

## Newsletter

### MESSAGE FROM THE CHAIR

UNIVERSITY  
of GUELPH

#### Contents

Message from the Chair	1
Graduate Student News	2
Presentations & Publications	2
Graduate Student Profiles	3
Staff Profile	4
Retirement Reception	5
<i>Mentha spicata</i> research	6
Niagara Science Fair	8
Our Newest Canadians!	8
Canada Blooms 2009	9
The Big Flood of 2009!	10
Bits and Bytes	11
Library News	12
Around the Department	13
Contact Information	14

**OAC**  
food • life • leadership

Dean Rob Gordon visited with the faculty of our department at the beginning of June to discuss in some detail the college's financial challenges. OAC has been given lead role in helping the University to solve its structural deficit problem and Rob has been working with the departments and campuses to explore and develop ways and means of meeting the challenge. In Plant Agriculture we have been doing many things to contribute to the solution including our greater engagement in undergraduate teaching, the maintenance of our highly successful diploma in turfgrass management and the turfgrass manager's shortcourse, our increase in numbers of graduate students and our continued success in obtaining research grants including OMAFRA grants. We have also been creating some new initiatives that will help to bring external money to the department and college to sustain capacity in some areas and build new capacity in others. These include for example; the bean breeding initiative, the plant breeding education centre, the Guelph centre for urban organic agriculture, the partnership with Vineland and the landscape industry in fundraising for a new chair in landscape horticulture, discussions with Ontario Power generation on new initiatives in biomass based energy, and fundraising efforts to expand the bioproducts discovery and development centre. There is a lot of work to do, and much of it is in addition to the work we already do, but there are also so many good ideas within the department and the department has deep roots and many connections to help us realize new opportunities. I have been overwhelmed by how our department has responded to the challenges the University has set for us. The efforts we make will benefit our department by providing us with new avenues of funding and by making us even more relevant in teaching, service and research. The departmental response



shows that we understand that we are the department and the University and that we need to be part of the solution to our challenges. We have shown exceptional leadership in this regard.

And thinking of hard work and leadership, I want to thank everyone who helped to make it all right again after the Crop Science building flood. In particular Jim Hoare, Beth Livingstone, Jenny Vandekamer and Chris Grainger who all went above and beyond to help and to ensure that we escaped relatively unscathed from what could have been a disaster. I also thank everyone affected on the first and second floors for their help and patience.

Finally, I hope for a very successful field season and that in the midst of hectic schedules and despite the relentlessness of mother nature that everyone has a chance to enjoy the summer with some time off with family and friends.



## Welcome New Grads

A warm welcome to our new grads this semester:

Melody DeJong (M.Sc.) - F. Tardif/P. Sikkema

Chris Duyvelshoff (M.Sc.) - J. Cline

Ben Rosser (M.Sc.) - Bill Deen

Eric Tozzi (M.Sc.) - R. VanAcker

Huasong Xu (M.Sc.) - E. Lyons

We hope you enjoy your time in Plant Agriculture and find it to be a rewarding and fun experience

## Graduate Student Awards

Congratulations to Stela Balint, who for the 2nd time received the first place award for her poster at the Ontario Fruit and Vegetable Convention held on February 17, at Brock University. Stela's poster entitled: "Biological control products Contans and RootShield reduce the inoculum of Sclerotium cepivorum, the causal agent of onion white rot" was co-authored by Greg J. Boland and M.R. McDonald. Well done, Stela!



The Graduate Student Liaison Committee has 2 new co-chairs, congratulations to Mark MacDuff (M.Sc.) and Amelie Gaudin (Ph.D.) . Already the GSLC has been busy with a bbq on Friday, May 29 for the Department. Approximately 120 people were on hand to enjoy the savory delights prepared by the graduate students. Thanks to Mark, Amelie and their many helpers on the generous and delicious luncheon!



The current membership of the GSLC includes:

Chase Phillips, Jamie Larsen, Diago Cerrudo, Andrew Burt, Hugo Gonzalez, Siobhan Moore, Joel Heminway, Blair Nameth, Scott Cressman, Eric Page, Meghan Moran, Eric Shaw, Kelli Durham, Oliver Stoffyn, Aaron Bowman, Ildiko Szucs

## Presentations & Publications:

### Plenary Talk:

**Gaudin A**, Holmes B, Raizada M.N. 2009 . Effect of the Major Domestication Locus TB1 on Root Architecture: The Hidden Half of Maize Domestication. 51st Annual Maize Genetics conference. March 12-15, St Charles, Illinois.

