

Joint IOBC – Nearctic and Neotropical Regional Sections Conference Biocontrol in the Americas – Past, Present and Future

*Sheraton Fallsview Hotel and Conference Centre
Niagara Falls, Ontario, Canada
Les Shipp, IOBC-NRS President
(lead organizer)*

The Nearctic and Neotropical Regional Sections of the International Organization for Biological Control of Noxious Animals and Plants (IOBC) hosted a scientific conference to promote awareness and networking of biocontrol issues of common interest among the Americas. We often face similar pest problems and share common approaches to developing biological control programs. With the current controversy over accessing and benefit sharing of biological resources in other countries, it is important to better understand the biological control programs that are present elsewhere and how we can share our technology to the mutual benefit of all parties. The keynote speaker for the meeting was Dr. Jacques Brodeur, President of IOBC Global, who provided an update on the IOBC Commission on "Biological Control and Access and Benefit Sharing". The three day conference included symposia topics ranging from invasive pests, risks and benefits of exploration for biocontrol agents in the Americas, ecosystem landscapes and habitat management for IPM, challenges and successes for commercialization and implementation of biocontrol agents, microbial biological control, weed biocontrol, biological control with egg parasitoids and more.



Scientific Program

Monday, May 10, 2010

4:00 – 7:00 **Registration (Oakes Foyer)**

Tuesday, May 11, 2010

6:30 – 7:45 **Breakfast (Sheraton Cafe)**

7:00 – 8:00 **Registration**

8:00 **Welcome and Introductions**

8:10 **Keynote speaker (Jacques Brodeur, University of Montreal)**
“Biological Control and Access and Benefic Sharing”

8:45 **Risks and Benefits of Exploration for Biological Control**
Agents in the Americas
Moderators: George Heimpel, University of Minnesota and Peter Mason, Agriculture and Agri-Food Canada

- Alien versus predator (or parasite): interactions between the invasive coccinellid *Harmonia axyridis* and native natural enemies- Remy Ware, University of Cambridge
- Invasion of exotic arthropods in South America's biodiversity hotspots and agro-production systems: prospects for classical biological control - Kris Wyckhuys, Universidad Jorge Tadeo Lozano
- Climate change and trophic cascades: implications for biological control – Dave Gillespie, Agriculture and Agri-Food Canada, Bernie Roitberg, Simon Fraser University, Peggy Clarke, AAFC, Abida Nasreen, AAFC and Chandra Moffatt, AAFC
- Can indigenous parasitoids provide sufficient control of an invasive pest? Insights from light brown apple moth in California – Nick Mills, University of California, Berkeley
- The relationship between safety and efficacy in classical biological control - George Heimpel, University of Minnesota and Peter Mason, Agriculture and Agri-Food Canada

10:30 **Health Break**

10:50 **Use of Generalist Predators in Biological Control**
Moderators: James Harwood, University of Kentucky and Jonathan Lundgren, USDA-ARS

- Conservation of generalist predators for biological control - Edward Evans, Utah State University
- The importance of omnivory in the ecology of generalist predators: granivorous carabids as a case study - Jonathan Lundgren, USDA-ARS
- Relationships of plants with predatory Heteroptera - John Ruberson, University of Georgia and Jorge Torres, Federal Rural University of Pernambuco
- Intraguild interactions: lacewings and lady beetles - Donald Weber, USDA-ARS
- Spider biodiversity: what it means for biological control - James Harwood, University of Kentucky

12:35 Lunch (Oakes Foyer)

1:25 Ecosystem Landscapes and Habitat Management to Improve Biocontrol

Moderators: Doug Landis, Michigan State University, Cerruti Hooks, University of Maryland and Paula Shrewbury, University of Maryland

- Assessing characteristics of vegetation to enhancing abundance and diversity of natural enemies in vineyard ecosystems – Linda Thomson, University of Melbourne
- Can we improve the success of conservation biological control through a more balanced disruption of pest ecological requisites – Cerruti Hooks, University of Maryland
- Role of alternative resources in natural enemy conservation and efficacy – Steven Frank, North Carolina State University
- From plants to patches to Google Earth: dispersal of weed biocontrol agents in variable landscapes – Rob Bourchier, Agriculture and Agri-Food and Brian Van Hezewijk, Agriculture and Agri-Food
- Generating field margins that combine benefits in terms of biocontrol and conservation - Felix Wäckers, Biobest Biological Systems

3:10 Health Break

3:30 Invasive Pests – Is Biological Control a Viable Option: What Lessons Have We Learned?

Moderators: M. Hoddle, University of California, Riverside and Roy Van Driesche, University of Massachusetts

- When does eradication give way to biological control for invasive insect pests? Lessons from light brown apple moth

and other recent invasions in California. – Nick Mills, University of California, Berkeley

- Are wood borers attacking forest trees viable targets for BC? Lessons from emerald ash borer, Asian longhorn borer beetle, and goldspotted oak borer - Duan Jin Juan, USDA-ARS
- Are grasses feasible targets for biological control: biological, economic, and social limitations and the case for *Arundo donax*, and other invasive grasses - John Goolsby, USDA-ARS
- Assessing difficult targets – when is biological control feasible? – Lincoln Smith, USDA-ARS
- Biocontrol of invasive insects attacking endangered plants. How is support for a project generated when there are no obvious stakeholders? Bromeliad weevil and other cases. – Ron Cave, IFAS/University of Florida

5:15 Social mixer/poster viewing (Oakes Foyer)

