

IOBC-NRS NEWSLETTER

INSIDE THIS ISSUE:

ESA Symposia of interest 1

From the President 2

Candidates for IOBC NRS Election 3-6



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James Nechols
 Kansas State University

Cesar Rodriguez-Saona
 Rutgers University

Practical Implementation of Conservation Biological Control

On Tuesday November 18, 2014, there will be a Member Symposium at the Annual Meeting of the Entomological Society of America.

1:30 PM	Introduction to Implementing Conservation Biological Control: The Goals of the Working Group
1:55 PM	The conservation of edaphic biological control Jeffrey Bradshaw, University of Nebraska
2:20 PM	Incorporating conservation biological control into field crop production while minimally influencing farming logistics John Tooker, Pennsylvania State University
2:45 PM	Mixing it up: Impacts of within field plant diversity on conservation biological control Julie Peterson, University of Nebraska ; Brett R. Blaauw, Rutgers, The State University of New Jersey
3:45 PM	Landscape approaches to conservation biological control: Progress to date and identification of key knowledge gaps Tatyana Rand, USDA - ARS
4:10 PM	The economics of conservation biological control Steven Naranjo, USDA - ARS ; Peter C. Ellsworth, University of Arizona ; George Frisvold, University of Arizona
4:35 PM	Farming with beneficial insects: Translating conservation biocontrol science into mainstream farm practice Eric Mader, The Xerces Society for Invertebrate Conservation ; Jennifer L. Hopwood, University of Kansas ; Mace Vaughan, The Xerces Society for Invertebrate Conservation
5:00 PM	Landscape ecosystem services: European perspectives Lene Sigsgaard, University of Copenhagen

Other Symposia of Interest at ESA

SUN Nov 16 morning—Classical Biological Control of the Brown Marmorated Stink Bug, *Halyomorpha halys*

SUN afternoon—Biological Control in Acarology: Present and Future Challenges

SUN afternoon—Biological Insect Control—Ready for a Breakthrough?

TUE afternoon—Classical Biological Control of Invasive Plants: Complex Challenges, Semiochemical Solutions

WED afternoon—Predatory Lady Beetles: Global Opportunities for biological control and challenges as invasive species



MESSAGE FROM THE PRESIDENT: **Moving in the right direction**

Sometimes a ship is slow to turn. I think it is safe to say that the majority of crop production in the U.S. has abandoned the original vision of what IPM was supposed to do, as proposed by Stern et al back in 1959. Circumstance at the time was widespread overuse of insecticides in most systems that was unnecessarily costing farmers money and making it prohibitively difficult to use other tools like biological control. IPM presented a different perspective: that it is a bad business decision to kill every pest in your field, and that in most cases insecticides are best used as a last response to pest problems, not the first response.

Arguably, in some ways we have returned to the early model of pest control that IPM sought to replace. Pesticide use has risen steadily throughout much of the country. Prophylactic use of insecticidal GM crops, neonicotinoid seed treatments, and calendar sprays has often replaced scouting and treating pests when they become problematic. Do today's pesticides pose the same risks as those early organochlorines, carbamates and organophosphates? Probably not, and there are instances where these prophylactic approaches have helped increase opportunities for biological control (cotton, for example). But we are also balancing on the edge of a slippery slope. For example, there are few crop acres in the U.S. that are not currently treated with neonicotinoid seed treatments; what insecticides will swoop in to fill this niche when neonicotinoids fail or if they are found unsafe?

I was recently informed by applied entomologists at a major university that they didn't feel that conservation biological control was a realistic response to pest management, and a more pragmatic approach would be to use research to determine how to use pesticides better. This begs the question of whether research should be primarily focused on supporting the current crop production paradigm, or whether it should be used to bring agriculture to the next level? As with IPM in the 1960s and 70s, habitat management- conservation biological control- has its eyes on the future.

Agroecology has come a long way since the early days of IPM. We are quickly approaching a time when we can redesign cropping systems- using natural systems as a guide- that are profitable and where pests are not a problem to begin with. Farmers are already developing these crop production systems (often, in spite of the researchers), and predation, parasitism, and diseases are inherent in making these cropping systems work. I believe that this is the future of our discipline, and the IOBC-NRS is taking strategic steps to make this future a reality.

Many thanks to all of the people that have helped me over the past couple of years, and to all of you members who make this society live!