### Publications:

Bakker, C. J., Swanton, C. J. and McKeown, A. W. 2009. Broccoli growth in response to increasing rates of pre-plant nitrogen: I Yield and quality. Can. J. Plant Sci. 89:527-537.

Bakker, C. J., Swanton, C. J. and McKeown, A. W. 2009. Broccoli growth in response to increasing rates of pre-plant nitrogen: II Dry matter and nitrogen accumulation. Can. J. Plant Sci. 89: 539-548.

Murphy, S. E., Lee, E. A., Woodrow, L., Seguin, P., Kumar, J., Rajcan, I. and Ablett, G. R. 2009. Association of seed and agronomic traits with isoflavone levels in soybean. Can. J. Plant Sci. 89: 477-484.

Overexpression of cytosolic glutamine synthetase increases harvest index and nitrogen use efficiency in rice.

(Brauer, L.K., Shelp, B.J., Rothstein, S.) A.D. Latornell Conservation Research Forum (Guelph, Canada, [April 3, 2009](#)) (poster).

**Kelli Durham**

I grew up in Burford, ON which is a small town situated between Brantford and Woodstock. I'm almost positive that no one knows where this is; however much to my surprise Burford actually has an article on Wikipedia now. My parents and younger brother still live in Burford. My mom is

a nurse at Woodstock General Hospital and my dad is an electrician with whom my brother is doing his apprenticeship. Throughout my childhood and adolescence I played a number of different sports including: baseball, soccer, ringette, hockey and rugby. After high school I decided to attend the University of Guelph based on the decision that the campus looked nice in the summer. I'm glad I chose to come to Guelph and I graduated in 2007 with

a Bachelor of Science with Honours in Molecular Biology and Genetics. The fall after graduation I actually started a M.Sc. in developmental biology at McGill. Things didn't quite work out in Montreal with my project and advisor and I decided to move back to Guelph in 2008. When I returned to Guelph I worked for Bayer CropScience for about a year which helped me to decide to pursue a M.Sc. in plant breeding and genetics. In January 2009 I started my project with Peter Pauls and Ali Navabi on common bacterial blight resistance in dry beans. So far things are going really well and I am glad I decided to join the Department of Plant Agriculture. I am currently involved with the Plant Ag Social Committee and enjoy playing squash and three-pitch with department colleagues. In my spare time I enjoy baking (which most people know) and mountain biking while trying not to crash into trees.

I was born in Kerman, a city in the south east of my beautiful country, Iran. The most remarkable spectacle of my hometown is its nights; you can see lots of stars in an endless night sky. I really miss those nights.

I am the second child in a six-member family. There is a very nice garden in our house and my dad takes care of it. He grows lots of plants, trees, and vegetables in our pretty small garden. I think my father has a green finger as everything he grows becomes really beautiful and great.

When I finished my high school everybody in my family expected me to study medicine as my older brother did, but I was accepted to study plant agriculture. During my undergraduate studies I took courses such as plant biology, plant genetics, and plant breeding. These courses really inspired me to continue my studies in plant breeding at the graduate level in one of the northern universities of Iran. As a matter of fact, I have explored many cities in Iran for my studying. During my graduate studies in Iran I had the opportunity to work on many plants like wheat, roses, date palms, and pears. And now, here I am, in Canada, at University of Guelph, doing my PhD on pears. I've just found that working on fruit is a completely new world in plant science.

I found everything in my first semester at University of Guelph extremely exciting. I have also found lots of nice and kind friends who have helped me a lot to go through the hard time of being away from my family.

I am really happy that I am doing my PhD here in one of the best universities in Canada regarding plant agriculture. I would like to thank Dr. David Hunter, my adviser, who provided this opportunity for me to come here. I started working on my thesis in May in Vineland Research Station where I have seen many beautiful gardens of cherries, apples, pears and grapes. I hope I can discover more beautiful aspects of my life in Canada.

**Mina Kaviani**

**Jen Kingswell**

Although I was technically born in Scarborough, Ontario I consider myself a “Guelphite” as my family moved here when I was very young. I had a connection to the U. of G. at that early age as the reason we left

Scarborough was that my father was hired to open and manage the University’s first book store in the late 1960’s. I attended both public & high school in Guelph then went on to Mohawk College in Hamilton for business school, all the while residing in the “Royal City”. For all you history buffs, the city was named to honour Britain's royal family, the Hanoverians, who were descended from the “Guelfs”. Shortly after College I held administrative positions with local private industry prior to being hired here at the U. of G. by the late Dr. Jack Tanner (former Crop Sci. Dept. Chair) 23 years ago. Initially I served in a secretarial support capacity to numerous faculty, research staff and students. I was fortunate to have been provided the opportunity to shift my duties more towards contractual employment administration shortly thereafter which I find very interesting.

