

Agroforestry Events in Prince Edward Island

Jim Richardson, Technical Director, Poplar Council of Canada



The sun shone, seafood was in abundance, and poplar and willow science, technology and practice were in the air as participants gathered for the 13th North American Agroforestry Conference in PEI in June 2013. The conference, organized in the Provincial capital of Charlottetown by the Association for Temperate Agroforestry (AFTA <u>www.aftaweb.org</u>), is held every two years to promote the understanding of agroforestry in a North American context. More than 100 participants attended from Canada and the USA, as well as several countries in Europe, South America and Africa. The event included a day and a half of technical sessions, a full-day field tour, and an optional pre-conference field tour featuring agroforestry in New Brunswick. The annual business meeting of the Poplar Council of Canada took place in conjunction with the conference.

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During the technical sessions in Charlottetown, 64 invited and volunteer oral presentations were given and 25 posters, all under the general theme of 'Agroforestry – innovations in agriculture'. Most of the presentations were organized in a series of concurrent sessions on topics that included: Agroforestry and greenhouse gases; Poplar, willow and biomass; Economics, policy and outreach; Riparian and silvopasture; Windbreaks and alleycropping; and Non-timber forest products. While not all the presentations were directly concerned with poplars or willows, all were relevant to the interests of Poplar Council members. Several presentations were given by PCC members. Abstracts of all oral and poster presentations were invited to submit formal papers following the conference for peer review and consideration for publication in a special issue of the journal Agroforestry Systems. More than 20 authors responded positively to the invitation and the special issue is likely to appear in early 2014.

During the conference, a full day was devoted to field visits to agroforestry sites in PEI. A total of five sites were visited across the central part of the island. These included shelterbelt rejuvenation in intensive potato production using a variety of tree species including white spruce, European larch, red maple, white ash and mountain ash. Production of hazelnuts was shown in an orchard with 18 different varieties being tested. Haskaps or blue honeysuckle berries (*Lonicera caerulea*), native to Kamchatka and northern Japan are a relatively new and tasty crop being tested in PEI; they are somewhat akin to highbush blueberries and well suited to cool temperate and boreal climates (Fig. 1). Commercial blueberry production fields were also visited on a site where the importance of shelterbelts to the development and maintenance of native pollinator communities was discussed (Fig. 2).

One of the highlights of the field day was a visit to a riparian buffer and willow biomass variety trial hosted by Agriculture and Agrifood Canada scientist (and PCC Director) Dr. Raju Soolanayakanahally. The buffer plantation is designed to mitigate high nitrate leaching into water bodies from adjacent heavily-fertilized fields growing primarily potatoes (Fig. 3). The willows were able to benefit greatly from the run-off, achieving the highest recorded willow yield in Canada of 3.2 kg/ha/year (measured on an individual

tree basis). Though this particular buffer plantation, established in 2006, could not be fully harvested due to Provincial regulations applying to a zone within 15 m of water, other trial plots are testing willow varieties for biomass production for energy (Fig. 4). Harvested on a 3- or 4-year coppice rotation, yields of up to 60 t dry matter / ha are possible. The primary market for the biomass is seen as farm use, displacing high-priced fossil fuels.

The optional one-day pre-conference tour started in Fredericton, New Brunswick and at the end of the day brought the 20 participants to the conference site in Charlottetown. In Fredericton, the Canadian Bioenergy Centre, part of the Wood Science and Technology Centre of the University of New Brunswick, was visited. The Centre develops and tests equipment and technology related to use of wood for energy, particularly in the form of pellets, and includes a lab accredited for testing pellets against North American and European standards. The second stop was at a multi-species, multi-tiered plantation established in 2004 to evaluate carbon sequestration and non-timber forest products. Thirty different species and varieties of shrubs and trees are being compared, ranging from blackberries to hybrid larch and tamarack, and including willows (Fig. 5). The final field stop in New Brunswick demonstrated small-scale commercial production of shiitake mushrooms on hardwood bolts (oak, beech, maple, elm, alder). The operation, with 1000 bolts, was producing 1 pound of mushrooms per year on each bolt, to be sold at \$5 per pound wholesale. The same operator also ran a small hardwood seedling nursery growing black walnut, oak, butternut, horse-chestnut and chestnut in pots and plugs in a small greenhouse.

