



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

# IOBC NEWSLETTER 71

ORGANISATION INTERNATIONALE DE LUTTE BIOLOGIQUE  
CONTRE LES ANIMAUX ET LES PLANTES NUISIBLES (OILB)

SUMMER 2000

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IOBC/OILB 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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## NATURAL ENEMIES PROVIDE AN ECOSYSTEM SERVICE

In a recent policy forum in "Science" magazine (289: 395-396), Daily *et al.* describe how ecosystems provide a flow of vital services, such as production of goods (*e.g.*, timber), life-support processes (*e.g.*, water purification), and life-fulfilling conditions (*e.g.*, aesthetic beauty). Historically, such "ecosystem services" were treated as "free".

But, as Daily *et al.* (2000) point out, times are changing and there is now growing interest in placing a price tag on ecosystem services. This not only applies to natural or pristine ecosystems, but managed ecosystems as well. For example, ecosystem goods and services provided by a farm business might include water filtration, salinity control, biodi-

versity and carbon sequestration, in addition to harvested commodities. In the future, a farmer might receive government compensation for non-commodity, ecosystem services that benefit the general public. However, placing a price tag on nature's services may not be easy.

In managed ecosystems, resident natural enemies should be considered as an ecosystem service. Placing a value on this particular service may be relatively simple when the cost of the alternative is easily determined. For example, many sugarbeet producers in northern California, USA, apply the insecticide chlorpyrifos for control of beet armyworm (*Spodoptera exigua* [Hubner]), which costs about 15 US\$ per acre. A grower who treats a 100 acre field (typical size for the region) would spend 1,500 US\$ one or more times during the growing season. My research on natural enemies of beet armyworm suggests that a density of two predatory bugs (e.g., *Orius* spp., *Nabis* spp., *Geocoris* spp.) per plant will provide a comparable level of control – an “agroecosystem

service” that is worth 1,500 US\$. This is a new way of thinking for pest control advisers and sugarbeet growers in northern California, USA, and one that will require some adjustment on their part.

The concept of ecosystem services should be applied to antagonists for all classes of pests. This would include microbial antagonists of plant pathogens, nematode-trapping fungi, seed predators of weeds, etc. The challenge for IOBC is straightforward: we should be the chief advocate or “official representative” as it were, for naturally occurring antagonists of pests. This includes placing a price tag on the services provided by such antagonists, which typically will involve equating the service with

the cost of an application of pesticide. In those cases where pesticides pose off-site problems (e.g., water contamination), the equation will be more complicated. Government officials and policy makers should be reminded that pest antagonists provide an important service and, where appropriate, this service should receive appropriate compensation.

In closing, let me say that I am deeply honored to serve as President of IOBC and I look forward to the challenges of the next four years. Thanks to the leadership of Past-President Dr J.K. Waage and his Executive Council, IOBC is well prepared to enter the twenty-first century.

*Dr L.E. Ehler, President of IOBC Global*

## IOBC GENERAL ASSEMBLY

The IOBC organised its last General Assembly Thursday 24 August, at Foz do Iguassu, Brazil, from 2:00 PM onwards. This event was organised within the framework of the last International Congress of Entomology (see the last IOBC Newsletter). All the issues concerning the activities of the IOBC Global during the period 1996-2000 were discussed. A summary of these discussions is presented here.

### **Establishment of the Permanent Secretariat for Global IOBC**

The proposal to establish a Permanent Secretariat of Global IOBC was discussed during the previous General Assembly on September 1996, at Montpellier, France. A final decision was taken by the Executive Committee to have it hosted by AGROPOLIS, a French Complex for research and higher education in agriculture located at Montpellier, France. Following this decision, an agreement was signed in April 1997 between Global IOBC and AGROPOLIS and the activities started in summer 1997. According to this agreement, the duties of the

Permanent Secretariat, under the guidance of the General Secretary, were determined as follows:

- Carrying out the daily paper work, *i.e.*, dispatching newsletters, bulletins, books and other information material, replying to letters of request, keeping contacts with Regional Sections and helping with exchanges of information between sections, etc.
- Keeping up to date the different lists of subscribers to the IOBC journal BioControl or to the Newsletter and bulletins.
- Managing contacts with Kluwer, the editing company of BioControl, *i.e.*, preparing the IOBC subscriber lists, sending new addresses or names of subscribers, conveying complaints of members to the editor, etc.
- Soliciting and compiling information relevant to IOBC and distributing it to the members and other interested persons and organisations, *i.e.*, being responsible for drafting, printing and

distributing the Global Newsletter to all members.

- Providing help in collecting member fees and sending reminders of late dues.
- Preparing and printing the lists of candidates for the elections of the IOBC Global Executive Committee and sending the ballot to all members.

### **Statistics on membership during the period 1996-2000 for all Regional Sections**

Statistics were given concerning the membership for all Regional Sections and for all types of members. We noted that the number of supporting and institutional members progressively decreased during this 4-year period, which is worrying. This is probably linked to the fact that members were complaining about late delivery of BioControl and have cancelled their subscription. This is a likely loss of money for Global IOBC.

### **Changes in Regional Sections**

- 1997. The new Council of IOBC/WPRS was elected on September 30, 1997, with Dr P. Esberg as the new Presi-

dent, <sup>th</sup> General

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– 2 October 2 1997.

- 1998. The new Council of I /NTRS May 20, 1998, Alatorre Rosas as the new President during the 1<sup>st</sup> a-

Congress of

18<sup>7</sup>

- IOBC RS was elected on 1999-2000, with Dr L. Charlet as the new President.

in summer 2000.

- 1999. There are other changes which concern OBC/S : It became “Asia and the Pacific Regional Section” (APRS Membership in this Region extends from India and

also includes Australia, New Zealand, and the Pacific I - land countries. “Asia and the

therefore more accurately describe the geographical spread of the Regional Se - tion. The proposed change of

by the Global Council at the meeting in Montpellier,

### Global Working Groups

- A new IOBC Global WG on Water Hyacinth was created and Dr. H. Zimmermann was chosen to be the chairman. The first international meeting the WG was held in South Africa, 17-20 November 1998.
- Creation of a new WG on Coffee Berry Borer. The idea to set up this WG followed the 2<sup>nd</sup> Intercontinental Conference on Coffee Berry Borer, held from 29 March to 2 April 1998 in Tapachula, Chiapas, Mexico. Dr J.F. Barrera- Gaytan was chosen to be the Chairman.
- Creation of a new WG on Transgenic Organisms in IPM and Biological Control. This followed the discussion launched by Dr. J.K. Waage

in his editorial in IOBC Global Newsletter 67. Dr A. Hilbeck was chosen to be the Chairwoman. The decision to create these last two new WG was made during the last meeting of the IOBC Global Executive Committee held on September 18, 1998 at Montpellier, France.

- The name of the WG “*Trichogramma* and other egg Parasitoids” was changed to “Egg Parasitoids”.
- The name of the WG “Quality Control of Mass-reared Arthropods” was also changed to “Arthropods Mass Rearing and Quality Control”.