I married a “rare species” 6 months after my U. of G. start, in particular, an authentic Guelph native named Dean. I say “rare” because many of our South Guelph commuter neighbours are surprised to hear that middle-aged Guelph natives actually exist. Talking of species, we

have raised many dependents over the years in the form of rabbits, cats, dogs and even a parrot, however, none of the genus homo-sapien. To our delight, this spring our well stocked backyard bird feeder attracted 10 bird species, several chipmunks, squirrels, rabbits and of course racoons. We are blessed to have a back yard which looks onto a pond offering a natural habitat to a great variety of wildlife. OK, so I guess you’ve figured out by now that Dean and I are animal lovers. In another life maybe I’ll come back as a dog.....a well-pampered one that is. I’m a champion arm chair athlete, my primary sport of interest being Formula 1 auto racing. If you “diss” my favourite driver (Rubens Barichello), you’d be best to stay clear! My ultimate dream would be to travel with the league for 1 season around the world (remember me if you win the lottery).

Speaking of travelling, I love to fly south in the winter, especially to Cuba for which I have a great fondness. I’m not your typical traveller as I’d much rather “rough it” with the locals rather than isolate myself to culturally sterile resorts. I would say it is the same exposure to a culturally rich environment that I find so appealing about working here at Plant Ag and the University in general. I feel fortunate to have been exposed to the cultures of several countries represented by our diverse faculty, staff and students over the years. It’s almost as if I travel vicariously to these countries through their stories. Awesome!

On May 8, the Department bade a fond farewell to a number of people in the Department at a retirement reception held at the Victoria East Golf Club

**Julia Zilka** joined the former Crop Science Department in 1978 and until her retirement in 2008, she worked as a research assistant with a number of faculty in oilseed breeding program, most recently with Istvan Rajcan. Aside from work, Julia is a talented artist, we hope she enjoys her retirement and has more time to spend on her art.

**Calvin Chong** received his undergrad and graduate degrees from Macdonald College, McGill, where he was a faculty member from 1977-1984. In 1984 Calvin joined HRIO as a research scientist in the nursery research program, and in 1997 was appointed Manager of Research Program at HRIO. In 1998 Calvin joined the Department of Plant Agriculture. Over the course of his career, Calvin supervised or co-supervised 5 Ph.D. and 11 M.Sc. students and published over 70 refereed articles. Calvin has had some health issues recently but is doing relatively well currently, we wish him all the best in this retirement the very best for a healthy future.



**Danny Rinker** received his Ph.D. from Pennsylvania State University, prior to which he worked as a Secondary School Teacher. In 1984 Danny joined OMAF in Vineland as a research scientist and extension specialist. In 1999 Danny received a faculty appointment in the Department of Plant Agriculture. As it is well recognized, Danny has gone on to become one of the most renowned mushroom specialists in Canada and internationally as well. Danny is actively involved in Alcohol Babies Anonymous of St. Catherines and plans to



devote more time to this charity during his retirement.

**Judy Strommer** received her B.Sc. & M.S. from the University of Chicago and was granted a Ph.D. from UCLA. After graduating, Judy worked at the National Cancer Institute and National Institute of Health at UC Berkeley before moving to Georgia where she took a position as assistant professor of Genetics at the University of Georgia. In 1989 Judy joined the University of Guelph with a joint faculty appointment between Horticultural Science and MBG. Judy has recently been very involved in a collaborative effort to build biotechnology programs for fungus-based lignin degradation, with scientists from Guelph, Alberta, and the University of Havana. Judy also led a research team to help researchers in Cuba develop a nascent viticultural industry with the hope that a Cuban vintage will result.



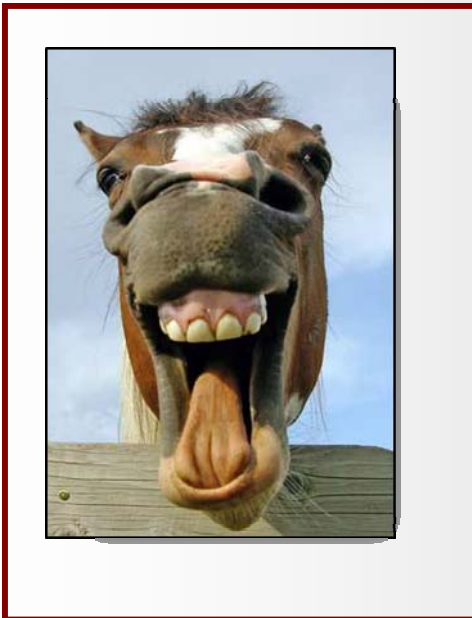
**Rick Upfold** received his B.Sc. And M.Sc. both from the University of Guelph and worked with OMAF in Walkerton as a Soils and Crops Specialist until 1983. In 1983 Rick joined the Crop Science Department as Extension Coordinator and then as Research Station Supervisor. Rick has a passion for teaching as well, and was awarded the Faculty Association Distinguished Professor Teaching Award in 2001 and a 2003 Presidential Distinguished Professor Award for teaching and service. As well, Rick received the OAC Alumni Distinguished Extension Award in 1998. Rick will continue in his role as Curriculum Advisor for Advanced Agriculture Leadership Program.