Wednesday, May 12, 2010

7:00 Breakfast

8:15 Challenges for Commercialization and Implementation of Biological Control Agents in the Americas

Moderators: Vanda Bueno, Universidade Federal de Lavras and José Parra, ESALQ/USP, Piracicaba

- Possibilities for advancing commercial biological control in North America - Norman Leppla, University of Florida and Karel Bolckmans, Koppert B.V.
- Challenges for mass-rearing and commercialization of entomophagous arthropods in Brazil - José Parra, ESALQ/USP, Piracicaba and Vanda Bueno, Universidade Federal de Lavras
- Ecological studies of two parasitoids of the tomato moth *Tuta absoluta*: challenges and perspectives for their application in biological control in Argentina – Norma Sanchez , CEPAVE, La Plata
- Challenges and successes in the commercialization and use of biocontrol agents in the Caribbean – Ian Gibbs, Ministry of Agriculture and Rural Development of Barbados, Yelitza Colmenarez , CABI International and Matthew Ciomperlik, APHIS-CPHST
- Status and challenges for regulations of biological control agents in South America – Wagner Bettiol, CNPMA/EMBRAPA

- 10:00** **Health Break**
- 10:20** **Challenges and Successes in Augmentation Biological Control for North America**
Moderator: Lynn LeBeck, Association of Natural Biocontrol Producers
- Challenges and successes to biological control implementation in greenhouses: a Canadian perspective - Rosemarije Buitenhuis, Vineland Research and Innovation Centre
 - ASTM International Standards for the commercial biocontrol industry - Carol Glenister, IPM Laboratories Inc.
 - Regulatory challenges to the growth of the North American commercial beneficials industry - Brian Spencer, Applied Bio-nomics, Ltd.
 - Entomopathogenic nematodes; successful application methodology and future directions. David Shapiro-Ilan, USDA-ARS
 - Benefits and limitations of factitious prey and artificial diets on life parameters of predatory beetles, bugs, and lacewings. Eric Riddick, USDA-ARS
- 12:05** **Lunch**
- 1:15** **Tour of Niagara region**
- 5:30** **Wine tasting at Peller Estates/social hour**
- 6:30** **Banquet**
- 8:30 – 9:00** **Return to Hotel**

Thursday, May 13, 2010

- 7:00** **Breakfast**
- 8:15** **Biological Control with Egg Parasitoids**
Moderator: Fernando Cônsoli, ESALQ/USP, Piracicaba and Guy Boivin, Agriculture and Agri-Food Canada
- The state of art of the taxonomy in Trichogramma – Richard Stouthamer, University of California, Riverside
 - Mating behavior of egg parasitoids - Guy Boivin, Agriculture and Agri-Food Canada
 - Ecology and management of egg parasitoids – Stefano Colazza, University of Palermo

- Can biocontrol with *Trichogramma* benefit from associated symbionts? - Fernando C onsoli, ESALQ/USP, Piracicaba
- Egg Parasitoids of Citrus weevils: A step beyond *Trichogramma* – Jorge Pe a, IFAS/University of Florida

10:00

Health Break

10:20

Weed Biocontrol – Why is it so Successful

Moderators: Guillermo Cabrera Walsh, USDA- ARS, Buenos Aires, Jack DeLoach, USDA-ARS and Ray Carruthers, USDA-ARS

- Foreign exploration, inter-country projects and in situ biological assessment - Guillermo Cabrera Walsh, USDA-ARS, Buenos Aires, Ray Carruthers, USDA-ARS, Hernan Norambuena, INIA, Chile and Jack DeLoach, USDA-ARS
- Biological control of invasive weeds in Latin America – Hernan Norambuena and Guillermo Cabrera Walsh
- Revelations on weed control biocontrol success in Canada – the houndstongue story – Rosemarie De Clerck-Floate, Agriculture and Agri-Food Canada
- Success of biological control of saltcedar in the western USA – emphasis Texas – Jack DeLoach, and Ramiro Luj n God nez

12:05

Lunch

1:00

Microbial Control in the Americas: Successes, Failures, Lessons Learned – What worked, Why? What didn't work, Why?

Moderators: Stefan Jaronski, USDA-ARS and Marcos Faria, EMBRAPA

- Insect microbials - US and Canada – Michael Brownbridge, Vineland Research and Innovation Centre/Wendy Gelertner, PACE Turf
- Insect microbials - Latin America - Marcos Faria, EMBRAPA
- Plant pathogen microbials - US and Canada - Randy Martin, Bioworks
- Weed microbials – US and Canada - Susan Boyetchko, Agriculture and Agri-Food Canada
- Plant pathogen microbials - Latin America - Marcelo Morandi, EMBRAPA

2:45

Health Break

3:05

Biocontrol Free Trade in the Americas – Exchanging People, Technology and Resources

Moderators: Luis Cañas, Ohio State University and Kevin Heinz, Texas A&M University

- Evaluating phorid flies for biocontrol of Red Imported Fire Ants: scientific networks helped frame an international approach – Rob Plowes, University of Texas and Lawrence Gilbert, University of Texas
- The Cuban experience in biocontrol free trade in the Americas – Leopoldo Hidalgo-Diaz, CENSA
- Biological control in Honduras: a successful story of integrated pest management and of collaboration with small scale farmers – Rogelio Trabanino, University of Zamorano
- International collaborations and the training of future generation of biological control practitioners – Luis Cañas, Ohio State University

4:30

Closing remarks