### BioControl

The Executive Committee of the Global IOBC decided during the

Montpellier, France, September 1996, to stop the publication of

new international scientific journal, BioControl. A contract was signed for a period of 10 years

in August 1997. This contract covers the editing of the new a-

1998 see the current situation of elow).

### OBC

In spring 1995, the Secretary OBC, Dr F.

IOBC PRS Commission “Pr - motion and Extension of W Activities” to design a new logo for Global I . However, despite the positive reaction from members and Global Executive , the new logo was not

used for IOBC

### Meetings and Publishing

An International I symposium was organised on “Evaluat

Biological Control”, in Montpel lier, France, 17-20 October 1999. Over 150 participants from 27

addressed a problem of interna tional importance in keeping with I ’s goals. It was the first known international meeting

weed biological control had a chance to meet, present their s-

conference were published by the I and are available at the Permanent Secretariat. A book

keynote presentations and will be available soon at CABI Publis - ing, UK (see the corresponding

IOBC in fall 2002 on a subject of criti cal importance to biological con trol.

multi-disciplinary audiences, and organized in consultation with Regional Sections.

### OBC

An agreement was signed with GROPOLIS at Montpellier,

IOBC OBC Global

impressed by the IOBC PRS Website, which was designed by TH in

to create the IOBC b-

at the following address: <http://www.iobc.agropolis.fr>.

### Committee of Global IOBC

Members of the Executive Committee of Global IOBC for the period 2000-2004 were elected by postal ballot, which was carried out from May to July 2000. The results are presented in the table below:

	Candidates	Votes	
<i>President</i>	Dr N.C. Leppla	91	elected
	Dr L.E. Ehler	149	
<i>Vice-President</i>	Dr J.C. van Lenteren	207	elected
	Dr C.C. Payne	89	elected
	Dr S. Pruszyński	118	
<i>Secretary-General</i>	Dr A. Gassmann	225	elected 3
<i>Treasurer</i>	Dr F. Polesny	221	elected

We congratulate the candidates who were elected and we wish them good luck, satisfaction and success with IOBC. We also thank those who were not elected for their willingness to serve IOBC and we hope that they will remain or become active IOBC members and officers of Regional Sections. Finally, we thank all members who have taken time to participate in the election.

#### Treasury report

As a general rule, during the period 1996-2000, receipts were always above expenses, leading to a positive balance averaging

13007.24 SFR. From this, BioControl subscriptions for our members must still be paid for the years 1999 and 2000. Most income came from membership fees (*i.e.*, 93.82%). The remaining was obtained from interest collected from the IOBC bank accounts. Concerning the expenses, 64% is devoted to the BioControl subscription fees for IOBC members 10% is spent for Global Working Groups, 8% is spent to produce and distribute the IOBC Global Newsletter twice a year, 14% to reimburse travelling expenses, and the remaining for miscellaneous items (*e.g.*, postage, etc.). The main part of

the membership fees comes from NRS and WPRS. The details of the treasury situation could be obtained on simple request to the Treasurer or the past-Treasurer of the Global IOBC.

#### Speech by new President

At the end of the General Assembly, Dr L.E. Ehler, our new President, gave a talk presenting some of his views for the future of IOBC. The editorial of this Newsletter gives a summary of his talk.

*E. Wajnberg and M. Montes de Oca*

## BIOCONTROL

Manuscript submissions remain at a good rate, but some (random?) shifts in the discipline balance have taken place. Now the smaller disciplines have increased (except for semiochemicals), while predator papers have declined distinctly. The balancing out is actually very welcome, although parasitoid papers still dominate the selection very clearly. The quality of the submitted papers may have gone up, because the acceptance ratio has risen from 37% in 1997-1998 to a steady 54% both in 1999 and 2000 (until June). The overall acceptance rate up to June 2000 was 47% (out of 199 manuscripts; or 44.9% if the withdrawn papers are calculated as rejected papers). There is still a need to raise the rejection rate a little, otherwise the journal will not be able to print the accepted papers within a reasonable time. The individual rejection rates of

the Associate Editors are all quite reasonable, and depend a little on the number of papers offered in each particular sub-discipline. The journal still does not receive many types of papers other than regular research papers. Only one "Forum-paper" was published, and one "Research note" is coming out soon. The editor-in-chief has invited one review article, but has not received it yet. All scientists are requested to not only submit their top research papers to BioControl, but also to offer high-quality topics for review articles, and to submit controversial papers for Forum-articles. We could make BioControl a more exciting scientific outlet for biological control researchers. The journal is now appearing on schedule, and we are not expecting to have any problems with this in the foreseeable future.

*Dr H.M.T. Hokkanen, editor-in-chief of BioControl*

We remind you that BioControl has its home page on the Internet at the following address: <http://www.wkap.nl/journalhome.htm/1386-6141>. There you will find all the information necessary for publication: aims and scope, submission information, instructions for contributors, etc. Since the subscription rate for BioControl is much lower for our members than for non-members, and this subscription rate is low compared to other journals in the same field, we strongly recommend all of you to subscribe to the journal if you have not already decided to do so. Finally, IOBC members, and Working Group participants are strongly encouraged to submit their contributions in the form of research papers or reviews.

*E. Wajnberg*

## IOBC BOOK PUBLISHED

As was explained in the last IOBC Newsletter, the IOBC organised an international symposium in Montpellier, France, 17-20 October 1999 on the indirect or non-target effects of biological control. A book entitled "Evaluating Indirect Ecological Effects of Biological Control", built around the keynote presentations, is now in press and will be available

November 2000. The book is published by the company "CABI Publishing" located in the UK. The editors of the book are Dr. E. Wajnberg (INRA, Antibes, France), Dr. J.K. Scott (CSIRO, Montpellier) and Dr. P.C. Quimby (USDA, Montpellier). The list of the chapters with their authors is provided below:

- Indirect ecological effects in biological control: the challenge and the opportunity, Dr. J.K. Waage.
- Indirect interactions, community modules, and biological control: A theoretical perspective, Drs. R.D. Holt & M.E. Hochberg.

- Research needs concerning non-target impacts of biological control introductions, Dr. K.R. Hopper.
- Foodwebs, risks of alien enemies, and reform of biological control, Drs. D.R. Strong & R.W. Pemberton.
- Evaluation of non-target effects of pathogens used for management of arthropods, Drs. M.S. Goettel & A.E. Hajek.
- Insect biological control and non-target effects: A European perspective, Drs. L.D. Lynch, H.M.T. Hokkanen, D. Babendreier, F. Bigler, G. Burgio, Zhi-He Gao, S.

Kuske, A. Loomans, I. Menzler-Hokkanen, M.B. Tho-

Waage, J.C. van Lenteren & Qing-Qi

- and its possible effects on biodiversity, Drs. P. Neuschwander & R. Markham.
- *Rhinocyllus conicus*: Initial evaluation and subsequent ecological impacts in North America, Drs. A. Gassmann & S.M. Louda.
- Risk analysis and weed biological control, Drs W.M. Lonsdale, D.T. Briese & J.M. Cullen.