**More than just 'minty fresh', Plant Ag Prof has been horsin' around  
with *Mentha spicata***

by

**Wendy Pearson**



While many of us have enjoyed a nice lamb chop with mint sauce, Dr. Laima Kott has been seasoning a different horse of a different colour. With her post-docs Ron Fletcher and Wendy Pearson, Laima has been testing a new and biologically exciting variety of *Mentha spicata* as an anti-inflammatory feed additive for horses.

Mint is a common feed ingredient in horse feed, frequently added as flavouring to regular horse feed to encourage horses to eat more. But until now there has been no evidence that feeding mint to horses can have any biologically important health benefits. So Laima has undertaken a rather unusual partnership with Clinical Studies at OVC to find out if her purpose-bred mint can play a role in modifying inflammation in horses. To be sure, marrying the science that is our everyday in Plant Agriculture with that of the veterinarians is not without its comedic moments. For instance, walking down the hallways of Plant Agriculture with a giant bag filled with dried green leaves isn't the least bit unusual, whereas this occurrence in Clinical Studies draws

more than an occasional (rather shocked) glance! This is when large, descriptive labels are useful..!

The research project began with Ron and Laima selectively breeding *Mentha spicata* such that the resulting plants over-expressed rosmarinic acid (High-Rosmarinic-Acid Mint; HRAM). Rosmarinic acid (RA; C<sub>18</sub>H<sub>16</sub>O<sub>8</sub>) is a polyphenolic carboxylic acid found in many herbal plants including rosemary (*Rosmarinus officinalis*), oregano (*Origanum vulgare*) and mint (commonly *Mentha spicata* or *Mentha × piperita*). RA protects plants against attack by bacteria and fungi, but also has widely reported biological activities in mammals and mammalian cells including antioxidant (1), anti-inflammatory (2), antitumor (3) (4), immunomodulatory (5), antiviral (4) and antibacterial (6). *Mentha spicata* (ie. 'mint') is a common natural source for RA. Like pure RA, mint oil also has anti-inflammatory properties, including inhibition of inflammatory molecules such as prostaglandin E<sub>2</sub> (PGE<sub>2</sub>), which is the molecule that we are trying to reduce when we take an aspirin. Inflammatory conditions are rampant in performance horses, but most common treatments for arthritis pain have many unpleasant side-effects making it desirable to find natural anti-inflammatory products with an improved safety profile.



Thus, we undertook first to detect anti-inflammatory activity of HRAM in a cartilage explant *in vitro* model of inflammation. These *in vitro* experiments were then followed by an experiment in horses to determine if anti-inflammatory activity of HRAM is also evident in the live animal.



Wendy Pearson & friend

HRAM and a wild-type, control mint (CM) were artificially digested (to simulate effects of the stomach and small intestine), and then 'metabolized' with liver microsomes in order to simulate effects of biotransformation in the liver. The resulting suspensions were ultrafiltered (to simulated movement of molecules across the synovial membrane which surrounds joints such as the knee joint) were analyzed for RA and its primary liver metabolites (*m*-coumaric acid, caffeic acid, methyl rosmarinic acid and ferulic acid).

We made 4mm cartilage explants from the knees of meat pigs, and cultured them for 6 days. From day 2 of culture until the end of the experiment, we added the simulated digest of HRAM or CM to tissue from each animal at doses which approximate 0 – 17 g of HRAM for an average 78 kg person. On day 4 and 5 we added an inflammatory stimulus (lipopolysaccharide; LPS) which produced an inflammatory state *in vitro*. We then measured the tissue culture media for markers of inflammation such as PGE<sub>2</sub> and nitric oxide (a potent inducer of cell death), and markers of cartilage breakdown such as glycosaminoglycan (GAG; the building blocks of cartilage which are released from cartilage during inflammation). Standard statistical analysis of the data showed that HRAM strongly inhibited PGE<sub>2</sub> and NO at all the doses tested, and inhibited breakdown of cartilage at a dose which approximated 3.3 g of HRAM for a normal-sized human.

