



FALL 2006

IOBC - NRS Newsletter

*International Organization for Biological Control
Nearctic Regional Section*

Volume 28
Number 3

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Changing of the Guard

The election results are in and we have winners. Actually, all of us are winners, as the new set of IOBC-NRS officers is excellent and will bring some new blood and new ideas to the Section. Les Shipp, entomologist with Agriculture and Agri-Food Canada and stationed in Ontario, will serve as President-Elect for the next two years. Les has been on the Governing Board and has been fully involved in Board meetings and plans. I am pleased Les agreed to run and even more pleased that he will serve the Section so well. Jean-Louis Schwartz, of the University of Montreal and leader of the Biocontrol Network (Canada) is the new Vice-President. You may have met Jean-Louis if you attended the joint IOBC-Biocontrol Network in Magog, Quebec, last year – Jean-Louis was one of the principal organizers of that highly successful meeting. His task will be to develop symposia for the annual meetings the next two years, so please offer your suggestions to him. Having both the President-Elect and Vice-President from Canada is a first as far as I can tell from IOBC history. We are grateful and honored to have both Les and Jean-Louis as NRS leaders for the next two years.

Jonathan Lundgren, scientist at the USDA-ARS laboratory in Brookings, South Dakota, will take over the task of Corresponding Secretary after the successful service of Susan Mahr. Please help Jon with his new task and submit articles to him. Stefan Jaronski, USDA-ARS in Sidney, Montana, will continue to serve as Secretary-Treasurer (more on dues below). Thanks, Stefan, for agreeing to serve again. Three new members-at-large of the Governing Board are Ruth Hufbauer, Department of Bioagricultural Science and Pest Management at Colorado State University; James Harwood, Department of Entomology, University of Kentucky; and Bill Overholt, Department of Entomology, University of Florida. Many thanks to the three of you for agreeing to serve the next two years.

I know it sounds trite, but the NRS really is your organization, so please weigh in with the new

officers, volunteer for a committee or office, submit your research findings to Jon Lundgren or find a way to contribute in whatever way you wish.

On the issue of dues, IOBC Global has relented in their push to have all dues collected globally. I know more than a few of you were put off by having to send your credit card information to Denmark – whereas you are willing to send it to Sidney, Montana – so we will revert to collecting dues from NRS members by the NRS treasurer, Stefan Jaronski. I am convinced that part of the decline in membership renewals was due to the dues-payment issue, so we hope to recoup some of the lost members with the reversion to previous payment options. The Governing Board will revisit use of credit card or PayPal to collect dues, in addition to submitting a check to Stefan (dues information enclosed in this issue). Please consider submitting your 2007 dues to Stefan early. If you are planning to subscribe to BioControl, it will be especially critical that you submit your dues and subscription amount to Stefan before the beginning of December, so the list of subscribers can be passed along to the publisher.

On one final note, the Governing Board, supported by IOBC Global President Joop van Lenteren and NTRS President Vanda Bueno, has decided to move ahead on a joint meeting in Mexico, in November 2007, to include IOBC-NRS, IOBC-NTRS and the Mexican Society for Biological Control. The theme of this meeting will be “Biocontrol Without Borders” (thanks Les Shipp, for the title!), and we in NRS are hoping this meeting will open dialog and lead to collaborations among biological specialists throughout the Western Hemisphere. If you were able to attend the last joint meeting (with the Biocontrol Network) in May 2005, you gained a sense of the value of meeting with others from parallel and related organizations – we hope to have the same sense of shared purpose and cooperation. The Mexican Society holds its annual Con-

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Changing of the Guard — Continued from page 1

gress in October or November each year; the IOBC meeting will be aligned with their schedule to allow participating in their Congress and the related training workshops that they offer each year. I will attend their Congress again this fall, to determine how best to make our IOBC meeting fit with their Congress and have neither group overwhelm the other. We are also discussing having either translation of papers or dual-screen presentations of papers – one set of slides in Spanish, the other in English. In addition to the IOBC meeting and the Congress, several workshop ideas have been floating around, to capitalize on NRS members being present. Regional projects and other working groups are encouraged to schedule their annual meetings as part of the Mexican meet-

ing. Meeting-room space will be made available. Negotiations for the site are still underway, and will be reported (with a call for papers) in the next NRS newsletter, as well as on the NRS Web Site. I appreciate the chance to serve as NRS president the past two years and look

forward to seeing where Marshall Johnson and Les Shipp will take the Section over the next four years. I hope to see you at the IOBC Symposium in Indianapolis this December, and in Mexico next November.