• Incorporating biological control into ecologically-based weed management, Drs. R.L. Sheley & Ma.J. Rinella.

- The scope and value of extensive ecological studies in the broom biological control programme, Drs. S.V. Fowler, J. Memmott, Q.E. Paynter, A.W. Sheppard & P. Syrett.

More information on this book and ordering details can be found on the following Website: [http://www.cabi.org/bookshop/book\\_detail.asp?isbn=0851994539](http://www.cabi.org/bookshop/book_detail.asp?isbn=0851994539).

E. Wajnberg

## REGIONAL SECTIONS

**Share your information:** Activities and events within IOBC Regional Sections do interest your colleagues outside the Sections as well. They will most probably not be informed if you do not tell them. You may share information by sending any kind of news to the Secretary General (address on first page).

### General report

The current membership of the RS consists of 3 Institutional Members, 2 in Australia and 1 in Japan; and 96 individual members, 47 in Japan, 20 in China, 13 in Australia, 5 each in New Zealand and Thailand, and 6 scattered around the rest of the region. Financially the RS is viable but only because postage costs are met by one of the Institutional members (employer of the President) and because IOBC Global posts the Global Newsletter direct to members. Most Japanese members do not have e-mail, and e-mail to China is unreliable. Postage from Australia to Japan or China costs \$2 per item for the Newsletter. The RS have a bank balance of about \$3000 but can rarely afford to support any workshops or pay for the Executive to attend regional meetings, as distances are great and airfares correspondingly high.

In the RS, classical biological control is still considerably hindered by bureaucracy and delays resulting largely from suspicion of introductions of biological control agents from other countries. However, augmentative and inundative biological control using local pathogens is increasing in small-scale agriculture, though large-scale commercial agriculture in the region contin-

ues, with a few notable exceptions (*e.g.*, paddy rice, fruit and horticulture in Australia and New Zealand, diamond-back moth control) to be dominated by pesticide use.

### Nominations for executive for APRS regional section

The IOBC Statutes specify that the Executive Committee can only serve for a 4-year term and, with the exception of the Secretary-Treasurer, cannot stand for a second term. The President stays on as Past-President. Within APRS, there is a tradition that the Executive moves to another country at the end of each four-year term and we would like to continue with this tradition, which we feel is beneficial in such a widely scattered Region. The RS is therefore asking for nominations for the positions of President and Secretary/Treasurer for the period January 2001 to December 2004. These nominations should be sent to the Secretary Dr D. Holdom (see address above). Nominations may be made by any member with the consent of the nominee, and nominees must be current members of the APRS Regional Section.

### The 4<sup>th</sup> Asia Pacific Conference of Entomology

This meeting will be organised in Kuala Lumpur, Malaysia, 14-17

### ASIA AND THE PACIFIC REGIONAL SECTION (APRS)



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[mcfadyenre@dnr.qld.gov.au](mailto:mcfadyenre@dnr.qld.gov.au).

**Vice Presidents:** Dr. R. Wang (China) and Dr. Md. Y. Hussein (Malaysia).

**Secretary/Treasurer:** Dr. D. Holdom, CRC for Tropical Pest Management, Gehrman Laboratories, Queensland Department of Primary Industries, St Lucia, Qld 4072, Australia. Tel: +61-7-3896-9397, Fax: +61-7-3365-1855, e-mail: [holdomd@dpi.qld.gov.au](mailto:holdomd@dpi.qld.gov.au).

**Past President:** Dr. R. Muniapan, Agricultural Experimental Station, University of Guam, Mangilao, Guam 96923 USA. Fax: +1-671-734-6842, e-mail: [rmuni@uog9.uog.edu](mailto:rmuni@uog9.uog.edu).

August 2001. The theme will be "Entomology for a dynamic and borderless world". The major topics to be discussed in the conference include, among others: Biodiversity (including taxonomy, genetics and evolution, ecology, behaviour, etc.), Sericulture/Apiculture, Urban Entomology, Landscape/Forest Entomology, Medical Entomology, Biochemistry and Toxicology, Molecular Entomology, Pest Management (including Biological Control, IPM, Host-plant resistance, etc.), Semiochemicals, Diagnostic tools, etc. Papers for oral and/or poster presentation are welcomed. Contributors should indicate the tentative titles(s) in the registration form. Abstracts should be submitted before 31 December 2000. For more information, contact the Secretary of the conference, 4<sup>th</sup> APCE, c/o Dr. I.A. Ghani, School of Environmental and Natural Resource Sciences, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor D.E., Malaysia, Fax: 00-60-3-8253357, e-mail: idrisgh@pkriscc.ukm.my, Website:

<http://www.mapps.org.my/mapps/APCE.html>

### 18<sup>th</sup> Asian-Pacific Weed Science Society Conference (APWSSC)

The Conference will be held from May 28 to June 2, 2001 in Beijing, China. The main venue is Beijing International Convention Centre (BICC). This scientific event will cover most important aspects of Weed Science, while focusing on "the Role of Ecologically Based Weed Management for Sustainable Agriculture in the 21<sup>st</sup> Century". Seven symposium and poster sessions will be organized: (1) Ecological Weed Control – Population Dynamics and Community Changes; (2) Roles of integrated weed management; (3) New Herbicides; (4) Herbicide Resistant Weeds and Crops; (5) Biological Weed Control; (6) New Approaches in Weed Management; (7) Environmental Issues. The official language of the Conference will be English. For more information, please contact: Dr

Chao Xian Zhang, Institute of Plant Protection, CAAS, No.2 West Yuanmingyuan Road, Beijing 100094, China Tel./Fax: +86-10-62815937, e-mail: cxzhang@public.east.cn.net, Website: <http://www.ipmchina.cn.net/APWSSC>

### "Tenteki-Karte": Data management system for biological and integrated control

Commercial use of natural enemies in greenhouses has been started in Japan since the registration of *Phytoseiulus persimilis* and *Encarsia formosa* as biopesticides in 1994. Now eight species of arthropod natural enemies are available for ten pests on seven crops. Despite of the high demand to reduce the agrochemicals by both farmers and consumers, augmentative release of biological control agents is still limited. The main reason for this is the unreliability of natural enemies is improper release of natural enemies by farmers or use in unfavorable weather conditions for natural enemies. Many examples of both effective and ineffective trials of biological control have been reported. If farmers and extension officers can access these results freely and get appropriate examples for successful use of natural enemies, it would be of great help for them to develop a plan of biological control. A case-based decision support system is being developed and delivered through the Internet. The system is designed to help farmers and extension officers to make decisions about biological control by accessing useful examples of biological control trials. The system is called "Tenteki Karte". "Tenteki" means natural enemy in Japanese and Karte is a patient's chart for clinical records in German. The system consists of several subsystems: (1) the main database, (2) the IPM mailing list, (3) the IPM advisory committee, and (4) the related databases. The main database is the accumulated factual data sets of biological control trials. Registered users can search appropriate cases of biological control trials using some key

words such as the crop, the pest and the cultivation condition on the Website. They can also enter the results of their biological control trials into the system as an image of a special fact sheet. Registered users can join the mailing list to discuss IPM or biological control. The advisory committee supports the discussion on the mailing list. If a non-registered user, or a guest, sends a query or a message through the Website, the message is transferred to the IPM mailing list and the advisory committee members can reply the query. For more information, contact: Dr T. Watanabe, National Agriculture Research Center, Kannondai, Tsukuba, Ibaraki 305-8666 Japan e-mail: tomoya@narc.affrc.go.jp.

