

Forestry Matters

Don't wait until everything is just right. It will never be perfect. There will always be challenges, obstacles and less than perfect conditions. So what. Get started now. With each step you take, you will grow stronger and stronger, more and more skilled, more and more self-confident and more and more successful."

Mark Victor Hansen

March 2010



Dates to Remember

- April 1 NO MORE CLASSES
and that's no April Fools
- April 6 Who will speak for the
TREES????
- April 15-
May 1 International Field Camp
to Brazil-J Malcolm & J
Caspersen
- May 2-4 International Conference
on BIOCOMPOSITES
- May 5-17 Undergraduate Field
Camp to Dominica-S.
Thomas
- May 10-21 Urban Forest Field Camp-
A Kenney & J McCarron

2010 Spring Banquet

The Faculty of Forestry Undergraduate Society held its second annual spring banquet at the Faculty Club on March 30, 2010. Attendance was great with undergraduate students, graduate students, academic staff, post docs, administrative staff and alumni and other guests in attendance. Highlights of the night included:

- A great gathering of everyone prior to the dinner, great time for meeting and greeting and remembering
- The Faculty Club always manages to provide a great meal
- The guest speaker was **KERRY BOWMAN**, *President and Founder of The Canadian Ape Alliance University of Toronto, Joint Centre for Bioethics*
- Awards presented were:
 - **Edward H. Buckley Awards**
 - Meagan Black-Demers
 - Malcolm Cecil-Cockwell
 - Elizabeth Comber
 - Caroline Franklin
 - Sarah Resnick
 - Feinan Long
 - Jessica Stokes
 - **2010 NSERC Undergraduate Student Research Awards (USRA)**
 - Sheraz Khan (*Paul Cooper*)
 - Jessica Stokes (*Sean Thomas*)
 - Anne McLeod (*Jay Malcolm*)
 - **Fred G. Jackson Prize shared by:**
 - Dorothy Maguire
 - Caroline Booth
 - **M. R. Glavivic Prize**
 - Camille Twomey
 - **T. W. Dwight Prize shared by:**
 - Mallory Parks
 - Caroline Booth
 - Annie McKenzie
 - **Undergraduate Teaching Excellence Award**
Congratulations to Jay Malcolm

Remember When?

Glendon Hall. The Faculty of Forestry used to have a soils lab, some greenhouses and a nursery at the Glendon Campus of York University.

It was the best place for many a summer BBQ for staff and students.





Just Stuff

Recent Award Winners:

Malcolm Cecil-Cockwell is an undergraduate student (B.Sc. Forest Conservation) who recently won an NSERC Undergraduate Student Research Award as well as a grant from the Center for Global Change Science. He declined the former but accepted the latter, and will use the grant to work under Professor John Caspersen and Julian Clearey on a life cycle assessment of wood fuels at the Haliburton Forest & Wildlife Reserve.

MFC INTERSHIPS:

Internships for the MFC09 class are developing well. Host organizations include The Ontario Ministry of Natural Resources, the Regional of York, Tree Canada, the Toronto District School Board, Bioforest Technologies Inc, Wildlife

Conservation Society, Ontario Forest Industries Association, US Department of Agriculture European Biological Control Lab in Montpellier France and the B.C. Forest Service Haida Gwaii (Queen Charlotte Islands).

Another Award Winner

PROFESSOR DAVID MARTELL OF THE FACULTY OF FORESTRY IS THE RECIPIENT OF THE 2009 CANADIAN OPERATIONAL RESEARCH SOCIETY'S (CORS) AWARD OF MERIT. IT WAS PRESENTED TO HIM BY PROFESSOR ELDON GUNN OF DALHOUSIE UNIVERSITY, AT THE JOINT INTERNATIONAL MEETING OF CORS AND THE INSTITUTE FOR OPERATIONS RESEARCH AND THE MANAGEMENT SCIENCES (INFORMS) IN TORONTO, ON JUNE 16, 2009. THE INSCRIPTION ON THE AWARD CERTIFICATE IS "FOR HIS OUTSTANDING CONTRIBUTIONS TO THE DEVELOPMENT AND APPLICATION OF OPERATIONAL RESEARCH IN FOREST

MANAGEMENT IN CANADA AND THE WORLD, AND FOR HIS MANY CONTRIBUTIONS TO THE CANADIAN OPERATIONAL RESEARCH SOCIETY."

New Look on Faculty Web Site

The Faculty has a new look on its web site. Same information with some jazz and appeal added. Thanks to Martha Kornobis, Mike Halferty and Hubert Bibrowski for getting the information updated and getting a more efficient, more student appealing look to it.