— Rob Wiedenmann

2007 Joint Meeting of IOBC-NRS, IOBC-NTRS and the Mexican Society for Biological Control (MSBC)

“Biocontrol Without Borders”

November 2007, Mexico

Details will be forthcoming, but plan now to participate, either by presenting a paper or poster (in either English or Spanish), teaching at one of the training workshops or holding a meeting of your regional committee or working group. Contact Rob Wiedenmann (rwieden@uark.edu) or Luis Rodriguez (rodriguez.luis@inifap.gob.mx) for further information.

NEWS

Change in Dues Payment

IOBC Global is reverting collection of dues to the regional sections. Therefore, renewal of membership in the Nearctic Regional Section, subscriptions to BioControl, etc. should now be directed to Stefan Jaronski, the NRS Secretary-Treasurer. Dues (in U.S. dollars!) may be sent to him at P.O. Box 232, Sidney MT 59270.

Please, please, use the IOBC/NRS membership form that will be posted on our website at the end of October with renewals. It is important that your contact information, especially email address, be updated with renewal.

PLEASE NOTE: Dues for 2007 are due December 1, 2006. A reminder will be sent out shortly before then. If membership renewal has not been received by January 15, 2007, you will be dropped (and no longer receive this newsletter).

Dues for 2007:

Regular	\$ 35.00
Regular with Subscription	\$150.00
Student	\$ 15.00
Institution	\$310.00

Gift Supports Students

The IOBC-NRS has received a generous gift in support of the IOBC Outstanding Student Award from long-time IOBC-NRS members who wish to remain anonymous. Contributions like this reveal the commitment of the donors to the discipline of biological control and their dedication to advancement of knowledge and implementation of this science. Do you have the same passion for biocontrol?

Farewell from the Editor

This is my last issue of the IOBC-NRS newsletter. I have enjoyed the chance to serve IOBC and remain connected to biological control despite no longer working in that area. I truly appreciate the timely contributions from members over the years that made my job a lot easier and hope that you will continue to assist our new editor, Jonathan Lundgren, as he takes over beginning with the Winter 2007 issue. And finally, I would like to offer a special thanks to Dan Mahr for proof-reading all the issues over the years!

— Susan Mahr

NEWSLETTER INFO

Please Submit Articles!

Submission of news items from the membership is what makes this newsletter of value to all. Anything related to biological control will be considered for publication: interesting research findings, proposed projects, theses or dissertation abstracts, publication reviews, awards, short review articles, and more. Get your name in print the easy way — just send your articles (preferably by email). Although a deadline is set for the editor's sake, you may submit at any time for future newsletters (see the address of the NEW editor, Jonathan Lundgren, on the back page).

Items for the Winter Newsletter are due by 15 January 2007

If you move, please send your new address to the Secretary/Treasurer or Corresponding Secretary so this newsletter will continue to reach you.



RESEARCH BRIEFS

Relevance of *Wolbachia* Bacteria in Biocontrol Research

Wolbachia bacteria are an unsuspected, but potentially important, component of many biocontrol programs. *Wolbachia* promote their spread by altering the reproductive success of their arthropod hosts. This ability frequently is identified as having potential either to reduce populations of pest species, or to increase populations of beneficial species. However, very little research on *Wolbachia* appears in arthropod- and

biocontrol-specific journals. Although *Wolbachia* will not have application for all programs, their prevalence cannot be denied. Populations of arthropods of current interest to biocontrol programs in Canada were screened for *Wolbachia*. Infections were detected in 47% of 177 populations, representing 46% of the 105 species tested. Greater awareness, in combination with the rapidly expanding knowledge base of *Wolbachia* and

similar endosymbionts, offers new directions for research in biocontrol programs. It is recommended that all arthropod species in biocontrol programs be screened for these bacteria.

— Floate K.D., G.K. Kyei-Poku, P.C. Coghlin. 2006. Overview and relevance of *Wolbachia* bacteria in biocontrol research. *Biocontrol Science and Technology* Vol. 16(8): 767-788.

