



INTERNATIONAL ORGANIZATION FOR BIOLOGICAL CONTROL
OF NOXIOUS ANIMALS AND PLANTS (IOBC)

IOBC NEWSLETTER 82

[WWW.IOBC-GLOBAL.ORG](http://www.iobc-global.org)

IOBC is affiliated with the International Council of Scientific Unions (ICSU)
as the Section of Biological Control of the International Union of Biological Sciences (IUBS)

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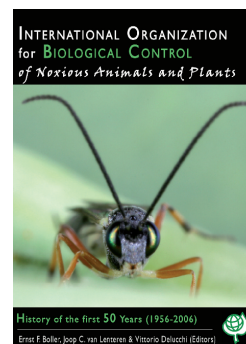
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**“IOBC: History of the first 50 years” has appeared.
Order your copy (10 Euro or 15 US\$) by emailing
Joop.vanLenteren@wur.nl**

*PDF files of previous newsletters can be found at
www.iobc-global.org*



1. EDITORIAL: LOOKING A BIT BACK, BUT ALSO FORWARD !!!

This editorial is meant (1) to report about our activities of the past three years, (2) to provide information about the current status and accomplishments of IOBC Global, and (3) to summarize some of the future activities.

(1) What has been done so far

When we started in August 2004, we realized that the very first priority was to spend quite some time on reorganizing internal affairs (finances, communication with working groups and regional sections, communication with members (website, newsletter). During the General Assembly, we proposed to work on the following issues:

- Celebrate 50th Anniversary of IOBC at several occasions worldwide: done extensively; including writing of book History IOBC.
- Communicate wherever possible about important findings of biological and integrated control in the framework of sustainable production of sufficient and healthy food in a biodiverse world: done on many occasions.
- Play an active role on national and international levels with regard to safety of biological control (quality control, safety of exotic natural enemies) and benefits of integration of biocontrol with other control methods: done on many occasions.
- Work on revival of activities of several regional sections. Various sections of IOBC were very active in the past, but did not show activities in 2004 or the status of sections was unknown (e.g. EPRS (Central and East Europe), NTRS (Latin America)). Other areas of concern were ATRS (Africa) and part of APRS (Asia). Tried to obtain external funding to set-up new activities in the mentioned regions. EPRS and NTRS are very active now; APRS to some extent; ATRS not yet. External funding to set-up new activities has only partly realized through Springer annual fee for BioControl.
- Develop incentives to make membership more attractive for all types of members. Active search for new IOBC members by IOBC Global and Regional Sections: done to some extent (new members EPRS, NTRS, APRS). The following incentives were developed to make membership more attractive: provision of writing partnership, Internet Book of Biological Control, frequent newsletter, and AGORA (see text about AGORA below).
- Try to obtain free/strongly reduced subscription of electronic versions of Entomological and Biocontrol journals for members/institutes in developing countries via the AGORA network = Access to Global Online Research in Agriculture: done, can be applied for directly at FAO, no need to do this via IOBC (see text about AGORA below).
- Improve information provided at website and in newsletter (only via website) by regular updates: done.
- Publish, step by step, biocontrol successes for each IOBC region on the IOBC website: done to some extent in IOBC Internet Book of Biological Control, more to be done.
- Produce book on 50 years of successes in biocontrol and new strategies for implementation of biocontrol and IPM: not done, only partly realized in book of History of IOBC and IOBC Internet Book of Biological Control

Not planned, but done:

- EPPO update criteria positive list natural enemies, update positive list, reestablished cooperation; future EPPO-EFSA role of IOBC: evaluate risks of import and releases of exotic natural enemies
- Writing of IOBC history book
- Production of IOBC Internet Book of Biological Control
- Establishment of IOBC archive
- Realized new contract with publisher of BioControl which is much more profitable for IOBC
- Obtained much more money for WG activities

- Created writing partnership (some 50 papers edited; Latin America, Africa, Asia, East Europe)
- Provision of information about biological control on an almost daily basis via email
- Contacts with IUBS about importance of conservation of biodiversity for future exploration of natural enemies
- Contacts with FAO about same issue

AGORA: free access to scientific papers for developing nations.

As one of our tasks, the 2004-2008 Executive Committee of IOBC Global intended to obtain free access for its members in developing countries to the AGORA network (AGORA = Access to Global Online Research in Agriculture). Members of the Executive Committee have discussed this possibility on various occasions with publishers and representatives of the Food and Agriculture Organization of the United Nations (FAO). As a result of these discussions, we can now inform members of IOBC in developing countries that they can get free access to AGORA directly at FAO if they meet the criteria for eligibility (see below).

AGORA is an initiative led by the FAO. AGORA has provided institutions of many developing countries with free or low cost access to journals covering agriculture and related biological, environmental and social sciences. AGORA's goal, since its beginning in 2003, is to increase the quality and effectiveness of agricultural research in countries with a low GNP. Through AGORA, researchers, policy makers, educators, technicians, students, and others have access to reliable, relevant information, and the means to continually expand their work related to food security and agricultural development, including biological control.

A partnership of global scientific publishers, the FAO, Cornell University (USA) and others, AGORA provides an internet portal to an online journal collection selected for agricultural research communities in the developing world. Agriculture is broadly interpreted to include food, nutrition, environment, development economies, and more. Hence, the vast number of journals supplied by publishers and societies cover these sectors. The AGORA website is hosted at FAO. FAO manages the registration and coordinates the training and outreach for AGORA.

To qualify as recipients for AGORA criteria for eligibility have been set. Usually, it's free access for institutions in the countries of Africa, Australasia, Asia, the Indian sub-continent, and Central and South America with per capita annual income of \$1,000 or less. These figures are reviewed and amended periodically.

Links to Agora:

<http://www.aginternetwork.org/en/>

English version

http://www.aginternetwork.org/es/privacy_policy.php

Spanish version

<http://www.fao.org/french/newsroom/news/2003/23019-fr.html>

French version

(2) Current status and accomplishments of IOBC Global

- IOBC is the only truly worldwide organization representing research in biological control in various global, regional and national organizations (e.g. IUBS, FAO, EC, ICE) for more than 50 years
- IOBC developed practically applied biological control and integrated pest management programs
- IOBC was the first to develop IPM guidelines for all major crops in Europe and has since continued to contribute to the development of principles of sustainable agriculture, e.g. guidelines on Integrated Production.
- IOBC initiated and co-developed Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms (International Standard for Phytosanitary Measures Number 3, 32 pages, 2005; Secretariat of the International Plant Protection Convention; available at www.FAO.org)
- IOBC initiated and co-developed methods to test side effects of pesticides on natural enemies, which are now the official standard for testing side effects in the European Union pesticide registration procedure and published as the EPPO standard for Environmental Risk Assessment

Scheme for Plant Protection Products, Chapter 9, PP 3/9, EPPO Bulletin 33, 99-131; available at [http://archives.eppo.org/EPPOStandards/PP3_ERA/pp3-09\(2\).pdf](http://archives.eppo.org/EPPOStandards/PP3_ERA/pp3-09(2).pdf).

- IOBC initiated and co-developed with the natural enemy producers guidelines for mass production and quality control of beneficial organisms (see: <http://www.amrqc.org>)
- IOBC co-developed with OECD a document on Guidance for Information Requirements for Regulation of Invertebrates as Biological Control Agents (IBCA's) (OECD Series on Pesticides Number 21, Environment Directorate; Organisation for Economic Co-Operation and Development, Paris 2003, 22 pages; Available at <http://www.oecd.org/dataoecd/6/20/28725175.pdf>)
- IOBC contributed information on biological control and biodiversity to the FAO report "Genetic resources of importance to agriculture" (to appear in 2007)
- Reviewed and made important contributions to paragraphs on sustainable agriculture and pest management in the UN-coordinated International Assessment of Agricultural Science and Technology for Development (to appear in 2008)
- Provided information to several organizations about natural enemies as quality indicators for biodiversity, and natural enemies as test organisms for side effects of pollutants and for pesticides as indicator of in and off field non-target effects

(3) Future activities of IOBC Global

IOBC is currently, among others, contributing to the following important developments:

- harmonization of quality control guidelines for natural enemies (together with the biocontrol industry; see e.g. van Lenteren, 2003)
- harmonization of guidance on import and release of new natural enemies (together with global, regional and national organizations; see e.g. Bigler et al., 2005; van Lenteren et al., 2006)
- harmonization of guidance on exploration natural enemies (together with several other global and regional organizations)

IOBC is also strongly involved in the organization of several symposia for the International Congress of Entomology in Durban in 2008. Programmes have been made and speakers have been invited for the following symposia:

- Critical analyses of successes and failures of biological control in Africa
- What are ecology's contributions to biological control and vice versa?
- Environmental benefits and risks of biological control
- Can boundaries between biocontrol and GMO's be overcome?

During 2007/2008 a new Global working group will be formed on "**Benefits and risks associated with exotic biological control agents**". The aims of this working group are, among others, (1) to assess the characteristics of exotic natural enemies which are considered to be successful biological control agents, and (2) to assess the characteristics of exotic natural enemies introduced into a country as biological control agents which subsequently become invasive alien species. IOBC WPRS is creating a working group in the same area, which will initially concentrate on the invasion of *Harmonia* in Europe (see elsewhere in this newsletter). More news about this working group will soon be available at the websites of IOBC Global and WPRS.

Joop C. van Lenteren,

President IOBC-Global

2. EXECUTIVE COMMITTEE MEETING 2007

The Executive Committee has met in Rome in May 2007. The main issues were related to the finances (overview of financial activities 2004-2007, preparation of budget proposals for 2008 and later, decisions concerning financial support of a number of activities), the functioning of Regional Sections and Working Groups, the formulation of guidelines for Regional Sections and Working Groups, the

creation of a new Global Working Group, and the preparation of the council meeting to be planned for November 2007).