Dr. E. Yano

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### AFROTROPICAL REGIONAL SECTION (ATRS)



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**Vice-President:** Dr. Ouayagode-Bakary, DPR, MESRS, B.P. V151, Abidjan, Ivory Coast.

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**Treasurer:** Dr. A. Paraiso, B.P. 12625, Niamey, Niger, Fax: +227-73-22-37.

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### NEARCTIC REGIONAL SECTION (NRS)



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**President Elect:** Dr. D.L. Mahr, Department of Entomology, 1630 Linden Drive, University of Wisconsin, Madison, WI 53706, USA. Tel: +1-608-262-3228, Fax: +1-608-262-3322, e-mail: dmahr@entomology.wisc.edu.

**Secretary-Treasurer:** Dr. R. Wiedenmann, Center for Economic Entomology, Illinois Natural History Survey, 607 East Peabody, Champaign, IL 61820, USA. e-mail: r-wiede@uiuc.edu.

**Corresponding Secretary:** Dr. L. Milbrath, Department of Entomology, 123 Waters Hall, Kansas State University, Manhattan, KS 66506-4004, USA. e-mail: lmilbrat@oz.oznet.ksu.edu.

**Past President:** Dr. T. Kring, Department of Entomology, Agric. Bldg. 321, University of Arkansas, Fayetteville, AR 72701, USA. e-mail: tkring@comp.uark.edu.

#### New IOBC/NRS Website

For several years the IOBC/NRS Website has been maintained on a server at the NSF Center for IPM, North Carolina State University, with the kind assistance of Dr R. Stinner. The Website has undergone a major overhaul under the initiative and direction of Dr S. Mahr, who will now serve as our webmaster. The new address is: <http://www.entomology.wisc.edu/iobc/nrs.htm>. Please update your bookmarks, check out the new site and let S. Mahr know what you think (smahr@entomology.wisc.edu).

#### The Practice of Biological Control: Importation and Management of Natural Enemies and Agents

This IOBC/NRS symposium will be held 2-5 August 2001, Montana State University, Bozeman MT, USA. The science and application of biological control have become the focus of greater public appreciation and scrutiny than ever before. To develop and implement biological control programs, practitioners must be able to present the activities and

goals of their discipline to diverse audiences. Therefore, the focus of the symposium is on education: what we have learned from the past century of biological control efforts, and how we can apply this knowledge. The symposium will emphasize: (1) A renewed focus on why biological control by natural enemies should be of major consideration in pest control, (2) Development of effective education programs about biological control that target diverse audiences, (3) A new set of biological control case histories that illustrate important successes, and (4) A discussion of the issues that promote and challenge the practice of biological control. The program will consist of keynote sessions and panel discussions concerning selected and contributed topics. Afternoon sessions will be dedicated to submitted poster sessions and opportunities for small group discussions. Submitted posters are open to all areas of biological control, and need not address any of the listed topics. This symposium is jointly sponsored by the IOBC, the Nearctic Regional Section (NRS) and the Biological Control WG of the Experiment Station Committee on Organization and Policy (ESCOPE-BCWG), with support of the National Biological Control Institute. For more information, please contact: Dr T. Kring, IOBC/NRS 2001 Symposium, Department of Entomology Agri 321, University of Arkansas, Fayetteville AR 72701, USA. Tel: +1-501-575-3186, Fax: +1-501-575-3348, e-mail: tkring@comp.uark.edu.

#### 50<sup>th</sup> Annual meeting of the Entomological Society of Canada

This meeting will be held this year in Montreal, Quebec, Canada, December 3-7, 2000, jointly with the Entomological Society of America, and la "Société d'entomologie du Québec". Anyone interested in this meeting should watch the society Website for information on dates, deadlines and places ([http://www.entsoc.org/annual\\_meeting/2000/2000.html](http://www.entsoc.org/annual_meeting/2000/2000.html)). Please note that abstracts must be sub-

mitted via the ESA Website. For more information, please contact Dr D.L. Johnson (e-mail: Johnson DL@em.agr.ca).

#### NEOTROPICAL REGIONAL SECTION NTRS)



**President:** Dr. R. Alatorre Rosas, Colegio de Postgraduados, Instituto de Fitosanidad, Km. 36.5 Carretera, Mexico-Texcoco, Montecillo, Texcoco, Mexico 56230. Tel-Fax: +52-1-595-10220/11580/11587. e-mail: alatoros@colpos.colpos.mx.

**Secretary:** Ms C.H. Arredondo Bernal, Comision Nacional de Sanidad Agropecuaria, Dirección General de Sanidad Vegetal, Centro de Referencia de Control Biologico, Km. 1.5 Carretera, Tecoman-Estacion FFCC. Fax: +52-332-42773. e-mail: hce-sar@triton.ucol.mx.

**Treasurer:** Dr. J.F. Barrera Gaytan, Division de Tecnología Agropecuaria, El Colegio de la Frontera Sur, Carretera Antiguo Aeropuerto, Km 2.5, Apartado Postal 36, 30700 Tapachula, Chiapas. Mexico. Tel: +52-962-81103. Fax: +52-962-81015. e-mail: jbarrera@tap.ecosur.mx.

**Vice Presidents:** (1) Dr. R. Vergara, Universidad Nacional de Colombia, Facultad de Ciencias Agropecuarias, Seccional de Medellín, Apdo. 1779, Medellín, Colombia, Fax: +57-4-2300-420; (2) Ing. J. Jimenez, Productos Biologicos Perkins Ltda., Carrera 29 N° 53-51, Apdo. 1015, Palmira, Valle, Colombia. Fax: +57-2-27-33719; and (3) Dr. E. Botto, Insectario de Investigaciones para Lucha Biologica, IMYZA-CICA-INTA, Castelar (1712), CC 25, Buenos Aires, Argentina. Fax: +54-1-481-1316. e-mail: postmaster@ebotto.inta.gov.ar.