These experiments clearly demonstrated a strong potential for HRAM to be a potent anti-inflammatory. So what happens when we feed it to horses? To answer this question, we fed 2 horses a diet containing HRAM (at the dose shown effective in the *in vitro* studies) and 2 control horses received a normal diet without HRAM for 28 days. On day 21, we injected a very small amount of LPS (the inflammatory stimulus used in the *in vitro* studies) into one knee of each animal. This injection produced a very low-grade, self-limiting and reversible inflammation which modified the joint fluid biochemistry to a more inflammatory profile, but did **not** produce any lameness in any of the horses. We then took a series of joint fluid samples for 7 days after the injection to determine whether those inflammatory molecules modified in the *in vitro* studies were also modified *in vivo*. This experiment has just been completed, with another 4 horses scheduled to go through the protocol in early July. Stay tuned for results!

Though this project is still ongoing, we have already generated a few remarkable bits of information about HRAM. For instance, it is even more effective than a reference anti-inflammatory drug (indomethacin) with respect to PGE<sub>2</sub> and nitric oxide inhibition *in vitro*. At the same time, it protects against GAG loss while indomethacin actually accelerates GAG loss. Results from the horse studies are eagerly anticipated, because if they show similar results as the *in vitro* studies, Plant Ag will have some pretty hot intellectual property on their hands. Seems the odd couple of Plant Agriculture and Clinical Studies may be a match made in heaven after all.

#### Works Cited

1. *Photoprotective properties of Prunella vulgaris and rosmarinic acid on human keratinocytes.* **Psotova, J, et al.** 3, 2006, J Photochem Photobiol B., Vol. 84, pp. 167-174.
2. *Molecular modeling and inhibition of phospholipase A(2) by polyhydroxy phenolic compounds.* **da Silva, S L, et al.** Mar 12, 2008, Eur J Med Chem., p. epub ahead of print.
3. *Antimutagenicity of rosmarinic acid in Swiss mice evaluated by the micronucleus assay.* **Furtado, M A, et al.** Sep 24, 2008, p. epub ahead of print.
4. *Antiviral and anti-inflammatory effects of rosmarinic acid in an experimental murine model of Japanese encephalitis.* **Swarup, V, et al.** 9, 2007, Antimicrob Agents Chemother., Vol. 51, pp. 3367-3370.
5. *Synergistic immunosuppressive effects of rosmarinic acid and rapamycin in vitro and in vivo.* **Yun, SY, et al.** 10, 2003, Transplantation, Vol. 75, pp. 1758-1760.
6. *Antioxidant and antimicrobial activities of rosemary extracts linked to their polyphenol composition.* **Moreno, S, et al.** 2, 2006, Vol. 40, pp. 223-231.



## Niagara Regional Science and Engineering Fair

Once again this year, Jay Subramanian mentored budding scientists in the Niagara Regional Science and Engineering Fair. Bindu Kovvuru took 2nd place overall, Supritha Nilam was award 3rd place overall. In addition, Bindu won 6 awards including an entry scholarship to Brock University worth \$1000 and one of the newly implemented Department of Plant Agriculture, University of Guelph Awards. Surpritha was also awarded an entry scholarship to Brock University along with 4 other awards. Both Surpritha and Bindu attend Sir Winston Churchill High School in St. Catharines and were both chosen to compete at the Canada Wide Science Fair in Winnipeg. Mackenzie Wiens who was also a receipt of a Plant Agriculture, University of Guelph award, shared the overall iunior third place with Jay's daughter Varsha Jayasankar. Congratulations to all of Jay's students and of course his daughter Varsha who received 3 awards in total including NPFVGA and VRIC best project award, on their exceptional achievements.



Rene presenting the Plant Ag. U. of G. award to MacKenzie



Rene presenting the Plant Ag. U. of G. Award to Bindu

### Canada-Wide Science Fair

Supritha and Bundu both went on to compete in the Canada-Wide Science Fair, where Supritha received Honorable Mention in the Senior Environmental Innovation Category. As well Supritha was awarded the Manning Innovation Achievement Award and the Manning Young Canadian Innovation Awards, the awards totaling \$4500. Bindu received Honorable Mention in the Senior Environmental Innovation Category as well as receiving the Canadian Stockholm Junior Water Prize, valued at \$2000.

Congratulations to these up and coming scientists and to Jay who was absolutely vital to the students success at both competitions.