3. COUNCIL MEETING 2007

Due to personal reasons, the council meeting of 2007 planned in November 2007 had to be cancelled. Almost all issues that should be discussed at the council meeting were communicated to the council members by email (seven files concerning various items have been sent out, the reactions have been collected; until now, very few problems have been encountered; some of the interesting suggestions made by council members will result in proposals to be reported in the March 2008 newsletter of Global and will later be discussed during the council meeting in Durban, 2008).

4. BOOKS ON BIOLOGICAL CONTROL: HOW MANY ARE THERE?

IOBC Global is preparing an overview of available biological control books in national languages. See the appendix of the IOBC Internet Book of Biological Control for a first listing. Ah, you miss your country's biocontrol book? Send us a short summary and a jpeg file of the first page and the book will be added to the list. The Fourth Edition of the **IOBC INTERNET BOOK OF BIOLOGICAL CONTROL** with a list of biocontrol books is out: see IOBC-Global.org

5. A NEW EXECUTIVE COMMITTEE OF THE IOBC GLOBAL FOR 2008 - 2012

The four years period of the Executive Committee will end during the next General Assembly that will be organized within the Framework of the XXIII International Congress of Entomology, Durban, South Africa, in the summer of 2008. New officers are elected by all IOBC members by an email postal ballot which will be performed before the General Assembly, likely in the spring of 2008. The Executive Committee consists of the President, the immediate Past-President, the two Vice-Presidents, the Treasurer and the Secretary General. With the exception of the Secretary General, officers are not eligible for a second term in the same office. Any member of the IOBC can be a candidate for the election. If you are interested to be a candidate (either as President, Vice-President, Treasurer or Secretary General), please contact the Secretary General of the IOBC (collazza@unipa.it). The details of the election procedure will be given in one of the following issues of the IOBC Newsletter. For official information on elections, see the statutes at our website.

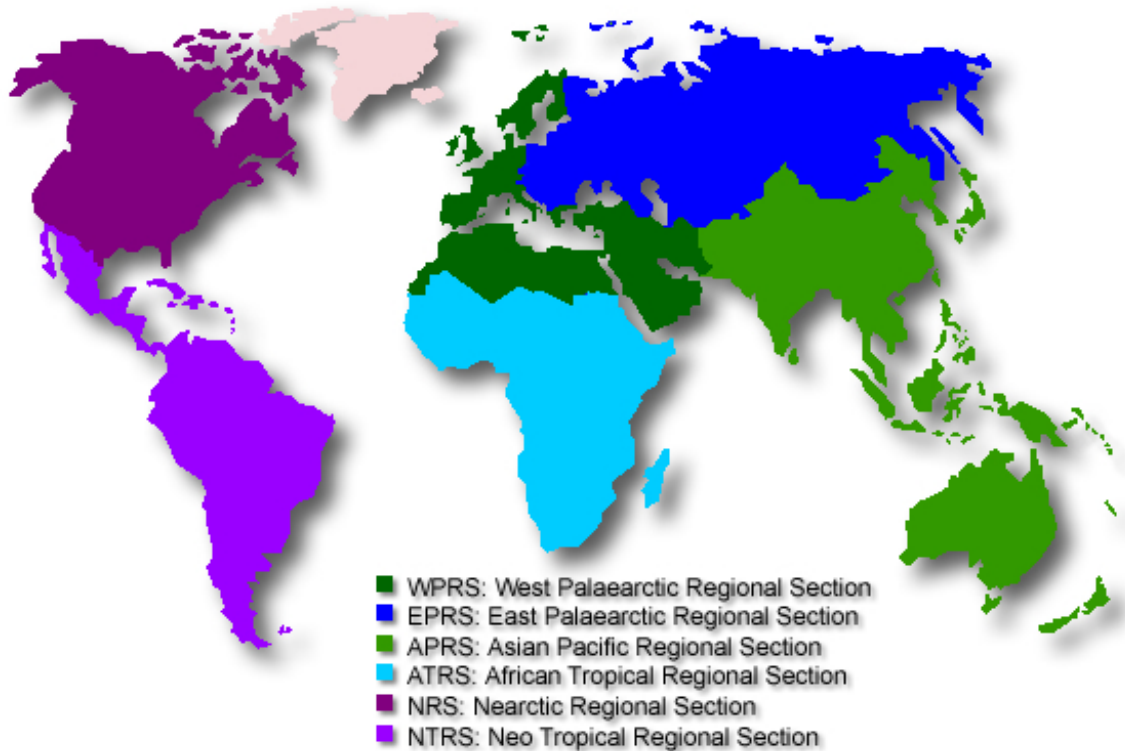
6. MEMBERSHIP FEES 2007

Membership fees for 2007 are the same as for 2006! Please be so kind to pay the 2007 fees to the your Regional Section. All information about membership and fees can be found on our website.

HAVE YOU PAID YOUR MEMBERSHIP FEE ?

THANK YOU !!

7. STATE OF AFFAIRS OF REGIONAL SECTIONS OF IOBC



Short information of all the Regional Sections, with a link to their websites, can be found on www.IOBC-Global.org and at the end this newsletter.

In 2005, the relationships with the East Palaearctic Section (EPRS) have been intensified. A new Executive Committee was elected during the General Assembly in Budapest, Hungary June 2005. EPRS organized a conference on “Biological Control in Integrated Production” in Poznań, Poland, May 15-19, 2006.

In 2006, much work has been done to reactivate the NeoTropical Regional Section (NTRS). First, a meeting with representatives of several Latin American countries and previous NTRS board members was held in Buenos Aires, Argentina. As a result, elections of a new Governing Board were organized. During a meeting in Recife, Brazil in August 2006, the new Governing Board presented itself and organized a meeting to discuss the future activities of NTRS. In this same period, NTRS organized a meeting in Colombia. The result of these activities is that NTRS membership increased from 3 to 75 during the past year!

In the other regions, the situation is similar to what was written in previous newsletters.

8. STATE OF AFFAIRS WORKING GROUPS IOBC-GLOBAL

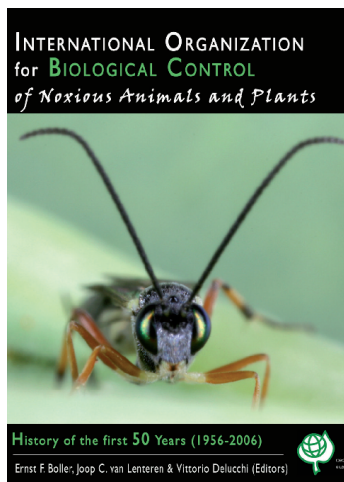
Recent meetings and short information of all the Global Working Groups, with a link to their websites, can be found on www.IOBC-Global.org. at the end of this newsletter.

Most of the 8 IOBC Global working groups are active and have planned meetings in the near future. We have received several proposals for new working groups. Proposals include: (1) Environmental benefits and costs of releasing exotic natural enemies, (2) Designing agroecosystems that nurture biological control, (3) Unisex (pure female lines) and biological control. The first proposal has been accepted by the Executive Committee and a Working Group has been formed. Persons interested in starting up a Global Working Group in issue 2 or 3 are invited to contact the Secretary General (colazza@unipa.it).

Because of our earlier poor financial situation, we had to reduce the support for working groups in 2004 and 2005. However, we are now be able to support working groups again if they fulfil the IOBC criteria (see website). Most working groups attract many participants to their meetings, but a

rather low percentage of the participants is member of IOBC. We would appreciate working groups to motivate participants to apply for IOBC membership!

9. IOBC'S FIRST FIFTY YEARS



Publication of book about history of IOBC

In this book, edited by Ernst Boller, Joop van Lenteren and Vittorio Delucchi, the history of IOBC Global and its Regional Sections is summarized, as well as of all the working groups and commissions of the organization on about 275 pages. **Order your copy (10 Euro or 15 US\$) by emailing Joop.vanLenteren@wur.nl**

Many colleagues have made most valuable contributions to this book either by adding interesting details to the histories of the Regional Sections and IOBC Global, or by writing short historic reviews of individual IOBC Commissions and Working Groups. In reading all these texts, you will discover an interesting characteristic of IOBC: its linguistic diversity. The vast majority of persons actively involved in IOBC activities do not communicate in English as their mother tongue, but in 30 or more different languages. Inevitably, the effort to communicate during international meetings and through written contributions in IOBC publications has created an unorthodox but lively “IOBC English” which captures the flavour of the authors’ own culture and geographic regions. Transmitting the content has always been more important than striving for linguistic perfection. Therefore, following a long IOBC tradition, we as editors of this book have refrained from linguistic polishing of the individual contributions, but have intervened discretely where errors could have led to serious confusion.