CONFERENCE

**11th International Conference on Biocomposites:
Transition to Green Materials**

Toronto

May 2-4, 2010

Downtown Marriott Eaton Centre

Everybody Loves Carbon

Adam Martin

In early March, Adam Martin beefed up his own annual carbon footprint as he traveled to Panama to attend “Taking Stock,” a climate change science and policy workshop hosted by the Smithsonian Tropical Research Institute. The workshop was organized to discuss the first round of outputs from The HSBC Climate Partnership program; a multi-partner, multi-million dollar initiative which specifically studies the impacts changing climate has on forest ecosystems. Adam represented both the University of Toronto and the Centre for Tropical Forest Science, as part of a larger team of scientists and project managers from an impressive list of environmental organizations including Earthwatch, WWF, the Smithsonian, Oxford University, and the Climate Group.

For the workshop, Adam presented the research he is currently working on with his PhD adviser Sean Thomas, entitled “Reassessing carbon content in tropical trees.” In short, their research shows that tropical hardwoods vary significantly in terms of how much carbon is locked up in their sapwood, which can be anywhere between 41-49% carbon. An additional take-home message from the research is that wood carbon content is not at all similar within closely related species, and that there appear to be no species traits (e.g. wood density, growth, mortality) which serve as a surrogate measure of wood carbon content. By in large, Adam and Sean’s research suggests that in order to accurately measure carbon stocks in tropical forests, we first must reassess how much carbon is in actually in trees.

The research was well-received by scientists and project managers alike...even the HSBC representatives found it



interesting. In that regard, it was apparent that Adam and Sean’s research has important implications for forest carbon accounting. With recent climate-change policy developing at a rapid pace, such as Reducing Emissions through Deforestation and Degradation (REDD), Adam and Sean’s research is particularly timely and topical.

In all, the HSBC Climate Partnership meeting was a success, and stands out as a sound example of effective collaboration between NGO project managers and research scientists. Summaries of the workshop, as well as more information the HSBC Climate Partnership can be found at:

<http://ctfsnews.blogspot.com/>
<http://www.flickr.com/photos/ctfs/sets/72157623526068035/>

<http://www.ctfs.si.edu/group/HSBC+Climate+Partnership/Videos>

U of Toronto researches bark biorefinery process

By Lisa Gibson Biomass Magazine

The University of Toronto will use a portion of an \$8.2 million award from the Ontario Research Fund’s Research Excellence Program to develop a bark biorefinery that will produce green adhesives and biobased foams from tree

bark. Associate Professor of Forestry Ning Yan and Professor Mohini Sain are leading a multidisciplinary team in developing the innovative process. “We will be using extraction, separation and purification for turning barks into adhesives,” Yan said, adding that hydroxylation will convert the bark biomass to biobased foam. “The biobased foam with controlled foam structure can be used in building, construction and automotive industries as more environmentally sound alternatives for traditional petroleum-derived foam products,” she said.

The team is in the early phases of project development, focusing on fundamental research and bench-scale technology development for intellectual property generation, which is crucial for scale-up and demonstration efforts, according to Yan. The team aims to have some products ready for pilot trials in four to five years with the help of its partners: FPIInnovations, a forest bio-economy development company; the Woodbridge Group, a foam technology provider; Huntsman Corp., a differentiated chemicals manufacturer and marketer; Arclin, a provider of bonding and surfacing solutions; St. Marys Paper Corp., a paper mill; Tembec Inc., a paper

company; and Abitibi Bowater, which produces newsprint, commercial printing papers, market pulp and wood products.

The process can use any bark, although compositional differences among the different species may make some candidates better for certain products, Yan said. “We are certainly very interested in Canadian species including bark from mountain pine beetle-infested trees.”

The project received \$1.75 million and could have significant impacts on forestry, along with the automotive and chemical industries, according to the university. “Bark contains other niche specialty chemicals that can have antimicrobial and nutraceutical/pharmaceutical applications,” Yan said.

If the project proves successful, it would provide a method for converting a waste residue available in large quantities to commercially viable and value-added products with value-added market potential, Yan emphasized. It can be implemented in existing forestry operations to complement the product portfolio. “It also identifies another stream of waste nonfood biomass resources that can be utilized for bioproducts development, offering more options and easing some of the constraints due to demand on biomass feedstock,” she said. “Further developing nonfood feedstock to high-value chemicals and functional materials is fundamental to this project.”

The following letter was sent to President Naylor on behalf of the OPFA.