The Subramanian Family Proud New Canadians

### Congratulations Jay!!

Perhaps of as much importance (or more) to Jay as the success of his students was the bestowing of Canadian citizenship on Jay and his family in May. As a proud new Canadian, we understand that Jay, an avid home gardener, will be adorning the garden of his home with a brilliant display of red and white impatiens this year. Congratulations to Jay and his family on their new citizenship.

## **Canada Blooms**

by

**Rodger Tschanz**

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Over 3 months ago on March 18-22, during March break, the latest edition of Canada Blooms took place at the south building of the Metro Toronto Convention Centre (MTCC) in Toronto. The weather cooperated with pleasant spring like conditions that encouraged gardening-like fervor amongst the attending public. For those of you not familiar with Canada Blooms it is an annual gardening show held in Toronto, jointly run by Landscape Ontario and the Toronto Gardening Club. The show includes gardens built by award winning designers, judged floral arrangements and household ornamentals, a garden speaker program and exhibits by gardening associations and vendors of garden related products.

The number of exhibitors was down this year as a result of the economic downturn and the considerable expense associated with running a booth downtown Toronto. Most of the displays this year were confined to the 800 level of the MTCC. Our university's booth was also downsized from 3 booths to one in an effort to have a more cost effective presence at



An award winning floral design at Canada Blooms



Ontario's turf industry display—  
a car covered in living grass

Blooms. The number of visitors to the show seemed to be on par with last year. The March break scheduling of the show (for both 2008 and 2009) greatly increased the number of youth attending the show.

As in the past, the Department of Plant Agriculture, Ridgetown College and the Office of Open Learning shared a booth and handed out literature about the University's educational programs and answered a far ranging selection of gardening questions. Guelph had additional exposure in the Bloom's speaker program with Sean Fox from the Arboretum, Dr. Peter Kevan (EVB), Rodger Tschanz (Plant Ag.), Counsellor Vicki Beard and Healthy Landscape Coordinator Karen McKeown (both from the City of Guelph) all being given the opportunity talk about topics such as urban forestry, pollinators in the garden and new flower releases.

Next year's Canada Blooms will be dramatically different since the location is being moved from the MTCC to the Direct Energy Centre on the Canadian National Exhibition grounds in Toronto. There is always a lot of excitement associated with a change of venue so be sure to set aside some time during March 17-21, 2010 to see what all of the fuss is about.

## ***The Great Flood of 2009!!***

As everyone in the Crop Science Building is well aware there was a major flood in the building in early May. One of the safety shower valves broke and flooded the entire 2nd floor and part of the 1st. Fortunately there wasn't too much damage done to valuable equipment and apart from some very considerable inconvenience for the residents of the 2nd and 1st floors it was not as bad as it could have been. Many

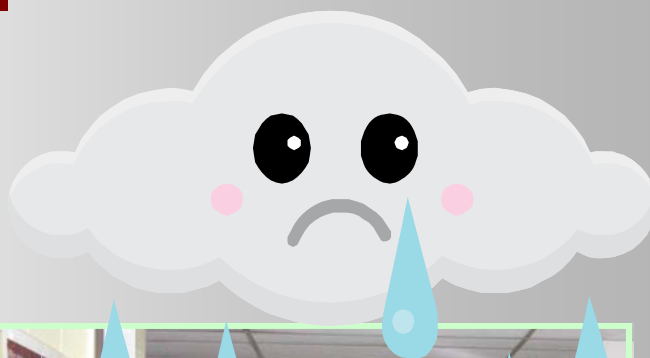


people pitched in to help with restoration, including a great clean up crew from First On-Site (highly

recommended if you ever need a flood clean-up crew—hopefully not!) and physical



resources personnel on campus. Along with that, the assistance of Dietmar Scholz and Jim Hoare proved invaluable. Jenny and Rene manned the phones that gloomy Saturday morning to try to reach all the occupants of the 2nd and 1st floors as well. The bright side is that all the offices on the 2nd floor are now complete with brand new carpet! We do thank everyone for their patience during the last few weeks.



## Have you Binged yet?

Jim Hoare, IT Tech

Bing (<http://www.bing.com/>) replaces Microsoft's product Live Search and carries forward the company's strategy for taking on Google and Yahoo. Bing went "live" to the public on June 3, 2009. The core improvements, according to Microsoft, are its capability to "scour the Web more deeply and to deliver more-relevant search results faster".

But the biggie feature of Bing - setting it apart from Google and Yahoo - is the way it organizes and displays the results. Bing's search results are organized into what it calls Search Categories (e.g. Web, Maps, Images, and Maps More). In a particular search, Bing creates these Search Categories dynamically in response to your search query. Microsoft acquired some other tricks through its purchase of the company Powerset, which attempts to figure out the searcher's intent rather than relying heavily on matching keywords to Web documents.