The Poplar Council annual business meeting took place in conjunction with the conference. During the meeting, for which seven members were present, reports from the past year were received, plans for the coming year were reviewed and Board membership was confirmed. Two of the reports are available in this newsletter and a couple of other reports are available on the PCC website. A small committee will be established to review the financial future of the Council. The possibility of changing the name of the Council to give explicit recognition of willows was discussed, with 'Poplar and Willow Council of Canada' (or more simply 'Poplar and Willow Canada') being considered. Jaconette Mirck of Agriculture and Agrifood Canada, Indian Head, Saskatchewan and leader of the Council's Environmental Services Working Group was elected to the Board, replacing Grant Harrison who had stepped down. The 2014 annual meeting will be held in Vancouver in conjunction with the 6th International Poplar Symposium being held there July 20-23. There was interest in a tentative offer to hold a meeting in 2015 in the Abitibi-Témiscamingue Region of Québec in the context of a possible circumboreal meeting on trembling aspen.

The format, facilities and scale of the 13th North American Agroforestry Conference provided ample opportunities in a relaxed atmosphere for informal networking amongst the participants, while the scientific and technical content of the conference was stimulating and wide-ranging. Traditional Maritime hospitality was offered by the hosts and greatly appreciated by the participants. The highlight for many was an evening 'kitchen party' featuring fresh lobsters, mussels and oysters, and associated trimmings, followed by live entertainment with fiddle and guitar music, singer and dancers. The location for the next AFTA conference – in 2015 – has yet to be determined.





Figure 1

Figure 2



Figure 3



Figure 5



Figure 4

- 1. Haskap plant, Phytocultures, Clyde River, PEI.
- 2. Shelterbelt to create pollinator habitat in lowbush blueberry production, West St. Peter', PEI.
- 3. AAFC willow riparian buffer trial, estab. 2006, never harvested, West River, PEI.
- 4. AAFC willow biomass variety trial, estab. 2008, harvested 2011, West River, PEI.
- Balsam fir (L) and Salix spp. (R) in multispecies, multi-tiered plantation trial for C sequestration and non-timber forest products, Waterborough, NB.

LINKS To Other Articles of Interest regarding the PCC AGM in Charlottetown, P.E.I.

Secretary Treasurer, Budgets – 2012, 2013, 2014

Deborah Brenton, Executive Assistant's Report to the Annual General Meeting

<u>Tree-planting (synonyms)</u>

Afforestation Geoengineering Forest Science Silviculture Piece-work

Annual Report to the Business Meeting Barb Thomas, Chair, Poplar Council <u>Charlottetown, P.E.I. 2013</u>



The 2012-2013 year for Poplar Council focused on genetic resources, breeding and continued implementation of the council's strategic plan. Pierre Périnet of the Quebec Ministry of Forests hosted a very successful annual general meeting/workshop in August 2012 with talks on breeding methodology, risks to our Canadian genetic resources, some current research on genetics and both a greenhouse and field tour as well. All talks from the meeting are available on the web-site for public viewing.

The Pesticide Working Group chaired by Cees van Oosten with his team of 10 members continued to be a very active group in council this past year. Sadly Cees has indicated he will be stepping down as of this year's AGM. Cees has done an outstanding job chairing this committee for many years and taking forward many successful applications for registration of herbicides and pesticides for use on poplars, aspens and willows in

Canada. We hope to fill the open position at our 2013 AGM in Charlottetown. Please see Cees's 2013 report on the web-site for more details on recent accomplishments.

The Genetics Working Group (GWG) is has also seen a change in leadership this year with Bill Schroeder stepping down as co-chair while Pierre Périnet will now continue as chair. Work in this group has focused on development of a white paper outlining our current Canadian poplar and willow collections, exploring the challenges of both maintaining and promoting these unique and critical collections and providing a national perspective on the need for preservation and use of these materials by industry, academics and landowners. Work has also been underway on renewing various IUFRO provenance collections and collecting and storing pollen for future breeding.