#### 7<sup>th</sup> Symposium on Biological Control. New times, new solutions

Poços de Caldas, MG, Brazil, 3-7 June 2001. The main purpose of the symposium will be to increase the technical-scientific development of biological control of important organisms in agri-

culture, veterinary, medical and public health in Brazil. The specific objectives will be: (1) training and recycling for professors, researchers and technicians, (2) Promotion, diffusion and adoption of technologies in biological control, (3) Presentation of new products that are proven safe for the national market, (4) Exchange of information among researchers, teachers, manufacturers, planners, environmentalists and students, (5) Conciliation of the agricultural production, public health and the economic development with the conservation and balance of the environment, (6) Stimulation of integrated participation among official municipal, state and federal entities, seeking the user of biological control agents. This symposium should interest scientists, researchers, students, experts in public health, technicians of the agricultural industry and cattle breeding, professionals of technical support and rural extension, teachers in agrarian/veterinarian areas, and any professionals in areas related to biological control, natural resources and applied ecology. This symposium will be organised by the University of Lavras, Department of Entomology, EMBRAPA, MG, Brazil. For more information, contact: UFLA Departamento de Entomologia, Campus Universitario, Caixa Postal 37, CEP (ZIP) 37200-000, Lavras-MG, Brasil. Tel: +55-35-829-1291, Fax: +55-35-829-1288, e-mail: siconbio@ufla.br, Website: <http://www.pjeventos.com.br/siconbiol>.

**EAST PALEARCTIC  
REGIONAL  
SECTION  
(EPRS)**



**President:** Dr. A.I. Smetnik, All-Russian Institute for Plant Quarantine, Pogradichnaya 32, reg. Bikovo, Moscow Region, 140150, Russia. Fax: +95-975-3971.

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**WEST PALEARCTIC  
REGIONAL  
SECTION  
(WPRS)**



**President:** Dr. P. Esbjerg, Royal Veterinary and Agricultural University, Department of Zoology, Bulowsvej 13, 1870 Frederiksberg C., Denmark. e-mail: [peter.esbjerg@ecol.kvl.dk](mailto:peter.esbjerg@ecol.kvl.dk).

**Vice Presidents:** Dr. J. Huber, Institute for Biological Pest Control, Heinrichstr. 243, 62287 Darmstadt, Germany. Fax: +61-51-40-7290, e-mail: [j.huber.biocontrol.bba@t-online.de](mailto:j.huber.biocontrol.bba@t-online.de). and Dr. A.M.P. Lavadinho, Instituto de Protecção da Produção Agro-alimentar, Centro Nacional de Protecção da Produção agrícola, Quinta do Marquês, 2780 Oeiras, Portugal. Tel: +351-01-443-05-27, Fax: +351-01-442-06-16.

**Secretary General:** Dr. C. Alabouvette, CMSE-INRA, BBCE-IPM BV 1540, 21034 Dijon Cedex, France. Tel: +33 (0) 3-80-69-30-41, Fax: +33 (0) 3-80-69-32-26, e-mail: [Claude.Alabouvette@dijon.inra.fr](mailto:Claude.Alabouvette@dijon.inra.fr).

**Treasurer:** Dr. C. Gessler, Ecole Polytechnique Fédérale de Zurich, Phytomedizin-Pathologie, ETH Zentrum/LFW, Universitätstr. 2, 8092 Zurich, Switzerland. e-mail: [cesare.gessler@ipw.agrl.ethz.ch](mailto:cesare.gessler@ipw.agrl.ethz.ch).

**1<sup>st</sup> IOBC/WPRS Conference on  
“Induced Resistance in Plants  
against Insects and Diseases”**

This conference will be held in Wageningen, The Netherlands, 26-28 April 2001. Induced resistance and tolerance are based on an indirect action against insects and diseases mediated by the plant. It has great importance for fundamental and applied research as well as for practical plant protection. Therefore, it is a field which appeals to a broad range of

scientists, including entomologists, plant pathologists and plant physiologists. The idea to create a platform on which all the different aspects of induced resistance are assembled in order to foster cross-disciplinary communication, led the formation of a new study group within the IOBC/WPRS under the title “Induced Resistance in Plants against Insects and Diseases”. The conference will be the first one organised by this group. The aims are (1) to gain a better understanding of the general and causal processes involved in induced defence reactions of plants (both insects and plant pathogens) and (2) to discuss the application of induced resistance in plant protection. Two sessions will be organised: (1) “Cross-talk among herbivore- and plant-induced signal cascades” (Chairperson Dr. E. Farmer); and (2) “Risks and benefits of induced resistance and tolerance” (chairperson: Dr. U. Neuenschwander). Proceedings will be published in the IOBC/WPRS bulletin. The official language will be English. For more information, contact the convenor of the group, Dr. A. Schmitt, Bba, Heinrichstraße 243, 64287 Darmstadt, Germany, e-mail: [anne.schmitt.Biocontrol.bba@t-online.de](mailto:anne.schmitt.Biocontrol.bba@t-online.de), Website: <http://iobc.ethz.ch>.

**“Integrated control in Glasshouses, Temperate Climate. 1<sup>st</sup> announcement of a joint meeting between WPRS and NRS Greenhouse Working Groups”**

The IOBC, IPM in Glasshouses, West Palearctic (WPRS) and Nearctic (NRS) working groups will meet jointly, the 8-11 May, 2002, at the Laurel Point Inn, in Victoria, British Columbia, Canada. The meeting will feature four days of presentations and workshop discussions on IPM in Glasshouses, and will include a research tour of the dynamic glasshouse industry in southwestern British Columbia. The meeting will be restricted to 150 delegates, on a first-come, first-served basis. To be placed on a mailing list to receive further details, please contact: Dr D.R.

Gillespie, Pacific Agri-Food Research Centre, Agriculture and Agri-Food Canada, P.O. Box 1000, Agassiz, British Columbia, Canada. V0M 1A0. Fax: +1-604-796-0359, e-mail gillespie@em.agr.ca.

Dr A. Enkegaard, Convenor of the IOBC-WPRS Working Group "Integrated Control in Glasshouses, Northern Section" e-mail: Annie.Enkegaard@agrsci.dk,

and Drs K. Heinz and L. Shipp, Convenors of the IOBC-NRS "Greenhouse Working Group" e-mails: KMHeinz@tamu.edu and shipl@em.agr.ca.

## WORKING GROUPS (WG)

### WG ARTHROPOD MASSREARING AND QUALITY CONTROL

**Co-chairman:** Dr. P. Greany, USDA-ARS, 1700 SW 23rd Dr, Gainesville, FL 32608, USA, Tel: +1-904-374-5763, e-mail: pgreany@gainesville.usda.ufl.edu.

**Co-chairman:** Dr. S. Grenier, INSA/INRA, Biologie 406, 20 Av. A. Einstein, 69621 Villeurbanne Cedex, France, Tel: +33-(0)4-72-43-79-88, Fax: +33-(0)4-72-43-85-34, e-mail: sgrenier@jouy.inra.fr.

**Co-chairman:** Dr. D. Nordlund, USDA-ARS Biological Control and Mass Rearing Research Unit, P.O. Box 5367, Mississippi State, Mississippi 39762, USA, Tel: +1-601-323-2230 ext. 248, Fax: +1-601-323-0478, e-mail: donn@ra.msstate.edu.