Stefan Weitz, from Microsoft, calls Bing a "decision engine" and says that it can help you explore, research, and find what you are looking for. "Google has done a great job of turning the word Google into a verb," he says. Bing is less about repeat of **Googling**, and more about first time or helping you refine "Quick Preview" feature gives you in your search results which goes a good thing, but will take a bit slow.



searches, which Weitz sees as the key feature finding the answer you're looking for the that search from the search results page. The a text-based synopsis of the pages displayed beyond a Google results page. This might be more time to load if your Internet speeds are

Microsoft says that it has beefed allow users to search for video as Hulu or YouTube. They emphasize that Bing also includes tools, such as SafeSearch, that allow users to block anything they might find offensive. Microsoft also has added a tool that lets network managers enforce the SafeSearch mode at the network level.

up the capabilities of its image search to content from specific online providers such

Microsoft acquired the company Farecast in 2008 to bring some uniquely advanced technology to search queries involving travel and buying. A tool for comparing airfares, uses a predictive algorithm to recommend when you should buy your airline ticket. The Farecast technology is now tightly integrated with Bing so you can use advanced pricing tools from within Bing's search results.

Using the same technology, Microsoft is bringing smarts to hotel reservations, too. Bing travel results show you Hotel Deals when you search for accommodations within a specific region. According to Microsoft's Weitz, "Bing calculates the historic price of a room at a specific hotel, compares historic pricing with the current rate being offered, and identifies whether the current price is a "deal" or not."

Microsoft hopes to catch up to Google in search market share. But it's got its work cut out. Google presently controls about 65% of the U.S. search market, while Microsoft owns only about 8% of the market, according to ComScore. Yahoo, the No. 2 player, held 20% of the market, as of May 2009. (ref. June 18, 2009 article ID=218100051 from <http://www.informationweek.com>)

Searching for "Plant Agriculture" using Bing shows our UoG department listed as #3 with #1 being [United States Department of Agriculture: Plants](#).

### References

"It's Official: Bing Is Now Microsoft's Search Engine", Tom Spring, PC World, May 29, 2009 <http://www.pcworld.ca//news/column/9c7c9346c0a8000601b3881561594fe1/pg1.htm>



## ***New Library Catalogue Interface—PRIMO***

*Judy Wanner*

**Volume 10, Issue 2**

**June, 2009**

### **New Library Catalogue Interface – PRIMO**

Get set for *Primo!* The Library's new search tool, *Primo*, will replace *TRELLIS* as the library catalogue this summer.

As you may know, *Primo* has been available in beta format for approximately the past 7 months, accessible only from a link in the top banner of the *TRELLIS* catalogue. Shortly, however, it will replace *TRELLIS* as the default destination when you run a quick search from the Library's homepage. A brochure describing this new catalogue format will be available soon. Try out the beta site to see the difference.

Unlike *TRELLIS*, *Primo* has the ability to expand to include data sets beyond the usual library catalogue records. It will grow significantly in future months to include other resources like full-text articles, images, and e-books – all available from one search box! *Primo* provides more options to refine your searches and more intuitive functionality.

### **Changes to Library Document Delivery Services – Update**

News of the discontinuation of the CISTI document delivery service was given in the last newsletter. The RACER system is now the sole method of requesting articles and books not available within the *TRELLIS* library catalogue. For anyone unfamiliar with this service instructions are available at [http://www.lib.uoguelph.ca/services/borrowing/interlibrary\\_loan/](http://www.lib.uoguelph.ca/services/borrowing/interlibrary_loan/). The major delivery difference between the two systems is that RACER materials are delivered to the library for pick up rather than to the department.

### **Campus Authors – The Deadline For Submissions Is September 4, 2009**

The Campus Author deadline for this year is fast approaching. Any member of the Guelph community, including authors themselves, may submit the name of a publication for Campus Author Recognition. <http://author.lib.uoguelph.ca/submitBook.cfm>

Criteria for submissions: In 2009, the Library will honour books that: were published in 2008 or 2009 and are authored, edited or translated by University of Guelph faculty, staff, students, retirees or alumni. The books may be: jointly authored, edited or translated and published in print or electronic form. Submissions received after September 4, 2009 will be honoured in 2010.

### **Library Review and Weeding Project**

To accommodate changes to library services to the Ontario Veterinary College Learning Commons that will transfer the collection to the main library, a weeding project of the fifth floor book collections in the McLaughlin Library is underway. This floor includes the Agriculture and Food Science sections. Periodic collection reviews are an ongoing type of activity undertaken by the Library to alleviate over-crowding and to ensure optimal currency and usefulness of materials to our students and faculty. Materials published before 1996 that have not circulated for 10 years and are last copies are being reviewed and may be relocated to the storage annex. For additional information on this initiative please see *Collection Review and Weeding for McLaughlin 5th (Fifth) Floor* in the Library News section of the library web page.