Our Strategic Planning committee, which meets every few months, recognized the commitment and efforts of Dr. Jaconette Mirck, and through her interests in the area of environmental applications, services and challenges of using poplars and willows in the landscape, she now chairs a new working group in this area. Thank you Jaconette for taking on this new role as chair of a working group with the PCC.

I would like to once again recognize and thank Jim Richardson for his continued commitment and dedicated work for the PCC. Jim provides us with reports from all conferences he attends, answers questions from the public and launch of our new and very nice web-site.

This year's AGM, being held in conjunction with the 13th Biennial North American Agroforestry Conference (NAAC) will have a focus primarily on willows including biomass, carbon and ecosystem services projects. It is a real pleasure to be able to spend time exploring yet another province in Canada while showcasing the extent of opportunity with willows and poplars in Canada.

For next year's AGM, the PCC will be joining the 6th International Poplar Symposium (IPS VI) being hosted by and held at the University of British Columbia in Vancouver, British Columbia. The IPS meetings are held every four years and it is a great honor to have the 2014 meeting in Canada. Please visit the web site at <u>www.2014ipsvi.com</u> for more details on the July 20-23 meeting.

On a personal note, I would like to thank the Board of Director's for supporting me to attend the 24th session of the International Poplar Commission meeting in Dehradun, India last Fall. This was very generous and I was able to meet many colleagues and learn a great deal about poplar growing, processing and challenges in India. I also took the opportunity to speak to the audience about the Poplar Council of Canada through one of the plenary sessions. Jim Richardson wrote several excellent articles after the trip that can be found in our Newsletter and as always, he provided an insightful and informative report. A further outcome of the meeting is I am now a member of the Executive Committee as a representative for Canada through an international vote. Jim Richardson also remains as a long-time member as a co-opted member of the Executive Council giving Canada significant representation with the IPC.

In closing, I would once again like to thank Cees, Bill and Grant Harrison (member-atlarge) for their dedicated work and service to the Poplar Council serving on committees and as chairs and co-chairs of their respective committees. I would also like to thank my Executive Committee, Board of Directors, working party chairs and the Strategic Planning committee for their support and hours of volunteer work on council. Deborah Brenton has continued to keep the office running smoothly, looking after the newsletter, the books, the bank, membership and directing the inquiries that come in over the year. Deb effortlessly carries out her duties making our monthly or bi-weekly meetings as efficient and easy as possible. Thank you Deb for making my job that much easier!

Technical Director's Report to the Annual Meeting Charlottetown, P.E.I., 2013 By Jim Richardson

This is the 17th annual report to the Poplar Council membership from the Technical Director, a position created by the Executive Committee in April 1997. The general objectives of the Technical Director are to supply technical services and advice to the Council, to promote awareness and support for the Council and to increase membership. More specifically, the responsibilities of the technical director include maintaining and updating the Council's website; responding to technical enquiries using E-mail, phone, fax and mail; providing an international dimension to the Council through participation in the International Poplar Commission; contributing to the PCC Newsletter and supporting technical aspects of the organization of the PCC Annual meeting; and providing services to members and the Board of Directors of a technical rather than purely administrative nature. The specific responsibilities continue to change somewhat, reflecting the changing ways in which the Council operates and new directions and initiatives of the Council.

Website

Management and maintenance of the Poplar Council website (www.poplar.ca) continues to be the most significant on-going responsibility of the technical director. After a year of design and development activity, a completely new site (with the same URL) was launched in time for the annual meeting in mid-August. The site is hosted by Sencia Canada Ltd., a professional web design and hosting company based in Thunder Bay, ON. It features a relatively simple, clean design with easy navigation. From the Home page, visitors can access pages such as 'What's New', 'Events', 'About PCC' and 'Information', as well as link to the Council's Facebook page. Information available includes a variety of PCC and IPC-related publications, as well as statistics about poplars and willows in Canada, tips for growers in a 'Growers' Corner' and a picture gallery. Members, particularly corporate members, are well-served with the display of corporate logos and links to members' own sites. Online membership application and renewal are offered and, although online payment is not currently offered, the option has been retained to offer PayPal for such payment in future. The 'What's New' pages and 'Events' pages are reviewed and updated regularly, as well as 'Links'. Information about individual and corporate members is updated once a year. The site has been an important source for the electronic newsletter, which is normally uploaded to the site soon after each new issue is sent to members by the Executive Assistant by E-mail.