Please reserve your copy of "Quality Control for Mass-Reared Arthropods", Proceedings of the IOBC Working Group on Quality Control of Mass-Reared Arthropods Workshops at Santa Barbara, California, USA and Cali, Colombia. Drs N.C. Leppla, S. Bloem and R.F. Luck are editing this 265-page book. They plan to submit the manuscript at the beginning of December 2000, so the book can be available in March 2001. It is a series of papers, abstracts and related information describing the major issues in developing and implementing quality control for mass-reared arthropods. The purpose is to document advances in the field and encourage continuation of the work. It will be another volume in a series (see <http://www.amrqc.org> for the history and references). The primary audience for the book includes researchers, regulators and commercial producers of natural

enemies world-wide, who may want to order multiple copies. Kluwer Academic Publishers can offer the book for 55 US\$ at a collective purchase of at least 50 copies or 45 US\$ if we order 100 or more. Send your requests to Dr N.C.

Leppla (ncl@gnv.ifas.ufl.edu), so he can determine the number of books to have printed.

In the IOBC Global Newsletter 69, Summer 1999, the WG announced establishment of a new Website (<http://www.amrqc.org>). Continued development of the Website has been facilitated by paid advertisements and a grant from the National Biological Control Institute. A considerable amount of information is being scanned for inclusion in the near future. We appreciate and solicit financial assistance to maintain this Website.

The symposium, "Rearing Entomophagous Insects on Artificial Diets: Laboratory Production to Field Evaluation" was organised by Drs N.C. Leppla and S. Grenier for presentation at the XXI International Congress of Entomology, in Foz do Iguacu, Brazil (August 20-26, 2000). This symposium was generally divided into two sections: (1) Laboratory production of natural enemies to manage pests in specific crops, and (2) Evaluation of the impact of diet-reared parasitoids and predators on their target hosts and prey. The first paper by S. Grenier *et al.* focused on rearing beneficials for greenhouse pests and the second by F. Pennacchio *et al.* described rearing of hymenopterous larval parasitoids of aphids for a variety of crops. Next, J.R.P. Parra *et al.* provided an overview of *in vitro* rearing of parasitoids in Brazil. The first session ended with a

paper on rearing an ichneumonid on an artificial diet by S.M. Ferkovich *et al.* The second session began with a provocative question asked by J. van Schelt and K. Bolckmans, "Will artificial rearing systems cause a real breakthrough in biological control?" D.A. Nordlund and E.G. King followed with an example of a potential breakthrough using diet-reared *Catolaccus grandis* to manage pest populations of the boll weevil. The next three papers by Li L.Y. *et al.*, D.A. Nordlund and Z.X. Wu, and P. DeClercq *et al.* combined production of natural enemies for specific purposes with determination of their impact. They respectively discussed rearing *Trichogramma ostriniae*, other egg parasitoids and predatory bugs. The final paper by J.E. Carpenter *et al.* gave a complete system for rearing and evaluating hymenopterous ectoparasitoids reared on artificial diets.

The advent of practical artificial diets for parasitoids and predators is already having a significant, positive effect on commercial biological control. As with phytophagous insects, artificial diets for natural enemies can dramatically increase the reliability of their rearing, improve their health and uniformity, and render them more available and affordable. Reductions in cost can make natural enemies more available and widely used in pest management. Additionally, artificial diets will enable beneficials to be shipped without other live organisms for food. The elimination of hosts and prey with national and international shipments has become a major regulatory issue. In the near future, artificial diets will revolutionise the sale of natural enemies by vastly increasing their shelf life. Suppliers

and consumers will be able to ship and maintain beneficial arthropods in excellent condition for several months.

Associated symposia were organised for the XXI International Congress of Entomology by Drs T.A. Coudron, "Insect Nutrition: Rearing for Research, Production and Release", S.B. Vinson, *et al.*, "Molecular and Physiological Interactions Between Parasitoids and Their Hosts", and D.A. Nordlund, "Technology for Automation of Insect Mass Rearing for Management and Research". The intent of the insect nutrition symposium was to present a holistic representation of the field and address biochemical traits related to the nutrition and rearing of insects. The role of host factors in parasitoid development was addressed in the second symposium and the last one focused on automation technologies for rearing large numbers of insects. The pioneering research presented in these symposia is helping to spawn a new era of pest management, one in which the widespread use of natural enemies will be practical and routine. By reducing costs and increasing the quality and availability of parasites and predators, artificial diets represent a major breakthrough in the field of commercial biological control. Numerous posters were also presented in relation with these 4 symposia.

The next meeting of the WG will be held in France, hopefully in 2002. Please send topics, ideas and an indication of your interest in participating to S. Grenier, co-chairman of the WG.

### **WG BIOLOGICAL CONTROL of *PLUTELLA***

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**Co-chairman:** Dr. A.M. Shelton, Department of Entomology, Cornell University, New York State Agricultural Experiment Station, 416 Barton Lab Geneva, NY 14456, USA. Tel: +1-315-787-2352, Fax: +1-315-787-2326, e-mail: ams5@cornell.edu.  
**Co-chairman:** Dr. A. Sivapragasam, Strategic, Environment and

Natural Resources Centre, MARDI, GPO Box 12301, 50774, Kuala Lumpur, Malaysia. Fax: +60-3-948-7639, e-mail: siva-sam@mardi.my.

**Co-chairman:** Dr. D.J. Wright, Department of Biology, Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, UK. Fax: +441-34-429-4339, e-mail d.wright@ic.ac.uk.

In April 2000, a new Website was launched. This site is entitled "The International Working Group for Diamondback Moth, *Plutella xylostella*". This site was developed and is maintained by Drs T. Shelton and C. Weeden and received funding from IOBC. The purpose of the site is to help disseminate information on research and extension activities worldwide. The site is located at: <http://www.nysaes.cornell.edu/ent/dbm/>. Comments and suggestions should be made to Dr C. Weeden (crw7@cornell.edu). The site contains information on past and upcoming conferences, a contact list for those working on diamondback moth, literature citations from 1969, news briefs, a review article and other information. The site will be updated at least quarterly. As soon as the meeting dates and information on the upcoming diamondback moth workshop scheduled for Australia in 2001 become available, they will be posted on the Website. When a call comes out from IOBC for items for an upcoming Global Newsletter, an e-mail is sent to the list of people on the Website. Items received are included in the Newsletter and also placed on the Website. Listed below are the ones received from the current solicitation.

An article has been published recently concerning research on biological control of *Plutella xylostella* in France. The paper is entitled "Ability of 17 strains of *Trichogramma* to control *Plutella xylostella* L. (Lep.: Yponomeutidae), in the laboratory", Tabone *et al.*, 1999, *Ann. Soc. Entomol. Fr.*, 35: 427-433 (in French). Studies are still underway for testing other indigenous and exotic strains. At the same time, knowledge about the biodiversity

of the natural enemy complex of *Trichogramma* spp. will be included. Laboratory screening is aimed at selecting the best strains to be tested in the field in order to evaluate their potential as biological control agents of DBM.