10. IOBC GLOBAL JOURNAL BIOCONTROL AND ISSUE ON *HARMONIA AXYRIDIS*

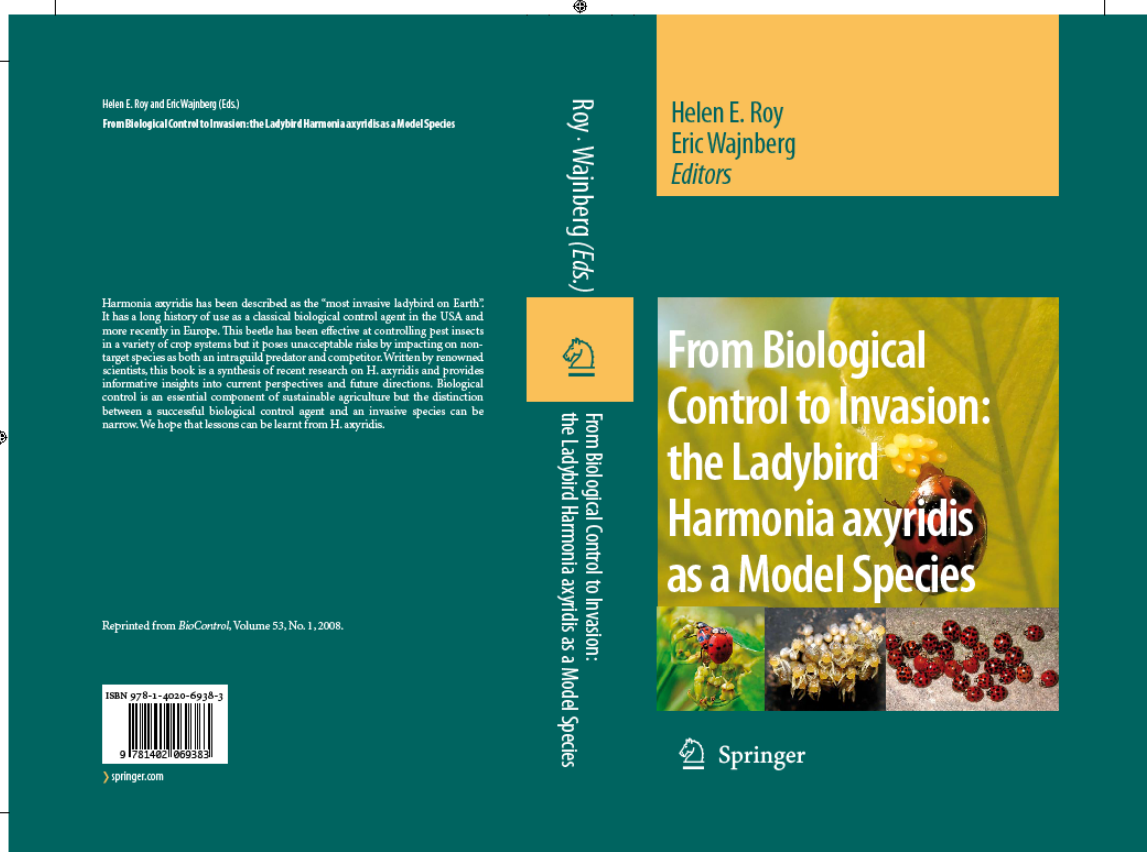
In the previous newsletter (issue 81, March 2007, available on the website of IOBC Global) we reported about the change in editorship and the excellent work of the first editor in chief of BioControl, Prof.dr. Heikki Hokkanen (Finland). The new editor in chief, Dr. Eric Wajnberg (France), is currently realising a number of changes, which contributing authors will experience next year.

The first issue of 2008 will consist of contributions related to the import, release and spread of *Harmonia axyridis* in Europe. This issue was prepared with the aim to also release it as a book. The issue was edited by Dr. Helen Roy (UK) and Eric Wajnberg, and will contain the following papers:

- Adriaens T, San Martin y Gomez G, Maes D Invasion History, habitat preferences and phenology of the invasive ladybird *Harmonia axyridis* in Belgium
- Berkvens N, Bonte J, Berkvens D, Deforce K, Tirry L, De Clercq P Pollen as an alternative food for *Harmonia axyridis*
- Berkvens N, Bonte J, Berkvens D, Tirry L, De Clercq P Influence of diet and photoperiod on development and reproduction of European populations of *Harmonia axyridis* (Pallas) (Coleoptera: Coccinellidae)
- Burgio G, Lanzoni A, Accinelli G, Maini S Estimation of mortality by entomophages on exotic *Harmonia axyridis* vs native *Adalia bipunctata* in northern Italy
- Brown PMJ, Adriaens T, Bathon H, Cuppen J, Goldarazena A, Hagg T, Kenis M, Klausnitzer BE, Kovar I, Loomans AJ, Majerus MEN, Nedved O, Pedersen J, Rabitsch W, Roy HE, Ternois V, Zakharov I, Roy DB, Ware RL, Majerus MEN *Harmonia axyridis* in Europe: spread and distribution of a non-native coccinellid
- Brown PMJ, Roy HE, Rothery P, Roy DB, Ware RL, Majerus MEN *Harmonia axyridis* in Great Britain: analysis of the spread and distribution of a non-native coccinellid

- Jansen JP, Hautier L Ladybirds population dynamics in potato: comparison of native species and an invasive species, *Harmonia axyridis*
- Kenis M, Roy HE, Zindel R, Majerus MEN Current and potential management strategies against *Harmonia axyridis*
- Koch RL, Galvan TL Bad side of a good beetle: The North American experience with *Harmonia axyridis*
- Koyama S, Majerus MEN Interactions between the parasitoid wasp *Dinocampus coccinellae* and two species of coccinellid from Japan and Britain
- Lombaert E, Malausa T, Devred R, Estoup A Phenotypic variation in invasive and biocontrol populations of the harlequin ladybird, *Harmonia axyridis*
- Pell JK, Baverstock J, Roy HE, Ware RL, Majerus MEN Intraguild predation involving *Harmonia axyridis*: a review of current knowledge and future perspectives
- Poutsma J, Loomans AJM, Aukema B, Heijerman T Predicting the potential distribution of the multicoloured Asian ladybeetle, *Harmonia axyridis*, using the CLIMEX model
- Roy HE, Brown PMJ, Rothery P, Ware RL, Majerus MEN Interactions between the fungal pathogen *Beauveria bassiana* and three species of ladybird: *Harmonia axyridis*, *Coccinella septempunctata* and *Adalia bipunctata*
- Roy HE, Wajnberg E From biological control to invasion: the ladybird *Harmonia axyridis* as a model species
- Soares AO, Borges I, Borges PAV, Labries G, Lucas E *Harmonia axyridis*: What will stop the invader?
- van Lenteren JC, Bigler F, Babendreier D, Loomans A *Harmonia axyridis*: an environmental risk assessment for Northwest Europe
- Ware RL, Majerus MEN Chemical protection of *Calvia 14-guttata* eggs against intraguild predation by the invasive ladybird *Harmonia axyridis*
- Ware RL, Majerus MEN Intraguild predation of immature stages of British and Japanese coccinellids by the invasive ladybird *Harmonia axyridis*

Provisional cover of *Harmonia* book



11. IOBC INTERNET BOOK ON BIOLOGICAL CONTROL

The **FOURTH EDITION** of the **IOBC INTERNET BOOK OF BIOCONTROL IS OUT**: see **IOBC-Global.org**



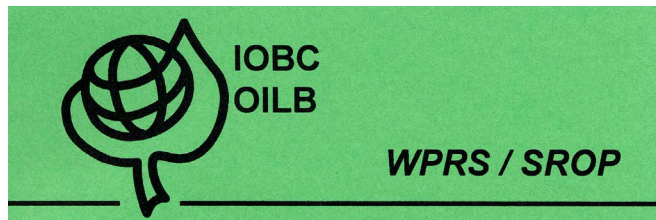
IOBC Internet Book of Biological Control

Aim: to present the history, the current state of affairs and the future of biological control in order to show that this control method is sound, safe and sustainable

The fourth edition of the book contains more than 100 pages with information about biocontrol is available for free on our website.

We ask you to support the preparation of this book. The first priority is to receive summaries of the actual application of biological control in each country or region. The second priority is to document the history of biological control in each country, including some key references, so that it will be easier for all biocontrol workers worldwide to know what has been done and what is going on at this moment. This will help us to make clear **how important biological control is**. We have received several very good contributions during the past months, which will be included in the fourth edition, **THANK YOU**.

12. AVAILABILITY OF PROCEEDINGS/BULLETINS IOBC-WPRS WORKING GROUPS



The working groups of WPRS are producing each year about 10 bulletins containing the proceedings of their meetings. Bulletins that have appeared since 1993 are listed on the WPRS website, and copies of these bulletins can be ordered with a form available on this website (via www.IOBC-Global.org to WPRS, go to publications etc.).

Summaries of the contents of WPRS bulletins can also be found on the WPRS website and in Profile, the newsletter of WPRS.

13. IOBC-GLOBAL WRITING PARTNERSHIP

Since the start of the IOBC writing partnership programme, IOBC assisted in preparing more than 50 manuscripts from members in Latin America, Central Europe and Asia for several refereed biological control and entomological journals.

There were quite a number of applications for this service from non-IOBC members, but we had to inform the applicants that we can only do this very time consuming work for our members.