Johathan Lundgren

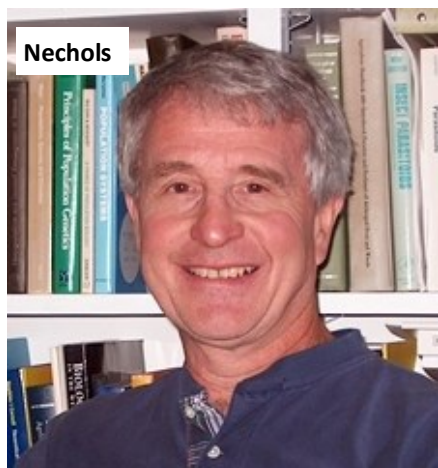
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Candidates for the IOBC NRS Election

President-Elect

James Nechols

Jim Nechols is a Professor of Entomology at Kansas State University. His research specializations are biological control, ecology and behavior of enemy-pest interactions, alternative pest management and insect phenology. He has been a member of IOBC for many years and served on the Executive Board as Secretary-Treasurer in the mid-1980s. Jim has worked on several biological control projects involving arthropod pests and he also led two projects on biological control of weeds. The majority of his research is focused on interactions of natural enemies with their biological and physical environment. Currently Jim is subject editor (biological control section) for Environmental Entomology, and previously served as principal editor for Crop Protection. Jim has co-edited two books on biological control. Jim has been a Member-at-large of IOBC NRS in 2013-14.



*From the **By-laws**:* The President-Elect shall serve two years as President-Elect and the following two years as President. The President-Elect shall assume the office of President at the close of the annual meeting held at the end of the term of the incumbent President. A vacancy in the office of the President-Elect shall be filled as soon as practical by written ballot. The President-Elect is the chair of the membership committee.

Secretary-Treasurer

James Harwood—incumbent

James is an Associate Professor of Insect Ecology within the Department of Entomology at the University of Kentucky. His research interests lie at the interface between food web ecology and biological control, with a particular focus examining predator-prey dynamics in agroecosystems. After a B.Sc. (Hons.) and Ph.D. from Cardiff University (1997, 2001), James continued developing his interests in biological control with postdocs in the United Kingdom and U.S. before joining the faculty at the University of Kentucky in 2007. A member of IOBC-NRS since 2004, Harwood served as a Member-At-Large from 2006-2008 and has held various positions within the Entomological Society of America (International Branch President 2010, International Affairs Committee Chair 2009, Membership Committee Chair 2012). He is also Editor-in-Chief of Food webs, an Editor of Biological Control and serves on the Editorial Board of Functional Ecology and Agricultural & Forest Entomology. James has been the Secretary-Treasurer of IOBC NRS in 2013-14.



*From the **By-laws**:* The Secretary-Treasurer shall have custody of all accounts, securities, property, and records of the Region. The Secretary-Treasurer shall prepare an annual budget, maintain membership and fee records, and pay the annual global membership fee and member subscriptions to BioControl.

Candidate for Vice President

Cesar Rodriguez-Saona

Cesar Rodriguez-Saona is an Associate Professor and Extension Specialist in Blueberry and Cranberry IPM at Rutgers University. He received his M.S. degree from Oregon State University and his Ph.D. from the University of California, Riverside. Prior to joining Rutgers University, he worked for the USDA-ARS in Phoenix, AZ, University of Toronto, and Michigan State University. The goal of his research program is the development and implementation of cost-effective and reduced-risk IPM practices for blueberries and cranberries that are compatible with biological control agents. He is pursuing this goal by integrating chemical, behavioral, and biological methods in insect control and by gaining a better understanding of the ecology of pests and their natural enemies. His extension program delivers current and critical IPM information to growers. The specific areas of expertise within his research program include Biological Control, Tri-trophic Interactions, Integrated Pest Management, Insect Chemical Ecology, Insect-Plant Interactions, and Host-Plant Resistance. Cesar has been a Member-at-large of IOBC NRS in 2013-14.



From the By-laws:
The Vice-President serves as the program chair for the Regional Section. In case of the inability of the President to serve, the Vice-President shall become President for the remainder of the current term of office.

Candidate for Corresponding Secretary

Corresponding Secretary

Jana Lee—incumbent

Jana is a Research Entomologist at the USDA ARS Horticultural Crops Research Unit in Corvallis, Oregon. Her laboratory studies the behavior of insects to develop biologically-based pest control on spotted wing drosophila, brown marmorated stink bug, raspberry aphid, and azalea lace bug. Jana focused on conservation biological control for her MS and PhD at Michigan State Univ. and Univ. of Minnesota, and on bark beetle IPM for her postdoctorate at UC Davis / Forest Service. Jana has been a member of IOBC since 2003., and been the Corresponding Secretary in 2013-14.