Dr. David Naylor, President
University of Toronto
Simcoe Hall, 27 King’s College Circle
Toronto, ON M5S 1A1

Dear Dr. Naylor,

On behalf of the Council of the Ontario Professional Foresters’ Association (OPFA), I am writing to you about our concern with forestry education in Ontario. We are requesting the opportunity to meet with you to discuss the plans that are being made by the University of Toronto for the Faculty of Forestry.

Professional foresters understand change. Our profession has initiated and adapted to profound scientific, cultural and economic changes as we have moved towards new definitions of forest management that benefit the environmental sustainability of forests whether on crown land or in urban areas. We are, therefore, not necessarily opposed to changes at the Faculty of Forestry that might result from the current review initiated by the University of Toronto. We are concerned, however, about the future implications for Ontario’s supply of registered professional foresters and of future leaders in some of the areas in which your academic staff have excelled.

Founded in 1957, the OPFA was legislated as a self-regulating profession in Ontario under the *Ontario Professional Foresters Act 2000*, giving the OPFA jurisdiction to license professional foresters in the public interest. The licensed activities, which only OPFA members may practice, cover “- - the development, management, conservation and sustainability of forests and urban forests - -” requiring post-secondary education.

The sustainable forest management legislation of Ontario regulates all Crown lands forest planning activities; and the approval of a professional forester licensed by the OPFA is required before any significant forest management activities are finalized by government or implemented on the ground by the forest industry. Many municipalities have similar requirements regarding private and local public lands, whether urban or rural. To provide another example, planting plans for the Province’s 50 million tree program also require professional preparation. Thus, the supply of adequately trained professionals is critical. Our membership numbers about 900 foresters who work and provide leadership in the areas of forest conservation, government administration, education, urban forestry, private forest land owners, consulting and the forest products and allied industries.

New natural resource management and conservation challenges will require employment of professional foresters, with new skill sets in addition to traditional forestry skills that many associate with an old, narrow view of the responsibility of foresters. Such requirements, anticipated by the Legislature in the definition quoted above, are expected to proliferate within both government and industry because of fresh realization of the important role of forests in developing clean energy, mitigation of and response to climate change, and the transformation of our traditional forest products sector into the new bio-economy. Meanwhile a significant portion of our membership is quickly approaching retirement age.

The University of Toronto has been an important influence in Canadian forestry education. As just one indication, most of the elected Councillors on our current 15-member governing body are alumni of the University of Toronto’s Faculty of Forestry.

We have been committed to collaborating with your institution in furthering the development of excellent degree programs which might provide the qualifications needed for the forestry profession. Even before the 2000 legislation, we had begun to encourage universities across Canada, in collaboration with the Canadian Professional Foresters Associations, to provide a broader range of appealing degree programs while producing graduates who could ultimately be registered through OPFA or our provincial counterparts for professional licensing. In this connection, we have had a mutual recognition agreement in place since 2001 allowing members’ professional mobility throughout Canada.

The minimum educational requirement for candidates is a four year bachelor’s of science degree (or equivalent) covering specific competencies, and subsequent relevant work experience. The Faculty of Forestry at your university has been working closely with us and our counterparts to develop more inclusive, but equally strong, standards for licensing, and we anticipated the development and approval of a formal program that would allow some of your forestry majors and some forestry post-graduates to qualify to work as professionals in these essential areas after graduation.

We would welcome the opportunity to learn whether the current review of the Faculty of Forestry might lead to such an outcome and would appreciate an opportunity for a few of us to meet with you to discuss the options that are being considered by the University of Toronto for the Faculty of Forestry.

Thank you.

Yours truly,

Carl Corbett, RPF
President

CC: Dr. Cheryl Misak, Vice-President and Provost

Dr. C.T. Smith, Dean, Faculty of Forestry
OPFA Council & Members

Neat News:

Alex Karney got an 8-month internship with CIDA.

North Bay Knowledge Meets Toronto Weather

14th Annual Nipissing-University of Toronto Forestry Symposium

As we left the U of T campus early Friday morning it was a beautiful day. We had heard reports that it was similar four hours north of the city in North Bay, but each of the nine Masters of Forest Conservation students on the trip, as well as John McCarron and Andy Kenney, our staff supervisors, took this with a grain of salt, and our rented vans were packed to the brim with parkas, mitts, hats and snow-boots. When we arrived that afternoon outside Nipissing University, the forecast held true and it was actually quite pleasant, and many of us thought we had overpacked. The afternoon lecture series proved interesting with a number of universities represented as well as some local high schools. Topics from lynx to LIDAR were presented well, and produced good discussion. After the lectures, a few of us were given an impromptu tour of Nipissing's biology department, avoiding a room that was apparently infested with fruit flies after an experiment gone awry, before returning to the student lounge for what I am finding is a forestry standard: pizza and beers. After good conversation, and a few good laughs over some beverages, the U of T crew called it a night, and took up lodging at the Canadian Ecology Centre in nearby Mattawa where the beds were very comfortable, and we partook in a rousing game of golf (the card game, not the "sport").