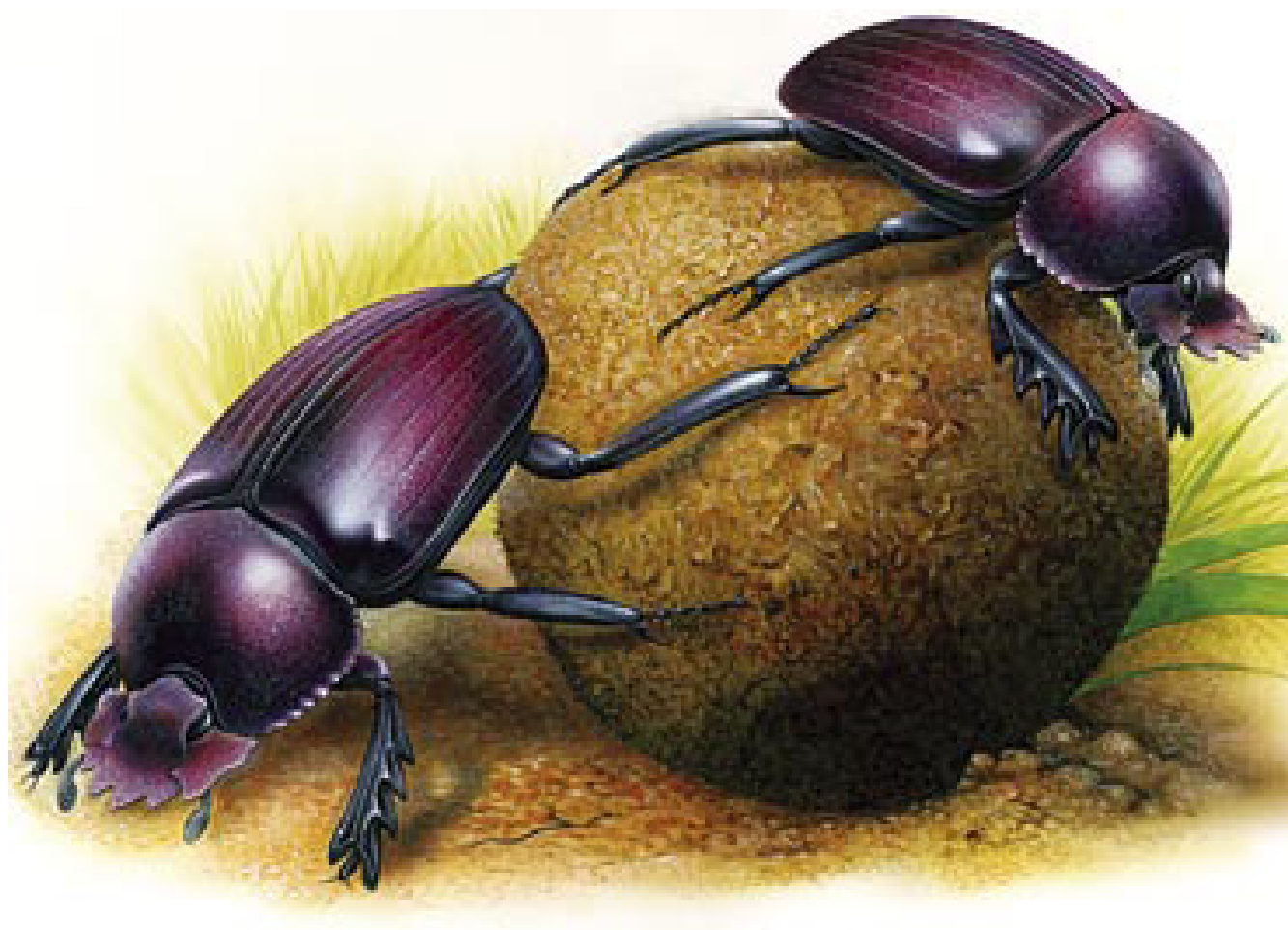
You can apply for a writing partnership if you are from a non-English speaking developing country and member of IOBC. See our website, IOBC-Global.org, for more details and an application form.

14. NEXT MEETING OF EXECUTIVE COMMITTEE, COUNCIL AND GENERAL ASSEMBLY OF IOBC-GLOBAL; INTERNATIONAL CONGRESS OF ENTOMOLOGY

The next meeting of the **Executive Committee** of IOBC Global will be held in the spring of 2008. The agenda of this meeting will be published on our website www.IOBC-Global.org: *we appreciate input from members!*

Message for all Regional Sections: During the International Congress of Entomology in Durban, South Africa in the summer of 2008, a **Council Meeting** and the **General Assemblée** of IOBC Global will be organized. Please be so kind to mail to Stefano Colazza (Colazza@unipa.it) who will represent your region. Also mail us topics to be discussed at this meeting. We already have many topics for this meetings and will send you a provisional agenda shortly after our Executive Committee meeting in the spring of 2008.

**We hope to see many of you at:
ICE 2008
XXIII International Congress of Entomology
6 - 12 July, 2008
International Convention Centre, Durban
www.ice2008.org.za**



15. 3rd INT. SYMP. ON BIOLOGICAL CONTROL OF ARTHROPODS



The Third International Symposium on the Biological Control of Arthropods (ISBCA III) will be held in Christchurch, New Zealand in February–March 2009. The key organizer of ISBCA III is Steve Wratten (Wrattens@lincoln.ac.nz) at Lincoln University.

16. SUMMARIES OF PHD THESES

The role of ecological compensation areas in conservation biological control. G. Burgio (Bologna, Italy). PhD Thesis, Wageningen University, 2007, 154 pp.



Ecological compensation areas (ECAs), defined as all natural vegetation and non-crop plants within the rural landscape, are considered an important tool in multifunctional agriculture. In particular, ECAs are crucial in enhancing functional biodiversity for pest suppression and for the conservation of rare species. In my PhD thesis I focused on the role of ECAs on functional biodiversity, which is associated with the ecological services employed by the beneficial fauna. Within multifunctional agriculture, functional biodiversity is particularly aimed at establishing strategies for farmers to enhance ecosystem functioning for pest suppression and for conservation of insect diversity.

I performed several case-studies about insect conservation within the rural landscape of the Po Valley in northern Italy. First, I carried out two case-studies at the farm-scale, which are presented in the first two sections of the thesis that address (i) the role of ECAs on generalist predators and (ii) the role of ECAs and flowering plants on parasitoids of leafminers. Then, in the last part of the thesis (section 3), I report a case of insect conservation at the landscape-scale, which involved the sampling of different insect bioindicators, like syrphids, carabids, butterflies and sawflies.

The research described in the first two sections, resulted in the identification of many non-crop plants within ECAs that play an important role in the conservation of beneficial insects, including generalist predators and parasitoids. Knowledge about the role of non-crop plants on the multiplication, life cycle and population dynamics of these beneficial arthropods can be helpful to select weeds, trees and shrubs, in order to restore degraded agroecosystems. In the thesis I provide detailed lists of non-crop-plants and related beneficial insects that will assist in the implementation of management techniques of non-crop plants within ECAs.

In the third section, I was able to demonstrate that each insect group displayed different biodiversity patterns in relation to the different landscape/micro-habitat categories. Bioindicators like syrphids and carabids were strongly affected by the landscape complexity, while butterflies were mainly influenced by the micro-habitat characteristics. I discuss the role of these insect groups as landscape/micro-habitat indicators and I provide faunistic list of species which may be helpful to compile regional lists for studies on insect conservation.

Next, I discuss the importance of assigning a “*functional meaning*” to faunistic lists of insects in a landscape management approach. In order to develop this aspect, I used an expert system, called Syrph the Net, which is a tool that uses the so-called *biodiversity maintenance function* to explore elements of site quality and site management.

In all the sections, I discuss the importance of sampling techniques for quantification of insect diversity. In conclusion, my thesis project demonstrates the importance of ECAs on insect conservation and biodiversity, and also provides information about management strategies for non-crop plants to improve conservation biological control and conservation of rare insect species.

The full text of this thesis can be obtained from: gburgio@entom.agrsci.unibo.it

For information about the following PhD theses, see Global Newsletters from 75 onwards (pdf files on website):

A novel bacterial disease of the predatory mite *Phytoseiulus persimilis*: disease syndrome, disease transmission and pathogen isolation. PhD thesis Conny Schütte (The Netherlands), Wageningen Universiteit, February 2006. *A pdf version of this thesis can be obtained at: conny.schuette@tiscali.nl*

Assessing the risks and benefits of flowering field edges: strategic use of nectar sources to boost biological control. PhD thesis Karin Winkler (Germany), Wageningen University, Laboratory of Entomology, The Netherlands; December 2005. *A pdf version of this thesis can be obtained at: Karin.Winkler@wur.nl; or Joop.vanLenteren@wur.nl*

Associative learning in two closely related parasitoid wasps: a neuro-ecological approach. PhD thesis Maartje A.K. Bleeker (The Netherlands), Wageningen University, Laboratory of Entomology, The Netherlands; December 2005. *A pdf version of this thesis can be obtained from maartje.bleeker@wur.nl*

Bioecology of *Aphidius colemani* Viereck, 1912 (Hymenoptera: Braconidae, Aphidiinae). PhD Thesis of Marcus Vinicius Sampaio (Brazil), Federal University Lavras, Minas Gerais, Brazil. *Information about this thesis can be obtained from VHPBueno@ufla.br*

Biological control of plant bugs, *Lygus* spp., PhD thesis T. Haye, Department of Zoology, Christian-Albrechts University, Kiel, Germany, 2004. *The full version of this thesis can be obtained at: http://e-diss.uni-kiel.de/diss_1133*

Chemical ecology and integrated management of the banana weevil *Cosmopolites sordidus* in Uganda. PhD Thesis of W. Tinzaara (Uganda), Laboratory of Entomology, Wageningen University, February 2005. *A pdf copy of this thesis can be obtained from arnold.vanhuis@wur.nl*

Development in different temperature and rearing optimization of the predator *Orius insidiosus* (Say, 1832) (Hemiptera: Anthocoridae). PhD Thesis of Simone Martins Mendes (Brazil), Federal University Lavras, Minas Gerais, Brazil. *Information about this thesis can be obtained from VHPBueno@ufla.br*

Extremely selfish B chromosome initiates only male offspring by eliminating a complete genome: Mode of action, origin and structure of the Paternal Sex Ratio chromosome in the parasitoid wasp *Trichogramma kaykai*. PhD thesis of J.J.F.A. van Vugt (The Netherlands), Laboratory of Entomology, Wageningen University, The Netherlands. *A pdf copy of this thesis can be obtained from joke.vandervugt@wur.nl*

Evaluation of *Lysiphlebus testaceipes* (Cresson, 1880) (Hym.: Aphidiidae) as an agent of biological control of aphids in protected cultivations. PhD Thesis of Sandra Maria Morais Rodrigues (Brazil), Federal University Lavras, Minas Gerais, Brazil. *Information about this thesis can be obtained from VHPBueno@ufla.br*