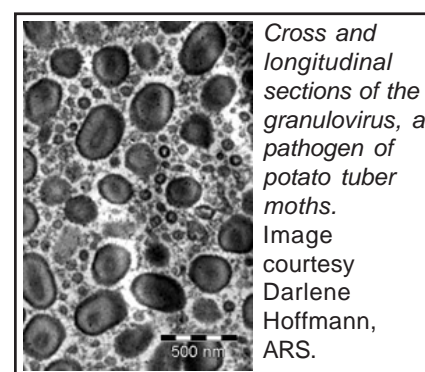
Granulovirus Tested for Biocontrol of Potato Tuber Moth

The potato tuber moth, which feeds on both the potato plant and its tubers, is a big problem in the Pacific Northwest. In July, USDA-Agricultural Research Service (ARS) scientists began testing a granulovirus' potential to biologically control the moth's larval stage. Entomologists Larry Lacey and Steven Arthurs with the ARS Yakima Agricultural Research Laboratory, Wapato are studying ways to produce and formulate the granulovirus as a biopesticide product that potato growers could spray on their crops before harvest, when synthetic insecticides can't be used. Another potential use is on stored potatoes. Lacey is leading the studies as part of a three-year cooperative agreement

involving scientists at Oregon State University's Hermiston Agricultural Research and Extension Center, and the International Potato Center in Lima, Peru.

Although the granulovirus is already used in other countries to protect stored potatoes from infestation, it's not commercially available to U.S. growers, and limited research has been done investigating the pathogen's preharvest potential.

Besides the granulovirus, Lacey's group is also examining the biological control potential of the bacterium *Bacillus thuringiensis*, two species of insect-specific nematodes, and the fungus *Muscodor albus*. In earlier potato-storage studies at Wapato, *Muscodor*'s re-



lease of natural volatile compounds killed both adult potato tuber moths and their larvae.

— adapted from an August 25, 2006 ARS Press Release by Jan Suszkiw at <http://www.ars.usda.gov/is/pr/2006/060825.htm>

Wolbachia in Filth Fly Parasites

More than two dozen species of wasps have been commercialized as biocontrol agents or are being studied for control of the house fly and stable fly. *Wolbachia* bacteria are known to infect at least some of these wasps and are of interest because infections can dramatically affect insect reproduction.

A survey in this parasitoid-fly system detected *Wolbachia* in 15 of 21 species of wasps and in three of nine species of flies parasitized by these wasps. Phylogenetic analyses using *wsp* gene sequences identified single isolate infections in most cases. Infections of two and four isolates were detected in the pteromalids *Nasonia vitripennis* and

Spalangia cameroni, respectively. Laboratory experiments showed infections in *S. cameroni* to cause an incomplete form of female-mortality (FM) type cytoplasmic incompatibility (CI). Crosses between uninfected female and infected male partners ($\text{w} \times \text{w}^{\text{w}}$) produced fewer progeny, which had a strong male-biased sex ratio. Crosses between $\text{w} \times \text{w}^{\text{w}}$, $\text{w}^{\text{w}} \times \text{w}^{\text{w}}$, and $\text{w}^{\text{w}} \times \text{w}$ produced more progeny, which had a female-biased sex ratio. Developmental times of progeny were increased when the paternal parent was infected with *Wolbachia*, regardless of whether the maternal parent was infected or whether offspring developed from fertilized eggs. This result may reflect the

action of *Wolbachia* on components of the seminal fluid that then affect the development of offspring from inseminated females. It is hoped that future studies of *Wolbachia* in this guild will facilitate the rearing and application of these wasps as biocontrol agents of house fly and stable fly.

— Kyei-Poku G.K., M. Giladi, P. Coghlin, O. Mokady, E. Zchori-Fein, K.D. Floate. 2006. *Wolbachia* in wasps parasitic on filth flies (Diptera: Muscidae) with emphasis on *Spalangia cameroni* Perkins (Hymenoptera: Pteromalidae). *Entomologia Experimentalis et Applicata* (in press)



MEETING CALENDAR

XXIX National Congress on Biological Control

Nov 5-10, 2006

Manzanillo, Colima, Mexico

Meeting of the Mexican society. For more information visit their website at <http://www.controlbiologico.org.mx/> or contact Dr. Jaime Molina Ochoa at jmolina@uco.mx

Weed Science Society of America Annual Meeting

Feb 5 - 10, 2007

San Antonio, Texas

Everything about weeds, including some biological control. For more information contact Joyce Lancaster at jlancaster@allenpress.com.

XIIIth International Symposium of Biological Control of Weeds

April 22-27, 2007

Montpellier, France

Registration closes 15 December 2006. € 400 by 31 Jan; € 480 after. Visit the Symposium website www.cilba.agropolis.fr/Weeds2007/Welcome.html for more details.

Joint Meeting of IOBC-NRS and Mexican Society of Biological Control

Nov 2007

Mexico

This meeting is still in the planning stages. For more information watch future issues of this newsletter or contact Rob Wiedenmann (rwieden@uark.edu) or Luis Rodriguez (rodriguez.luis@inifap.gob.mx).