Drs Wen Qing Zhang and S.A. Hassan have submitted an article entitled, "Selection of egg parasitoids of the genus *Trichogramma* (Hymenoptera: Trichogrammatidae) to control the diamondback moth, *Plutella xylostella* (Lepidoptera: Plutellidae)". An abstract of the article can be seen on the Website.

Dr Izumi Ohta reports that in Japan, cruciferous leaf vegetables are often covered with cheesecloth and non-woven fabrics to control pest insects. Diamondback moth adults sometime intrude into such row covers and cause damage to the vegetables. Since *Trichogramma chilonis* could pass through the cover mesh, DBM was efficiently controlled by row covers together with the egg parasitoid.

Drs J. Pell and R. Vickers, in Australia, report on auto-dissemination of *Zoophthora radicans* through the use of pheromone trapping studies. In large scale caged field trials they found good control. A more complete abstract of their work can be seen on the Website.

Dr Idris Bin Abd. Ghani, from Malaysia, reports that *Nosema* spp (most probably *N. bombycis*) is resistant to Fumidil-B, the antibiotic commonly added to artificial diet of DBM, even at increased concentration. This was tested together with other antibiotics, albendazole, tetracycline and Suprim. Adding albendazole at the same concentration as Fumidil-B suppressed the spore production, and reduced disease infection. He also found higher infection rates in the highlands (lower than 20°C) than in lowlands (>30°C) due to temperature difference and indicated that parasitoids of DBM, particularly *Diadegma semiclausum*, were abundant and not affected by this pathogen.

## **WG FRUIT FLIES of ECONOMIC IMPORTANCE**

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**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, e-mail: bam10@psu.edu.

## **WG ECOLOGY of APHIDOPHAGA**

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**Chairman:** Pr. J.-L. Hemptinne, Laboratoire d'Agroécologie, Ecole nationale de Formation agronomique, BP 87, 31326 Castanet-Tolosan, France. e-mail: jean-louis.hemptinne@educagri.fr.

**Co-chairman:** Pr. D. Coderre, Département des Sciences Biologiques, Université du Québec à Montréal, CP 8888, Succursale du Centre ville, Montréal, Québec, Canada H3C 3P8. e-mail: coderre.daniel@uqam.ca.

## **WG CHROMOLAENA ODORATA**

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**Chairman:** Dr. R. Muniappan, Agricultural Experimental Station, University of Guam, Mangilao, Guam 96923 USA. Fax: +1-671-734-6842, e-mail: rmuni@uog9.uog.edu.

The 5<sup>th</sup> International Workshop on Biological Control and Management of *Chromolaena odorata* will be held at Durban, South Africa, October 23-28, 2000. Information on this workshop as well as registration can be obtained at the following Website page: <http://www.cpitt.uq.edu.au/chromolaena/siamhome.html>, or by contacting the chairman of the WG.

## **WG EGG PARASITIDS**

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**Chairman:** Dr. F. Bin, Agricultural Entomology Institute, University of Perugia, Borgo XX Giugno, 06121 Perugia, Italy. Tel: +39-075-585-6030, Fax: +39-075-585-6039, e-mail: fbin@unipg.it.

**Co-Chairman:** Dr. E. Wajnberg, INRA, 37 Blvd. du Cap, 06600 Antibes, France. Tel: +33-04-93-67-88-92, Fax: +33-04-93-67-88-97, e-mail: wajnberg@antibes.inra.fr.

Dr. S.A. Hassan decided to step down as a Chairman of the WG. IOBC wants to thank him for his continuous, active and enthusiastic work during all these years for developing the activities of the WG. There is no doubt that this WG would not have been what it is now without his precious Involvement. The IOBC wants to wish him all the best in his future activities.

## **Latest International Symposium on "Egg Parasitoids" in 2000 in Brazil**

The WG organised an international symposium within the framework of the XXI International Congress of Entomology, Brazil, August 2000. The symposium was included in Session 8 (Entomophagous Insects and Biological Control) and was a real success. It lasted a whole morning and included nine talks presented by scientists working in different countries. Besides this, Dr F. Bin, the chairman of the WG, gave an introductory talk entitled "Critical issues in egg parasitoids" that gave a thorough summary of the habits of these hymenopterous wasps, including their biology and ecology, and their efficiency as biological control agents.

The WG is now looking forward to its next International Symposium that will be organised in 2002. For this the WG is now looking for a country and institution willing to host this important scientific event. Anyone who is interested should contact the chairman or the co-chairman of the WG.

*Dr. E. Wajnberg, Co-chairman of the WG*

## **WG IWGO - OSTRINIA AND OTHER MAIZE PESTS**

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**Chairman:** Dr. H.K. Berger, BFL, Spargelfeldstraße 191, 1226 Wien, Austria Tel: +43-1-732-

16-2002. Fax: +43-1-732-16-2108, e-mail: hberger@bfl.at.

**Co-chairman:** Dr. L.C. Lewis, USDA-ARS, Corn Ins. Research Unit, Genetics Laboratory, c/o Insectary Bldg., Iowa State University, Ames, Iowa 50011, USA. e-mail: leslewis@iastate.edu.

## **Meetings, Workshops**

The last two meetings of IWGO took place in Adana, Turkey (XX<sup>th</sup> IWGO meeting. Proceedings are available either from the chairman of the WG or from the local organizer: Prof. S. Koronosor, University of Çukurova, Faculty of Agriculture, Plant Prot. Department, 01330 Adana, Turkey) and Paris, France (VI<sup>th</sup> International Workshop on *Diabrotica virgifera*, together with 4<sup>th</sup> FAO/TCP Meeting and 5<sup>th</sup> EPP0 ad hoc Panel).

The next meetings are planned for (1) 2000: Stuttgart, Germany [VII<sup>th</sup> International Workshop on *Diabrotica virgifera*, together with 6<sup>th</sup> EPP0 ad hoc Panel, November 16-18, 2000] and (2) 2001: USA [XXI<sup>st</sup> IWGO Meeting].

## **Publications**

The WG released several publications, partly with the support of Global IOBC. First, Volume XIX/2 of the IWGO-Newsletter, a scientific magazine edited by the chairman of the WG since 1981, was released in October 1999. All Newsletters can be obtained from the chairman of the WG. Second, the proceedings of the XIX<sup>th</sup> IWGO Meeting (1999) in Adana, Turkey are also available (see above for more information). Finally, the IWGO produced its own Website. It will replace the Newsletter in the future. The address of the IWGO home-page is: <http://www.infoland.at/iwgo/>.