Evaluation of *Orius* species for biological control of *Frankliniella occidentalis* (Pergande) (Thysanoptera: Thripidae). PhD thesis M.G. Tommasini (Italy), Wageningen University, Laboratory of Entomology, The Netherlands; September 2003. *A pdf version of this thesis can be obtained from tommasini@crpv.it*

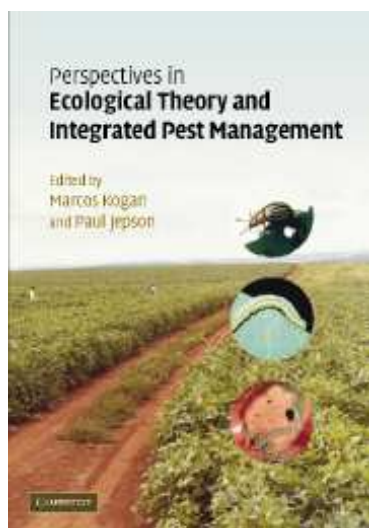
Host selection in Hymenopteran parasitoids: behaviour, morphology and sensory physiology. S. Ruschioni, PhD Thesis, University of Marche at Ancona, November 2006, 120pp. *Information about this thesis can be obtained at: sara.ruschioni@hotmail.it*

Interaction chrysanthemum-aphid-parasitoids/predator seeking the biological control under protected cultivations. PhD Thesis of Maria da Conceição de Menezes Soglia (Brazil), Federal University Lavras, Minas Gerais, Brazil. *Information about this thesis can be obtained from VHPBueno@ufla.br*

- Parasitic wasps on butterfly expedition: foraging strategies of egg and larval parasitoids exploiting infochemicals of Brussels sprouts and their *Pieris* hosts. PhD thesis of Nina A. Fatouros (Germany), Freien Universität Berlin, Juni 2006, 181 pp. *Thesis information available at* Nina.Fatouros@wur.nl
- Parasitoids as Biological Control Agents of Thrips Pests. PhD thesis A.J.M. Loomans (The Netherlands), Wageningen University, Laboratory of Entomology, The Netherlands; September 2003. *A pdf version of this thesis can be obtained from* a.j.m.loomans@minlnv.nl
- Record and association of *Orius* and thrips species, influence of the photoperiod on the reproduction and evaluation of *Orius insidiosus* (Say, 1832) (Hemiptera: Anthocoridae) on biological control of thrips (Thysanoptera) in greenhouses. PhD Thesis of Luis Cláudio Paterno Silveira (Brazil), Federal University Lavras, Minas Gerais, Brazil. *Information about this thesis can be obtained from* VHPBueno@ufla.br
- Semiochemical relationships in the tritrophic system Leguminous plants, *Nezara viridula* (L.) and *Trissolcus basalis* (Woll.). PhD thesis Alessandro Fucarino, Palermo University, Italy; February 2004. *A pdf version of this thesis can be obtained from* elfucaro@hotmail.com
- Semiochemicals used by scale insects and their parasitoids: behavioral and chemical ecology investigations. PhD thesis Paolo Lo Bue, Palermo University, Italy; February 2004. *A pdf version of this thesis can be obtained from* paololobue@hotmail.com
- Tailoring complexity: Multitrophic interactions in simple and diversified habitats. PhD thesis T. Bukovinszky (Hungary), Wageningen University, Laboratory of Entomology, The Netherlands; June 2004. *A pdf-version of this thesis can be obtained at:* Tibor.Bukovinszky@wur.nl
- The effect of symbiont induced haploid thelytoky on the evolution of *Brevipalpus* mites. T.V.M. Groot. PhD Thesis, University of Amsterdam, 2006, 154 pp. *A pdf-version of this thesis can be downloaded from:* <http://dare.uva.nl/document/33053>
- The entomopathogenic fungus *Metarhizium anisopliae* for mosquito control, PhD thesis E-J. Scholte, Laboratory of Entomology, Wageningen University, The Netherlands, November 2004. *A pdf version of this thesis can be obtained from* ErnstJan.Scholte@wur.nl
- Whitefly control potential of Eretmocerus parasitoids with different reproductive modes. PhD Thesis of Mohammad Javad Ardeh (Iran), Laboratory of Entomology, Wageningen University, February 2005. *A pdf copy of this thesis can be obtained from* mjardeh@gmail.com

17. RECENT PUBLICATIONS AND BOOKS ON BIOLOGICAL CONTROL AND IPM

If you miss important recent books on biological control or IPM, send us (colazza@unipa.it) a jpeg picture of the front page, a short summary and information on how and where the book can be ordered. Also, please send us pdf files or reprints of important new biocontrol publications and they will be mentioned in the next issue of our newsletter.



Perspectives in Ecological Theory and Integrated Pest Management. M. Kogan & P. Jepson (eds.). Cambridge University Press, Cambridge, 2007 (ISBN-13: 9780521822138).

Since the early days of integrated pest management a sound ecological foundation has been considered essential for the development of effective systems. From time to time, there have been attempts to evaluate the ways in which ecological theory is exploited in pest control, and to review the lessons that ecologists learn from pest management. In the last 20 years there have been many developments within the contribution of ecological theory to integrated pest management. This book captures some of the new themes in both pest management and ecology that have emerged and provides an updated assessment of the role that basic ecology plays in the development of rational and sustainable pest management practices. Major themes are examined, assessing the

significance and potential impact of recent technological and conceptual developments for the future of integrated pest management.

- Details the recent advances in ecology and integrated pest management
- Assesses the ecological impacts of agricultural practices on biodiversity
- Looks to future and the potential impact of recent technological and conceptual developments

Contents: Overview: ecology and IPM Marcos Kogan and Paul C. Jepson; 1. An ecologist's view of IPM Richard Levins; 2. Ecology and the human factor: ecological scales and levels of IPM integration Marcos Kogan; Part I. Level one IPM: Species- And Population-Level Processes Marcos Kogan and Paul C. Jepson; 3. Ecosystematics and IPM Darlene Judd; 4. Populations, metapopulations: elementary units of IPM systems Linton Winder and Ian Woiwod; 5. Arthropod behavioural ecology and IPM Ronald Prokopy and Bernard Roitberg; 6. Arthropod sexual behaviour and IPM Ring Carde; 7. Ecology of arthropod/ plant interactions and IPM John C. Reese and Marcos Kogan; 8. Nutritional ecology of plant feeding arthropods and IPM Antonio Panizzi; 9. Conservation biology, biodiversity and IPM Steve D. Wratten, Dieter F. Hochuli, Geoff M. Gurr and Jason Tylianakis; 10. Entomopathogen ecology in biocontrol systems Flavio Moscardi; 11. Ecological risks of biocontrol agents: impact on IPM Heikki Hokkanen, Joop van Lenteren and Ingeborg Menzler-Hokkanen; Part II. Level Two IPM: Community-Level Processes - Multiple Pest Marcos Kogan and Paul C. Jepson; 12. Long distance movement of arthropods and dynamics of crop field colonisation Keith Walters, Richard Baker and Ray Cannon; 13. Ecology of genetically transformed host plants and natural enemies George Kennedy and Fred Gould; 14. Host plants/ herbivores/ natural enemies: dynamics of tritrophic interactions Andrew P. Gutierrez and Johann Baumgärtner; 15. Weed ecology, habitat management and IPM Robert Norris; 16. Ecological bases of weed management with herbivorous arthropods and plant pathogens Peter McEvoy and Christopher C. Mundt; 17. Ecology of plant pathogens and IPM Joyce Loper; 18. Ecology of vertebrate pests and IPM Gary W. Witmer; 19. Ecological bases of habitat management for IPM Daniel McGrath; Part III. Level Three IPM: Ecosystems-Level Processes Marcos Kogan and Paul C. Jepson; 20. Ecosystems- concepts, analyses, and practical implications in IPM Timothy D. Schowalter; 21. Ecosystems ecology and IPM Clara Nicholls and Miguel Altieri; Part IV. Ecological Scale-Independent Processes Marcos Kogan and Paul C. Jepson; 22. Molecular ecology: applications to IPM Paul J. De Barro, O. R. Edwards and P. Sunnucks; 23. Ecotoxicology and IPM Paul C. Jepson; 24. Environmental/ ecological economics and IPM.



Biological control: a global perspective. C. Vincent, M.S. Goettel & G. Lazarovits (eds.), 2007. CABI, Wallingford, UK (ISBN: 9781845932657).

Biological control, the management of pests by the use of living organisms, has a long history of application to agriculture around the world. However, the effective use of beneficial organisms is constrained by environmental, legal, and economic restrictions, forcing researchers to adopt increasingly multi-disciplinary techniques in order to deploy successful biological control programs. It is this complex process, including the mindset and the social environment of the researcher as well as the science being pursued, that this book seeks to capture. Chapters reveal the personal experiences of scientists from the initial search for suitable control agents, to their release into ecosystems and finally to the beneficial outcomes which demonstrate the great success of biological control across diverse agro-ecosystems. Drawing together historical perspectives and approaches used in the

development of biological control as well as outlining current debates surrounding terminology and differential techniques, *Biological Control: A Global Perspective* will be a valuable resource.

For information on the publications below: see IOBC Global Newsletters from 75 onward (pdf files on iobc website).