### **Web Sites**

This year marks the 200th anniversary of Charles Darwin's birth (February 12, 1809). Through the web it's possible to source all of his writings and a wealth of information on the Theory of Evolution still controversial today. A few of the many Web sites developed for the occasion include:

An interactive map of the voyage of the Beagle undertaken when Darwin was 22. <http://www.gallup.com/poll/114544/darwin-birthday-believe-evolution.aspx>

A 2009 Gallup poll investigating current belief in evolution - <http://www.gallup.com/poll/114544/darwin-birthday-believe-evolution.aspx>

15 Evolutionary Gems Collection (15 examples published by *Nature* over the past decade or so to illustrate evolutionary thinking. <http://www.nature.com/nature/newspdf/evolutiongems.pdf>

Our own library Darwin information site: [http://www.lib.uoguelph.ca/research/subject\\_&\\_course\\_guides/index.cfm?fuseaction=SubjectGuides.getGuide&code=univ120029](http://www.lib.uoguelph.ca/research/subject_&_course_guides/index.cfm?fuseaction=SubjectGuides.getGuide&code=univ120029)

## Around the Department

**Manish Raizada** was featured on “Quirks & Quarks”, a CBC radio program hosted by Bob McDonald on March 28/09. Manish was on the program to discuss his work in Sustainable Agriculture, in a segment entitled “Nine-and-a-Half Technologies that could change the world”. Manish spoke about simple and inexpensive technologies that would help the world’s poor grow enough food to adequately feed themselves, as well as technologies for developing drought and pest resistant crops. For a complete transcript of Manish’s appearance please see <http://www.cbc.ca/quirks/archives/08-09/qq-2009-03->

Congratulations to **Gale Bozzo** who recently received funding from the LOF-CFS Leader’s Opportunity Fund.

The journal *Botany*, which is edited by **Barry Shelp** and Larry Peterson, has been selected as one of the 100 most influential journals in biology and medicine over the last 100 years.

Research by **Francois Tardif** and **Peter Sikkema** was highlighted on the University homepage on May 7. Francois and Peter have been working on research which has found a giant ragweed biotype that is resistant to the glyphosate, a popular herbicide which has become the tool of choice for many weeds. The giant ragweed was found in a portion of a large field of Roundup Ready® soybeans in Essex County. Up until now no weeds in Canada have been found to be resistant to glyphosate, but 15 species, including giant ragweed have been confirmed resistant in other countries. This could pose a major problem for growers and Francois and Peter are continuing their research in this area in order to make effective recommendations for control options.

The **Simcoe Vegetable and Alternative Crop Open House** will be held on Tuesday, August 18, 2009 at the Simcoe Research Station. The Open House runs from 1:30–5:00 p.m. and will feature such things as Chia, Luffra, Goji, Yard long Bean, Fenugreek, Tahtsai, Bitter Melon, Celtuc, Tomatillo and many more unique crops. Also highlighted with hands-on demonstration on alternative crops will be:

- pest management and sprayer technology
- cover crops: opportunities to save your nitrogen dollars
- current nitrogen research conducted by the University of Guelph

If you are interested in attending please RSVP by August 14 by calling 519-426-7127 ext. 323

**Neal Stoskopf**, retired professor in Plant Agriculture, was the recipient of the U. of G. Alumni Association Alumnus of Honour award in June during Alumni weekend. Neal was a faculty member and administrator at the University of 37 years before retiring in 1994. Along with Rick Upfold and Ed Gamble, Neal was the recipient of the Friendship Medal by the Chinese government in 1995 for their efforts to increase wheat production in China.

Congratulations to **Danny Rinker** who was presented with an Honourary Life Membership in the Canadian Mushroom Growers’ Association at their convention in May. The Canadian Mushroom Growers’ Association honoured Danny for his outstanding service and dedication over the past 25 years to the Canadian Mushroom Sector. A well deserved honour for Danny!



Dr. R. Van Acker, Chair

Dr. B. Grodzinski - Graduate  
Coordinator

*Program Counsellors:*

Dr. E.A. Clark—Organic

Dr. F. Tardif—Crops

Dr. J.A. Sullivan—Hort

Dr. E. Lyons—Turf

Dr. D. Wolyn—Plant Biology &  
Plant Biotechnology



Happy Canada Day!!



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