From the By-laws: The Corresponding Secretary shall be responsible for publication of the Regional Newsletter and shall act as a liaison for Regional information to be included in the global newsletter. The Corresponding Secretary shall also keep minutes of annual meetings and meetings of the Governing Board. [NOTE: Duties now include website maintenance.]

Candidates for Member at Large in the IOBC NRS Election (*three to serve on the Governing Board*) ...cont. on p. 6

Stefan Jaronski

Stefan Jaronski obtained his M.S. (1972) in parasitology and Ph.D. (1978) in entomology (insect pathology) from Cornell University, where he studied Microsporida in blowflies and mosquitoes, respectively. After two postdoctoral appointments concerning biocontrol of mosquitoes, he did an abrupt left turn leaving the academic community for industry, and changing from medical entomology to agricultural pests. Jaronski worked at Abbott Laboratories from 1983 to 1992, during which time his research involved commercial development of *Beauveria bassiana*, then *Bacillus thuringiensis* against a wide variety of insects. From 1992 until 2000 he worked at Mycotech Corp., Butte MT, a small venture biotech group commercializing Beauveria-based mycoinsecticides, and was involved in all aspects of commercial development, from early, basic research through field efficacy trials to generation of registration data, from basic mycology to formulation chemistry, from science to marketing. Jaronski joined USDA ARS Northern Plains Agricultural Research Laboratory in Sidney MT in March 2000 as Research Entomologist. Jaronski's research at Sidney centers on microbial control of grasshoppers on U. S. rangeland (as well as a lot of fingers in a lot of other pots). Jaronski has been a member of Nearctic Regional Section since 1993, serving as member-at-large 2000-2002, Secretary-Treasurer 2002-2012, and Vice President 2012-2014. In addition, he is currently Treasurer of the Society for Invertebrate Pathology.



Mary Gardiner

Mary Gardiner is an Associate Professor in the Department of Entomology at the Ohio State University. She received her M.S. from the University of Idaho in 2004 and her Ph.D. from Michigan State University in 2008. She currently advises eight graduate students and two research scientists who work in a diversity of agricultural and urban ecosystems. Much of this research takes place within Cleveland, OH, an urban ecosystem that encompasses 20,000 vacant lots that were formerly residential and commercial space. Here, her laboratory is focused on how redesigning vacant land to restore native plant communities, improve storm water infiltration, and provide access to locally-produced food influences arthropod communities and their contributions to ecosystem function and the provision of ecosystem services. She also has a book due out in February 2015 titled *Good Garden Bugs: Everything You Need to Know About Beneficial Predatory Insects*, published by Quarry Books. Mary is actively engaged in Extension related to enhancing home landscapes, urban greenspaces and small-scale farms as habitats for beneficial arthropods. She co-teaches two graduate courses: Insect Ecology and Evolutionary Processes and Presentation Skills for Scientists.



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Candidates for Member at Large (*three to serve on the Governing Board*) ...cont. from p. 5

Alejandro Costamagna

Alejandro Costamagna is an Assistant Professor in the Department of Entomology at the University of Manitoba. His research focuses on the ecology of natural enemies of agricultural pests at multiple spatial scales and his interests include ecosystem services at human-dominated landscapes, trophic and guild interactions in multi-species assemblages, and sustainable management of agricultural pests. He teaches undergraduate and graduate courses in general ecology and insect ecology at the Faculty of Agriculture and Food Sciences. Alejandro obtained his M.Sc. and Ph.D. in Entomology at Michigan State University, and did post-doctoral studies at the University of Minnesota and at CSIRO in Australia. He has been a member of IOBC since 2005.

Send items for the IOBC-NRS Newsletter to:

Newsletter Editor, Jana Lee

E-mail: Jana.Lee@hotmail.com

From the By-laws: The Members-at-Large shall serve as chairs of special committees or projects established by the membership or the Governing Board to facilitate meeting the objectives of the Regional Section and global organization. ... Members-at-Large shall serve for a period of two years and are not eligible for a second consecutive term.



Costamagna

IOBC Welcomes our new President for 2015-16

Donald Weber

Don has worked on environmentally friendly pest management in a variety of fruit and vegetable systems such as apple, cranberry, cole crops, sweet corn, and cucurbits. He holds a Masters from UC Berkeley and PhD from UMass Amherst. His research with USDA ARS at Beltsville, Maryland, focuses on biological and pheromonal control of chrysomelid beetles and other vegetable pests. This includes cultural controls to enhance conservation biological control, semiochemical manipulation both of natural enemies and of pests, and diel patterns of predation. His recent focus on small farms and urban gardens will allow some interesting studies as to how scale and different types of diversity affect small agroecosystems which may be distant from or close to surrounding ecosystems and their services such as biological control.



Weber