- Biology, History, Threat, Surveillance and Control of the Cactus Moth, *Cactoblastis cactorum*. H. Zimmermann, S. Bloem, H. Klein. IAEA/FAO-BSC/CM, Printed by the IAEA, Vienna, Austria. ISBN 92-0-108304-1
- Biological Control in Brazil (in Portuguese). Information about this book can be obtained from the senior editor, Prof. dr. J.R.P. Parra (jrpparra@esalq.usp.br).
- Biological Control in IPM Systems in Africa. P. Neuenschwander, C. Borgemeister and J. Langewald (eds.), CABI, Wallingford, UK, Hardback, 448 pp., ISBN 0 85199 639 6
- Biological Control in Protected Culture. Editors: Kevin M. Heinz, Roy G. Van Driesche and Michael P. Parrella. Ball Publishing, Batavia, Illinois, Hardbound, ISBN 1-883052-39-4, 552 pp
- Biological Control of Invasive Plants in the United States. E. M. Coombs, J. K. Clark, G. L. Piper & A. F. Cofrancesco (Eds). Oregon State University: 476 pp. ISBN 0-87071-029-X. Ordering info at: <http://oregonstate.edu/dept/press/a-b/BioControl.html>
- Biology, History, Threat, Surveillance and Control of the Cactus Moth, *Cactoblastis cactorum*. H. Zimmermann, S. Bloem, H. Klein. IAEA/FAO-BSC/CM, Printed by the IAEA, Vienna, Austria. ISBN 92-0-108304-1
- Biological Pest Control in Chile: History and Future. S. Rojas, 2005. Libros INIA 12, Ministry of Agriculture, Instituto de Investigaciones Agropecuarias, 125 pp. ISBN 956-7016-19-41 ; ISSN 0717-4713. (In Spanish).
- Bioinsumos: Una Contribucion a la Agricultura Sustentable. Lecuona, R.E. (ed.), 2004. Ediciones Instituto Nacional de Tecnologia Agropecuaria, 58 pp. (In Spanish)
- Catalog of Phytofagous Insects of Argentina and their associated plants. H.A. Cordo, G. Logarzo, K. Braun, O.R. Di Iorio (eds.), South American Biological Control Laboratory, USDA-ARS, Sociedad Entomologica Argentina.
- Control Biologico: Esppecies entomofagas en cultivos agricolas. Molinari, A.M., 2005. Ediciones Instituto Nacional de Tecnologia Agropecuaria, 80 pp. (In Spanish)
- Cabbage, Eggplant and Tomato Integrated Pest Management, FAO Inter-country Programme for IPM in Vegetables in South and Southeast Asia. Anonymous, 2000. FAO Regional Office for Asia and the Pacific. Phra Athit Road, Bangkok 10200. Thailand, 205 pp.
- Crop protection in biological agriculture in Italy. M. Benuzzi and V. Vacante, in Italian. Information about this book can be obtained from M. Benuzzi (benuzzi@intrachem.it).
- Discovery of the Parasitoid Lifestyle. Special feature in Journal of Biological Control Vol 32, No. 1, January 2005.
- Durable Crop Protection: policy for crop protection towards 2010. Anonymous, 2005. Ministry of Agriculture, Nature and Food Quality, The Netherlands. (Report can be downloaded from www.minlnv.nl).
- Ecological Infrastructures: Ideabook on Functional Biodiversity at the Farm Level. Boller, E., Häni, F. & Poehling, H.-M., 2004. ISBN 3-906776-07-7. 230 pp.
- Environmental Impact of Invertebrates for Biological Control of Arthropods: Methods and Risk Assessment; Edited by F. Bigler, D. Babendreier and U. Kuhlmann. CABI, Wallingford, Oxon, UK, 2006.
- From farmer field school to community IPM. Ten years of IPM training in Asia. Pontius, J., R. Dittls, A. Bartlett, 2002.FAO Regional Office for Asia and the Pacific. Phra Athit Road, Bangkok 10200. Thailand, 106 pp.
- Fundamentos y Perspectivas de Control Biologico. Badii, M.H., A.E. Flores & L.J. Glan Wong (eds.) 2000. Universidad Autonom de Nuevo Leon, Mexico, 462 pages ISBN: 970-694-033-2.
- Genetics, Evolution and Biological Control. L.E. Ehler, R. Sforza and T. Mateille (eds.), 2000. CABI, UK, Wallingford, UK, Hardback, 288 pp., ISBN 0 85199 735 X.
- Improving biocontrol of *Plutella xylostella*. Editors A.A. Kirk & D. Bordat. Proceedings of the international symposium. Montpellier, France, 21-24 October 2004.
- Insects and their Natural Enemies Associated with Vegetables and Soybean in Southeast Asia. Shepard, B.M., G.R. Carner, A.T. Barrion, P.A.C. Ooi, H. van der Berg, 1999. Quality Printing Company, Orangeburg, South Carolina, USA (ISBN 0-9669073-0-2), 108 pp.
- Insect Plant Biology by Louis M. Schoonhoven, Joop J.A. van Loon & Marcel Dicke. Oxford University Press, Oxford, UK, 421 pp. <http://www.oup.co.uk/isbn/0-19-852594-X>

- Integrated Pest and Disease Management in Greenhouse Crops. Editors: Ramon Albajes, M. Lodovica Gullino, Joop C. van Lenteren and Yigal Elad. Kluwer Academic Publishers, Dordrecht, Hardbound, ISBN 0-7923-5631-4, 568 pp.
- The IPM Practitioner. Annual Directory of Least-Toxic Pest Control Products. For information, contact BIRC, POBox 7414, Berkeley, California, 94707, USA.
- Natural crop protection in the tropics. Letting information come to life. Stoll, G., Margraf Verlag. 2nd edition, 2005, 380 pp.; 15 ills. ISBN 3 8236 1317 0.
- Natural Enemies: An Introduction to Biological Control. Ann Hajek. Cambridge University Press, Cambridge, UK, Hardback and Paperback, 378 pp., ISBN 0 521 65295 2
- Parasitic Wasps: Evolution, systematics, biodiversity and biological control. G. Melika and C. Thuroczy, eds. Agroinform, Kiado & Nyomda kft, Budapest, 2002: 480 pp.
- Quality Control and Mass Production of Natural Enemies. V.H.P. Bueno (ed.), in Portuguese. Information about this book can be obtained from V. H.P. Bueno (vhpbueno@ufla.br).
- Quality Control and Production of Biological Control Agents: Theory and Testing Procedures. J C van Lenteren (ed.), CABI, Wallingford, UK, Hardback, 327 pp., ISBN 0 85199 688 4
- The Manual of Biocontrol Agents. Third Edition. Editor: L.G. Copping. BCPC, Alton, Hampshire, 2004: 702 pp. ISBN 1 901396355. Info: www.bcpc.org.
- Trophic and Guild Interactions in Biological Control. J. Brodeur & G. Boivin (eds.). Progress in Biological Control, Volume 3. Springer, Dordrecht, 2006 (ISBN 10 1 4020-4766-5).

18. REGIONAL SECTIONS OF IOBC

Information provided below about regional sections of IOBC is limited, most information is regularly updated on our website www.IOBC-Global.org.

ASIA AND THE PACIFIC REGIONAL SECTION (APRS)



President: Prof. Masami Takagi, Institute of Biological Control, Faculty of Agriculture, Kyushu University, Fukuoka 812-8581 Japan, TEL 81-92-642-3035 FAX 81-92-642-3040, E-mail mtakagi@grt.kyushu-u.ac.jp

Vice Presidents: Prof. Shu-Sheng Liu (Zhejiang University, China), Institute of Insect Sciences, Zhejiang University, 268 Kai Xuan Road, Hangzhou 310029, People's Republic of China, Tel. (86-571) 86971505, Fax (86-571) 86049815, E-Mail: shshliu@zju.edu.cn

Dr Barbara Barratt, Programme leader for Biosecurity at AgResearch in New Zealand. Email: barbara.barratt@agresearch.co.nz.

Secretary General: Dr. Takatoshi Ueno, Institute of Biological Control, Kyushu University, Fukuoka 812-8581, JAPAN, Tel. +81-92-642-3036 (office), Fax.+81-92-642-3040, E-mail: ueno@grt.kyushu-u.ac.jp

Treasurer: Dr. Leigh Pilkington, Gosford Horticultural Institute, Locked Bag 26, Gosford NSW 2250, AUSTRALIA, Telephone: +61 2 4348 1953, Fax: +61 2 4348 1910, Mobile: +61 409 77 00 61, Email: leigh.pilkington@dpi.nsw.gov.au

Past President: Prof.dr. Eizi Yano,

Australia and New Zealand Biocontrol Conference 2008
International Organisation for Biological
Control of Noxious Animals and Plants
10 - 14 February 2008
Menzies Sydney Hotel, NSW, Australia
For all information, see: www.anzbc2008.org/

AFROTROPICAL REGIONAL SECTION (ATRS)

President: Dr. James A. Ogwang, Biological Control Unit, Namulonge Agricultural Research Institute, Kampala, Uganda. Email: jamesogwang@hotmail.com

Past President: Dr. H.G. Zimmermann, Agricultural Research Council, Plant Protection Research Centre, Weeds Research Division, Pretoria, South Africa. Email: riethgz@plant2.agric.za

Vice-President: Dr. Charles O. Omwega, International Centre of Insect Physiology and Ecology, Nairobi, Kenya. Email: comwega@icipe.org

General Secretary: Dr. M.P. Hill, ARC PPRI, Private Bag X 134, Pretoria 001, South Africa. Email: riethgz@plant2.agric.za

Treasurer: Dr. J. Ambrose Agona, Post Harvest Program, Kawanda Agricultural Research Institute, Kampala, Uganda. Email: karihave@starcom.co.ug



IOBC Global and IOBC ATRS are organizing a symposium at the next Congress of Entomology in Durban about biocontrol in Africa.

EAST PALEARCTIC REGIONAL SECTION (EPRS)

President: Dr. Istvan Eke. Budapest, Hungary. Email: Ekei@posta.fvm.hu; istvan.eke@freemail.hu

Vice Presidents: Dr. Danuta Sosnowska. Institute of Plant Protection, Department of Biocontrol and Quarantine, 60-138 Poznan, Miczurina Str. 20, Poland.