After a delicious bacon-based breakfast at the CEC, the Nipissing crew came by for our silviculture-by-snowshoe tour of the area. Needless to say, when you put a bunch of city kids on snowshoes, hilarity ensues. Though we were out in the bush for 6 or 7 hours, it never really hit home for us that you can't step backwards in snowshoes without falling over comically. Our brief exercise in tree-marking and the single-tree selection system was fun and refreshing, and we got to see a moose bed, but no moose, sadly. By noon the heat (yes, heat) was starting to get to us, and lunch was definitely in order. Grilled cheese and hotdogs grilled on a fire, built in the middle of the road, courtesy of CIF director John Pineau hit the spot, and it was good to take off the snowshoes for a bit. The afternoon brought an example of a white pine shelterwood cut, a heated debate about glyphosate, a visit to a clear cut, and finally, an inevitable snowball fight. It was a full day, and some of us were "collapsing from exhaustion" (read: forgetting you can't step backwards in snowshoes) by the end of it, but we learned a lot, and it was a good thing for us city kids to actually see what happens when all of the things that we are learning about are put into practice.

Roast beef was the order of the night for dinner, and John told us the story of Mattawa, and its slow, depressing decline. Thankfully his guitar playing around the campfire, with the addition of some snowbank-chilled libations brightened up the mood, peaking with John struggling through Stompin' Tom's "Rubberhead". A late night snack of leftover pizza cooked on hot rocks by the fire (see paragraph one), followed by some impromptu tobogganing capped off our night under the stars. Yes, the same stars you can't see in Toronto.

Morning came a little too early for most of us, but after another CEC breakfast (hats off to the ladies in the kitchen) we popped over to North Bay to the Fur Harvester's Auction House for a tour and explanation of the trapping industry in Ontario. We got to see the transformation of seal fur, hold a castor gland, and found out that the number one use for a polar bear skin was a stuffed polar bear. Seeing the amount of raccoon in the warehouse I mentioned to our guide that there was quite a bit of money to be made here in Toronto on raccoon, but he didn't seem to be buying it.

The ride home was nearly silent, mostly from fatigue, but also from trying to process the sheer amount of information from the trip. I'm glad we were able to go, and see that there still is a timber industry, and that it will need people like us to make it work. We always knew that there was quite a bit of science involved in the field, but it was good to get out there and actually see it in action. Forestry is an occupation based on long cycles and waiting things through, and measuring twice because you can only cut once... until it grows back, and if you employ the right techniques it could be sooner than you think.

Acknowledgements

Thanks to John McCarron and Andy Kenney for driving us around and organizing our trip, John Pineau and Andree Morneau for their leadership during our stay, Jim Gibb from the Fur Harvesters' Warehouse, the wonderful people at the Canadian Ecology Centre, and all the guys who took the time to show us around at Nipissing. See you all in Toronto next year!



I am pleased to announce that the new book "Alligators of the North" will be available in March 2010. The Alligator Steam Tug Boat was a common sight in the forest operations across eastern Canada and US from the 1890s through to almost the 1950s. This book will be the one and only publication covering this topic in a lifetime. For those who enjoy Canadian northwoods nostalgia, forest lore and even technical innovation, this is a milestone book for their library. There are numerous references to Simcoe, Port Dover, Arnprior, Pembroke and other Ottawa Valley locations, the Trent System, Georgian Bay, Lake of the Woods and Québec locations.

The Canadian Forestry Association has been the promoter of this project, and its involvement goes back to the early 1980s when the late Clarence Coons was commissioned to research and write a history of the Alligator. Now, with the addition of Norfolk County historian Harry Barrett, this text has been updated and emotionalized and features over one hundred images. The front cover is graced with a Tom Thomson painting of an derelict alligator.

Read more at our blog: <http://alligatorsofthenorth.blogspot.com/> If you are interested in obtaining "Alligators of the North" as a reference text or should you be interested in retailing the book as a profit generator, please let us know. Further discounting will be offered for bulk orders to museums.

Contact:
Canadian Forestry Association
200-1027 Pembroke Street East
Pembroke ON K8A 3M4
1-866-441-4006 toll free

Sincerely,
Dave Lemkay
General Manager

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