The Council's interactive, searchable directory of poplar and willow clones is available through the website, with access limited by password to members only. Due to technical difficulties with the format of the directory database, it presently physically resides on a remnant of the old website, though this is transparent to users. When planned revision and updating of the directory is undertaken in the near future, the technical format will be made more compatible with the new site.

International Dimension

Together with my colleague, J.G. Isebrands of Wisconsin, I have continued to spend much time in the past year on the final stages towards publication of a completely rewritten and updated edition of the FAO-IPC book on poplars and willows. This book is entitled 'Poplars and Willows: trees for society and the environment'. An international team of 'lead chapter authors', supported by nearly 60 individual contributing authors, including 8 Canadians, prepared the content of the book's 13 chapters. FAO entered into a co-publication agreement with the UK-based international scientific publisher CABI, which specializes in agricultural topics, to publish the book. The complete manuscript was initially submitted to the publisher in June 2012, but subsequently considerable revision was required to reduce the number (and cost) of illustrations, and the manuscript was resubmitted in December. The book is now expected to appear in print in mid-July 2013. A presentation on the forthcoming book was given by the editors at the 24th Session of the International Poplar Commission (IPC) in India in late October.

The 24th Session of the IPC included field tours before and after the technical presentations in Dehradun. Seven Canadians participated in the Session, including the Chair, Technical Director and two other Board members of PCC. We now have two members on the IPC Executive Committee, with the election to it of PCC Chair Barb Thomas and the renewed co-option of myself. The IPC Executive Committee met immediately prior to the 24th Session, as well as informally immediately after its close. A full report of the events in India, including field tours, was prepared for the Council and published in the E-newsletter, as well as made available on the website.

Newsletters and Other Publications

The technical director makes regular contributions to the Council's newsletter, including reports from meetings and other events. An article reporting on the workshop of the Genetics Working Party held in Quebec City in August 2012, along with the Council's annual business meeting and an associated field tour, was prepared and published. The same issue of the newsletter included an extended article on the 24th Session of the International Poplar Commission held in Dehradun, India, including reports on pre- and post-conference field tours. More photos from both those meetings were uploaded to the website photo gallery. Editorial review and technical advice have been provided in the preparation of a PCC technical note on shelterbelts as environmental services of poplars and willows.

Annual Meeting

Presentations on breeding techniques and national activities and challenges made at the August 2012 Genetics workshop in Quebec have been uploaded to the website. Announcements and information about the June 2013 North American Agroforestry Conference and associated annual meeting of the PCC have been made available through the website. At that conference I will make a presentation on the soon-to-be-published FAO-IPC poplar and willow book. A report on the conference, field tour and annual PCC meeting will be prepared for the website.

Technical Enquiries

The technical director responds to technical enquiries, most of which are received as a result of contact through the website to the Secretariat and are dealt with by E-mail. The vast majority of such enquiries come from non-members, including from outside Canada. The number of individual enquiries has greatly declined in recent years.

Acknowledgements

I would like to thank Barb Thomas and the Executive Committee for their continued support and confidence throughout the year. It is a pleasure to work under Barb's leadership of the Executive. I also appreciate very much the efficiency and hard work of Deb Brenton, the Council's Executive Assistant.

Yasu Hiratsuka



The Poplar Council would like to sadly acknowledge the passing of a long-standing member of the Council. On Sunday, October 12, 2013 Yasu passed away suddenly. He was an incredibly kind and compassionate man who had a profound impact on everyone he met. A globally recognized expert in mycology, Yasu was a passionate scientist who, at almost 80 years of age, still made significant contributions to his field and maintained collaborations around the world.

Save the Date

IPS VI meeting – July 20-28, 2014 – Vancouver, B.C. – organized by Cees van Oosten and the University of British Columbia as the host organization. <u>www.2014ipsvi.com</u>