Email: D.Sosnowska@ior.poznan.pl

Dr. Vladimir Nadykta (Institute of Biocontrol, Krasnodar, Russia)

General Secretariat: Dr. Yury Gninenko and Dr. E. Sodomov, Russia



Picture below: IOBC WRPS and EPRS, in collaboration with the WPRS working group Integrated Protection of Stored Products organized a meeting in Poznan (Poland) in 2007.



NEARCTIC REGIONAL SECTION (NRS)

President: Marshall W. Johnson, University of California, Parlier, CA 93648, USA.

Email: mjohnson@uckac.edu

President-Elect: Les Shipp, Agriculture and Agri-Food Canada, Harrow, Ont., N0R 1G0 Canada. Email: shipl@agr.gc.ca

Past President: Robert N. Wiedenmann, University of Arkansas, Fayetteville, AR 72701, USA.

Email: rwieden@uark.edu

Vice-President: Jean-Louis Schwartz, University of Montreal, Montreal, H3C 3J7 Canada.

Email: jean-louis.schwartz@umontreal.ca

Secretary-treasurer : Stefan T. Jaronski, USDA-ARS, Sidney, MT 59270 USA.

Email: sjaronski@sidney.ars.usda.gov

Corresponding Secretary: Jonathan G. Lundgren, USDA-ARS, Brookings, SD, 57006 USA.

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Members-At-Large: Ruth Hufbauer, Colorado State University, Ft. Collins, CO 80523 USA.

Email: hufbauer@lamar.colostate.edu;

James D. Harwood, University of Kentucky, Lexington KY 40546 USA

Email: James.Harwood@uky.edu;

William A. Overholt, University of Florida, Ft. Pierce, FL 34945 USA. Email: billover@ufl.edu



IOBC-NRS, in conjunction with the Neotropical Regional Section and the Mexican Society for Biological Control, held a joint Symposium/Congress, entitled "Biocontrol Without Borders", November 13-15, 2007, at the Hyatt Hotel in Merida, Mexico. The Symposium was a collaboration between societies and highlight research that cuts across national boundaries, particularly research and issues that are common in the Americas. Find out more details about the meeting at <http://entomology.uark.edu/iobcsymp.html>.

NEOTROPICAL REGIONAL SECTION (NTRS)

President: Prof.dr. Vanda .H.P. Bueno, Department of Entomology/UFLA,

P.O.Box 3037, 37200-000 Lavras, MG, Brazil. Email: vhpbueno@ufla.br

Secretary General: Dr. William Cabrera, South American Biological Control

Laboratory, Agricultural Counselor American Research Service Laboratory,

USDA--ARS, U.S. Embassy--Buenos Aires. Unit 4325, APO AA 34034-0001.

Email: gcabrera@speedy.com.ar

Treasurer: Dr. Luis Devotto, Avda. Vicente Méndez 515, and Instituto de Investigaciones

Agropecuarias (INIA), Chillán, Chile. Email: ldevotto@inia.cl

Vice President 1: Dr. Maria Manzano, Universidad Nacional de Colombia, sede Palmira, Colombia.

Email: mrmanzano@palmira.unal.edu.co

Vice President 2: Dr. Mary M. Whu Paredes, Enrique León García N° 527. Urb. Chama-Surco.

Unidad de Producción de Insectos Benéficos del Programa Nacional de Control Biológico del Servicio

Nacional de Sanidad Agraria -SENASA Lima-Perú. E-mail:

mwhu@senasa.gob.pe

Vice President 3: Dr. Leopoldo Hidalgo, Centro Nacional de Sanidad

Agropecuaria (CENSA), Carretera a Tapaste y 8 vías, Apartado 10, CP 32700,

San José de las Lajas, La Habana, Cuba.

Email: lhidalgo@censa.edu.cu

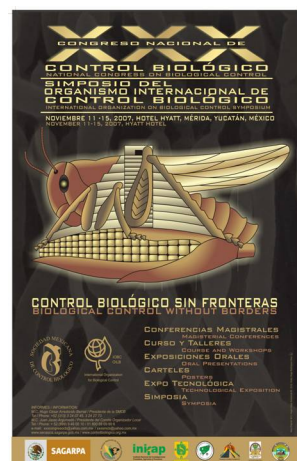
President Elect: Prof.dr. F. Consoli, Department of Entomology,

Fitopatología e Zoología Agrícola, ESALQ. Universidade de São Paulo, Av.

Pádua Dias 11, Piracicaba, SP 13418-900, Brazil. Email:

fconsoli@esalq.usp.br

Past President: Dr. Raquel Alatorre, Mexico. Email: alatoros@colpos.mx



IOBC-NTRS, in conjunction with the IOBC-NRS and the Mexican Society for

Biological Control, held a joint Symposium/Congress, entitled "Biocontrol Without Borders", November 13-15, 2007, at the Hyatt Hotel in Merida, Mexico. The Symposium was a collaboration between societies and highlight research that cuts across national boundaries, particularly research and issues that are common in the Americas. Find out more details about the meeting at <http://entomology.uark.edu/iobcsymp.html>.

WEST PALEARCTIC REGIONAL SECTION (WPRS)

President: Dr. F. Bigler, Switzerland, email: franz.bigler@fal.admin.ch

Vice Presidents: Prof.dr. Sylvia Blümel (Austria), Dr. Heidrun Vogt (Germany), Prof. Dr. L Tirry, University of Gent, Laboratory of Agrozoology, Department of Crop Protection, Gent, Belgium. Email: luc.tirry@ugent.be

Secretary General: Dr. Philippe Nicot (INRA, Avignon)

Treasurer: Prof. Dr. R. Albajes, Universita de Lleida, Centre UdL-IRTA, Lleida, Spain. Email: ramon.albajes@irta.es



This Section of IOBC has always been one of the most active and has an excellent website with all information on working groups, meetings and bulletins: www.iobc-wprs.org. This website also has PDF files of the WPRS newsletter **PROFILE**, providing all recent information about IOBC WPRS.

19. WORKING GROUPS OF IOBC GLOBAL

Information provided below about working groups is limited, most information is regularly updated on our website and the websites of the working groups.

WG ARTHROPOD MASS-REARING AND QUALITY CONTROL

Convenors: **Dr. S. Grenier**, UMR INRA/INSA de Lyon, Biologie Fonctionnelle, Insectes et Interactions (BF2I), INSA, Bâtiment Louis Pasteur, 20 av. A. Einstein, 69621 Villeurbanne Cedex, France. Tel: +33 (0)4 72 43 79 88. Fax: +33 (0)4 72 43 85 34. Email: sgrenier@jouy.inra.fr. **Dr. N.C. Leppla**, University of Florida, Institute of Food and Agricultural Sciences, Department of Entomology and Nematology, Gainesville, Florida, USA. Email: ncl@gnv.ifas.ufl.edu. **Dr. P. De Clercq**, Laboratory of Agrozoology, Department of Crop Protection, Faculty of Bioscience Engineering, Gent University, Belgium. Email: Patrick.DeClercq@ugent.be

The IOBC (www.IOBC-Global.org) promotes the development of biological control and its application in integrated plant protection programs. Biological control is the use of biota to control biota. The Working Group on Arthropod Mass Rearing and Quality Control is one of the oldest working groups of IOBC and active since the late 1960s. The 11th meeting of this Working Group, which will be held from 28 October to 1 November 2007 in Montreal (Canada), is co-organized by IOBC Global, IOBC NRS, the Association of Natural Bio-control Producers (ANBP), International Biocontrol Manufacturers Association Invertebrate Biocontrols Group (IBMA), the Biocontrol Network of Canada and the ASTM subcommittee E35.30 on Natural Multi-Cellular Biological Control Organisms. These proceedings contain abstracts, papers and text of posters that will be presented at this meeting.

11th Meeting IOBC WG Arthropod Mass Rearing and Quality Control 2007

INTERNATIONAL ORGANIZATION for BIOLOGICAL CONTROL of Noxious Animals and Plants

Bulletin IOBC Global No. 3, 2007, Precedings Working Group AMRQC
Joop C. van Lenteren, Patrick DeClercq & Marshall W. Johnson (Editors)

See website for future activities: <http://users.ugent.be/~padclerc/AMRQC/contacts.htm>.

The most recent meeting of this WG was held end October 2007 in Montreal Canada. The proceedings of this meeting, including full papers and abstracts of the presentations can be ordered at Joop.vanLenteren@wur.nl / Prof.dr. J.C. van Lenteren, Laboratory of Entomology, Wageningen University, PO Box 8031, 6700 EH Wageningen, The Netherlands. Send me 10

Euro of 15 US\$ (bank notes only) in an envelope and I will send you a copy; add 5 Euro or 10 US\$ for a copy of the history of IOBC.

Participants at the 11th Meeting of the IOBC Global WG Arthropod Mass Rearing and Quality Control



11th Workshop of the IOBC Global Working Group on Arthropod Mass Rearing & Quality Control

The 11th workshop of the IOBC global WG on Arthropod Mass Rearing & Quality Control (AMRQC) was held in Montréal, Canada, from 28 October to 1 November 2007, under the theme of “Maintaining Worldwide Connections for Quality Assurance in Arthropod and Nematode Rearing”. It was organized as a joint meeting of AMRQC, the Association of Natural Bio-control Producers (ANBP), the International Biocontrol Manufacturers Association (IBMA), and the ASTM Subcommittee E35.30 on Natural Multi-Cellular Biological Control Organisms. The workshop was co-chaired by Carol Glenister (ANBP and ASTM) and Simon Grenier (AMRQC and INRA), and was hosted by Jean-Louis Schwartz of the Biocontrol Network of Canada. Some 70 delegates from 20 countries participated in the event. The workshop focused on different issues related to the rearing of entomophagous and phytophagous insects and mites and of entomopathogenic nematodes, and gave attention to the principles and practices of quality assurance. An introductory session had keynote addresses by Joop van Lenteren on the role of IOBC (presented by Marshall Johnson) and Norm Leppla on building partnerships for quality assurance. Subsequently, 10 oral sessions with about 40 contributed presentations treated the different aspects of arthropod and nematode rearing as it relates to quality assurance:

- Quality Assurance Concept: Product to Consumer
- State of the Biological Control Industry

- Rearing and Quality Assurance Methods for Arthropods and Nematodes
- Rearing Entomophagous Arthropods Emphasizing Artificial Diets
- Production of Sterile Insects and their Quality Assurance
- Future Concepts for Mass Production of Phytoseiid Mites
- Education and Training in Arthropod Rearing and Quality Control
- Fitness, Cold Storage and Effectiveness
- Micro-Organisms, Genomics, and Insect Quality
- Round Table on Industry Needs for Research.