IOBC/WPRS Working Group "Insect Pathogens and Entomoparasitic Nematodes"

2007

Alès, France

For more information contact local organizer Dr. Miguel Lopez-Ferber, at miguellopez@ema.fr

3rd International Symposium on Biological Control of Arthropods

Feb 8-13, 2009

Christchurch, New Zealand

Maximising success while minimising risk. For more information visit www.isbca09.com/ or contact Helen Shrewsbury at shrewsbh@lincoln.ac.nz

2006 IOBC-NRS SYMPOSIUM:

Best Practices in Classical Biological Control

The 2006 IOBC-NRS Symposium, '*Best Practices in Classical Biological Control*,' will be held at the Entomological Society of America meeting in Indianapolis, Indiana December 10-13. For more details about the meeting, see the ESA website at www.entsoc.org/

The recent concerns about non-target impacts of classical biological control have prompted biological control researchers to refine their practices for pre-release screening and post-release monitoring of biological control agents. In some countries and states, more restrictive importation laws or regulations are also prompting more detailed studies of prospective biological control agents. Presentations in this symposium will focus on recent developments in ensuring environmental safety of biological control releases and documenting the effects of releases. The symposium will end with the description of a new initiative for the nearctic regional section of IOBC: the development of a best-practices certificate available from IOBC.

The Symposium will be preceded by the Business Meeting of the IOBC-NRS, including presentation of the IOBC-NRS Distinguished Scientist Award and the IOBC-NRS Student Award, and will be followed by a reception and mixer.

The presentations will include (tentative titles):

- Ethics and Best Practices in Biological Control — Del Delfosse
- Best Practices in Assessing Host Ranges for Parasitoids — Roy van Driesche
- The integration of biological control regulation and research in New Zealand — Barbara Barratt and Abdul Moeed
- Will a "best practices certificate" facilitate biocontrol? The devil is in the details — Russell Messing
- An NRS-IOBC Best-Practices Certificate — George Heimpel



Application For Membership
in
**INTERNATIONAL ORGANIZATION FOR BIOLOGICAL CONTROL
OF NOXIOUS ANIMALS AND PLANTS (IOBC)
NEARCTIC REGIONAL SECTION (NRS)**

Membership (check one): NEW ___ RENEWAL ___

Check ONE Category of Membership:		
<ul style="list-style-type: none"> • Individual — includes IOBC-NRS newsletters, publication privileges in <i>BioControl</i>, and fees forwarded to the Global Body. 	in Canada, U.S. or Bermuda	U.S. \$35 ___
	elsewhere	U.S. \$45 ___
	Student (all locations)	U.S. \$15 ___
<ul style="list-style-type: none"> • Individual, with subscription to <i>BioControl</i> — includes IOBC-NRS newsletters, publication privileges in <i>BioControl</i>, fees forwarded to the Global Body, and journal subscription fee. 		U.S. \$150 ___
<ul style="list-style-type: none"> • Institutional member — Includes 2 copies of IOBC-NRS newsletters, <i>BioControl</i>, and \$150 forwarded to Global Body 		U.S. \$310 ___
<ul style="list-style-type: none"> • Supporting member — Includes 2 copies of IOBC-NRS newsletters, <i>BioControl</i>, \$900 for support of Global organization, and \$100 to support NRS. 		U.S. \$1000 ___

Total enclosed for annual membership for the year 2007 (January to December) U.S. \$ _____

Date: _____ Signature: _____

Please print or type:

Name

Mailing address

Address, line 2

City, State/Province, Postal Code, Country

Telephone number

FAX number

email address

Send application form and payment to:
Stefan Jaronski
Secretary-Treasurer IOBC/NRS
P.O. Box 232
Sidney, MT 59270 USA

**MAKE CHECK PAYABLE TO
"IOBC/NRS"**

Brief description of specialty area:

**International Organization for Biological Control of Noxious Animals and Plants
Nearctic Regional Section**

**Organisation Internationale De Lutte Biologique Contre Les Animaux Et Les Plantes Nuisibles
Section De La Region Nearctic**

<http://www.entomology.wisc.edu/iobc/nrs.htm>

IOBC website: <www.iobc.agropolis.fr>

**Send items for the
Winter 2007 IOBC-NRS Newsletter
by 15 January to:**

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The **International Organization for Biological Control - Nearctic Regional Section Newsletter** is published 3 times a year in February, June, and October to provide information and further communication among members of the Region (Bermuda, Canada, and the United States).

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