Papers in these oral sessions and in corresponding poster sessions served as a basis for discussion and exchange, with the final aim of improving collaboration among scientists, practitioners and regulators. A proceedings volume of 117 pages was produced and issued as IOBC Global Bulletin no. 3, 2007. The next workshop of the AMRQC group was projected to be in 2010 in Vienna (Austria).

During the concluding business meeting, Norm Leppla (University of Florida, USA) and Simon Grenier (INRA, France) announced to step down as convenors of AMRQC after many years of excellent and widely acclaimed leadership. Tom Coudron (USDA-ARS, Columbia, Missouri, USA) was elected as a new convenor for AMRQC and will henceforth co-chair the group with Patrick De Clercq (Ghent University, Belgium).

WG BIOLOGICAL CONTROL OF APHIDS / ECOLOGY OF APHIDOPHAGA

Convenors: Dr. N. G. Kavallieratos (Greece) G. Laboratory of Agricultural Entomology, Department of Entomology and Agricultural Zoology, Benaki Phytopathological Institute, 8 Stefanou Delta, 14561, Kifissia, Attica, Greece; Email: nick_kaval@hotmail.com, **Eric Lucas** (Canada), **J.P. Michaud** (USA)

The Working Group has recently met in Athens, Greece from 5-10 September 2007 (see <http://www.aphidophaga10.gr>). During this meeting the WG has formulated the following mission statement: Ecology of Aphidophaga is an international working group of the International Organization of Biological Control. The purpose of Aphidophaga conferences is to provide an international forum for the presentation and discussion of research on the biology, ecology and behaviour of organisms contributing to mortality of aphids (Aphididae). The unifying premise of the group is that organisms utilizing aphids as a food source share common ecological attributes arising from the unique biology and demography of aphid populations. With respect to research topics, the intent of Aphidophaga is to be as inclusive as possible. Participants are encouraged to present research findings or theoretical models that may range in focus from highly specialized aphid natural enemies, to peripheral biotic mortality factors, to large scale ecosystem processes of which aphids are one component. There is no intrinsic bias toward either applied or fundamental research, but rather an expectation that topics will be of general interest to participants, stimulate scientific curiosity, and generate ideas for further investigations.

Ecology of Aphidophaga meets once every three years and the official language of meetings is English. The format of Aphidophaga has been, and will remain, one designed to allow ample time for the presentation of findings and their discussion by participants. Both poster and oral presentations are welcome.

Aphidophaga conferences shall be convened by a Standing Committee consisting of a Chairperson and four committee members nominated by the membership at each meeting, or shortly thereafter. The Standing Committee shall be responsible for maintaining and updating the membership list, inviting plenary speakers, and organizing and advertising the subsequent meeting. The tenure of service for committee members shall be six years, with at least two new committee members appointed at each meeting, including one representing the host country. One committee member shall serve as convenor to the IOBC and be responsible for reporting to the IOBC on Aphidophaga group functions and financial accounting matters. At each meeting, the membership will entertain proposals to host subsequent meetings and these will be put to a vote by those in attendance.

WG BIOLOGICAL CONTROL OF CHROMOLAENA ODORATA (SIAM WEED)

New Convenor: Dr. Costas Zachariades, ARC-PPRI, Private Bag X6006, Hilton, 3245 South Africa; Tel 033-3559418, cell 0833152100, fax 033-3559423; ZachariadesC@arc.agric.za

The previous convenor, Dr. R. Muniappan, receives IOBC's great respect and compliments for all his activities in IOBC, both in the APRS Regional Section and for this Working Group! Without persons like him, IOBC would not be able to function. The Seventh International Workshop on Biological Control and Management of *Chromolaena* and *Mikania* was held in Taiwan last September 2006 and proceeded very well as expected. Dr. Po-Yung Lai of National Pingtung University of Science and Technology hosted the workshop.

See website for future activities/newsletter: <http://www.ehs.cdu.edu.au/chromolaena/siamhome.html>

WG BIOLOGICAL CONTROL OF PLUTELLA

Convenors: **Dr. A.M. Shelton**, Department of Entomology, Cornell University, New York State Agricultural Experimenta Station, 416 Barton Lab Geneva, NY 14456, USA. Tel: +1-315-787-2352. Fax: +1-315-787-2326. Email: ams5@cornell.edu. **Dr. A. Sivapragasam**, Strategic, Environment and Natural Resources Centre, MARDI, Kuala Lumpur, Malaysia. Email: sivasam@mardi.my. **Dr. D.J. Wright**, Department of Biology, Imperial College at Silwood Park, Ascot, Berkshire, UK. Email: d.wright@ic.ac.uk

See website for future activities: <http://www.nysaes.cornell.edu/ent/dbm/>

WG BIOLOGICAL CONTROL OF WATER HYACINTH

Chairman: **Dr Martin Hill**, Department of Zoology and Entomology, Rhodes University, P.O. Box 94, Grahamstown, 6140, South Africa. m.p.hill@ru.ac.za

WG EGG PARASITIDS

Convenors: **Prof.dr. F. Bin**, Department of Arboriculture and Plant Protection, University of Perugia, Borgo XX Giugno, 06121 Perugia, Italy. Tel: +39-075-585-6030. Fax: +39-075-585-6039. Email: fbin@unipg.it. **Dr. E. Wajnberg**, Ecologie Comportementale, I.N.R.A., Sophia Antipolis, France. Email : wajnberg@antibes.inra.fr. **Dr Guy Boivin**, Research Station, Agriculture Canada, St-Jean-sur-Richelieu, Québec, Canada. Email: boiving@agr.gc.ca

The next meeting of this working group is planned during the International Congress of Entomology in Durban, South Africa (2008).

WG FRUIT FLIES OF ECONOMIC IMPORTANCE

Chairman: **Dr. B.A. McPherson**, Dept. Entomology, 501 ASI Bldg., Pennsylvania State University, Univ. Park, PA 16802, USA. Tel: +1-814-865-3088. Fax: +1-814-856-3048. Email: bam10@psu.edu

WG IWGO – OSTRINIA AND OTHER MAIZE PESTS (BY H. BERGER)

Convenors: **Ulrich Kuhlmann**; CABI-BioScience; Head Agricultural Pest Research CABI Bioscience Switzerland Centre, Delémont; Switzerland, Email: u.kuhlmann@cabi.org. **C. Richard Edwards**; Purdue University; Dep. of Entomology; Indiana; USA; Email: richedwards@entm.purdue.edu. **Harald K. Berger**; AGES, Spargelfeldstraße 191; 1226 Wien; Austria; Tel.: # 43 /664/56-42-885. Fax: # 43/1/732-16-2106. Email: harald.berger@ages.at.

All relevant data, reports and future meetings are published on the IWGO website: <http://www.iwgo.org>

GLOBAL WG ON TRANSGENIC ORGANISMS IN IPM AND BIOCONTROL

Convenors: **Dr. Angelika Hilbeck**, Swiss Fed. Inst. of Technology, Geobotanical Institute, Zurichbergstr. 38, CH-8044, Zurich. Tel: +41 (0) 1 632 4322. Fax: + 41 (0) 1 632 1215. Email: angelika.hilbeck@env.ethz.ch. **Dr. Salvatore Arpaia**, Italy. Email: arpaia@trisaia.enea.it. **Dr. Nick Birch**, UK. Email: n.birch@scri.sari.ac.uk. **Dr Gabor Lovei**, Denmark. Email: gabor.lovei@agrsci.dk;

The WG organised the Workshop “Environmental Risk Assessment of GM plants: discussion for consensus” in Rotondella, Italy, from 6-9 June 2006, in cooperation with ENEA (Italian National Agency for New Technologies, Energy and Environment). A short report of this meeting, including a picture of the participants can be found in newsletter 80.

20. MEETINGS ON BIOLOGICAL CONTROL AND IPM

Please consult www.IOBC-Global under “meetings” for future meetings on biological control and you will be linked to the IOBC-WPRS website (www.iobc-wprs.org) where a list with meetings is kept up to date. The IOBC-WPRS newsletter PROFILE can also be found at this website and contains a lot of information about working group activities and meetings. If you would like to see your biological control or IPM meeting listed on this site, please send us an email with relevant information.

One of the best websites with information about IPM (books, papers and meeting agenda) is IPMnet News at: http://www.ipmnet.org/IPMNews/main_page.html

Newsletter contributions: We would like to thank all members who provided items for this edition of the IOBC Newsletter. If you have not previously sent anything, please consider doing so. Remember that this is your opportunity to let others know what is going on in biological control. Take a few minutes and email items concerning biological control to Stefano Colazza (colazza@unipa.it), so they can be included in the next issue.

Any comments on this newsletter are welcome. Do not hesitate to contact us if there is any further information on biological control that you would like to see here.

Editors: Joop C. van Lenteren and Stefano Colazza, IOBC Global, 31 October 2007