## **Major results, Progress achieved**

The most important event in IWGO is certainly the appearance of *Diabrotica virgifera virgifera* in Europe since 1992. Several meetings (Subgroup "Diabrotica" - Convenor Prof. R. Edwards, University of Purdue,

Lafayette, Indiana, USA) were held. Within the 5<sup>th</sup> Framework Program of the European Community for Research, Technical Development and Demonstration Activities, Dr S. Vidal, (Justus Liebig-University Giessen, Germany) as the Coordinator, together with Drs P. Baufeld (BBA-Berlin, Germany), S. Derridj, (INRA, Versailles, France), L. Furlan, (University of Padova, Italy), H. Hummel, (Justus Liebig-University Giessen, Germany), J. Kiss (Agricultural University, Gödöllő, Hungary), U. Kuhlmann (CABI-Biosciences; Delémont, Switzerland) and the IWGO-chairman, were successful in getting funds for a research project entitled "The threat to maize production in the EU by the exotic corn rootworm pest *Diabrotica virgifera virgifera*: sustainable pest management approaches and ecological background". The project started in spring 2000 and will last until fall 2003.

#### **WG WATER HYACINTH**

**Chairman:** Dr. H.G. Zimmermann, Agricultural Research Council, Plant Protection Research Centre, Weeds Research Division, Private Bag X134, Pretoria 0001, South Africa. Tel: +27-12329-3276, Fax: +27-12329-3278, e-mail: riethgz@plant2.agric.za.

The first global working group meeting for the biological and integrated control of water hyacinth under the auspices of the IOBC was held at St Lucia Park, Harare, Zimbabwe, 16-19 November 1998. This meeting was attended by 47 delegates from 20 countries. Proceedings are available and are entitled: "Proceedings of the First IOBC Global Working Group Meeting for the Biological and Integrated Control of Water Hyacinth", Drs M.P. Hill, M.H. Julien and T.D. Center (Eds), 16-19 November 1998, Harare, Zimbabwe, 208 pp. It comprises 27 refereed papers and 3 abstracts. Topics covered in the proceedings include the implementation and post release evaluation of natural enemies,

research into new natural enemies for water hyacinth and the need for an integrated approach to the control of the weed. These proceedings are available from Martin Hill (PPRI, Private Bag X 134 Pretoria, South Africa, 0001, e-mail: Rietmh@plant2.agric.za) at a cost of US\$ 15 including postage.

The Second Global Working Group Meeting for the Biological and Integrated Control of Water Hyacinth will be held in Beijing, China 9-12 October 2000. The organising committee is headed by Dr Ding Jianqing, Biological Control Institute, Chinese Academy of Agricultural Sciences djq@public.east.cn.net. Abstracts and titles should be submitted no later than 31<sup>st</sup> of July 2000 and registration should be submitted by the 31<sup>st</sup> of August 2000.

#### **WG TRANSGENIC ORGANISMS IN IPM AND BIOLOGICAL CONTROL**

**Chairwoman:** Dr. A. Hilbeck, Swiss Federal Institute of Technology, Geobotanical Institute, Zurichbergstr. 38, 8044 Zurich, Switzerland. Tel: +41-1-632-4322, Fax: +41-1-632-1215, e-mail: hilbeck@cirsium.ethz.ch.

During the first half of 2000, our primary activity has been to write convincing proposals to raise the funds necessary for organising and holding our first international workshop. We have succeeded in securing funds from the Swiss Agency for Development and Cooperation (SDC) and the International Rice Research Institute (IRRI). Because the SDC has given money to IOBC under the condition that the workshop be held before the end of 2000, we have decided to hold our meeting in association with a related meeting organised by the RiceIPM Network which is also funded by SDC. Dr K.L. Heong from IRRI is the co-ordinator of that network. The conference is to be held in Hangzhou, China, 27-30 November, 2000. The conference will include presentations and discussion about transgenic crops and IPM, resistance

management for Bt crops and environmental impact of transgene outcrossing to wild/weedy relatives. An important additional highlight of the workshop will hopefully be the participation and presentations from governmental regulatory officials from Europe, Australia and the USA. They are expected to provide an update on the status of regulation and monitoring in their countries and perhaps their interpretation of the Biosafety Protocol agreed upon last February in Montreal, Quebec, Canada. Because of the large amount of effort that will be required to organise the meeting in China, we have decided to postpone the production of our second Newsletter until after the meeting. The Newsletter will then contain the key presentations and summarise the outcome of the workshop. The detail of the conference are provided below:

#### **Effective and sustainable use of agricultural biotechnology in integrated pest management in developing countries**

This event will be organised by both the WG and the International Rice Research Institute (IRRI). It will be funded by The Swiss Agency for Development and Cooperation (SDC). It will be held as a satellite meeting to the Rice IPM Network "International Conference on Raising Rice Productivity Levels – Implications for Pest Management" (see above). Transgenic crops that confer resistance to pests, such as Bt maize, rice and cotton, are at the forefront of the agrobiotechnological revolution. These technologies address pest problems that are also the focus of integrated pest management (IPM). IPM is the farmer's best mix of pest control methods to optimise productivity, income and sustainability. In the developing countries of Africa, Asia, and Latin America, national IPM policies encourage reduced dependence on broad-spectrum pesticides and greater reliance on plant resistance (of which transgenic crops are a form) and biological control. Many IPM programs encourage a farmer-participatory process, which

empowers farmers as IPM practitioners in their own crops. Concerns have been raised that an overemphasis on transgenic

made in participatory IPM development expertise.

Biotechnologies for crop protection have a potentially significant impact in initiatives, particularly in crops like

induced pest outbreaks have been the cause of dramatic declines in IPM development. IPM systems are therefore a "test case" for the

biotechnologies can make useful contributions to agricultural development. However, present IPM systems is limited and is concentrated in developed countries.

crops are now being released over tens of millions of hectares

scientists who have had the opportunity to develop methods to evaluate and use these technologies in IPM systems. These scientists, in turn, have problems in research and communication due to the fact that IPM systems in developing countries are now being released over tens of millions of hectares

transgenic plants for research.

In developing countries, there is currently a limited capacity to

evaluate, select and deploy transgenic crops as components of local IPM strategies. To address this problem, there is a need to establish collaborative links between scientists in developed and developing countries, and to provide scientists, regulators, and policy makers in developing countries with access to up-to date research and regulatory information.

### ON COFFEE BERRY BORER

**Chairman** Y. Tan, Division de Tecnología

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www.tap-ecosur.edu.mx/broca.

Some of the scientists of this Workshop are:

(CBB) Fund for Commodities through The International Coffee Organization. The project executing IPM in coffee in Colombia (CENICAFE), Ecuador (ANEP), Guatemala (ANEP), Honduras (ANEP), India (CBI) and Mexico (CIBICOSUR). The

incorporating different biological

and cultural control methods that have been developed in

caused by the CBB development of locally relevant and affordable IPM systems. The methods include the introduction

indigenous to Africa, at least the bethylids *Cephalonomia stephanoderis* and *Phymastichus coffea*. Local strains of parasitic *Beauveria bassiana* and

be incorporated to enhance the biological system. Functional and IPM systems are

and carry out the transfer and distribution of the IPM technology to a broad range of coffee producers. The project is in its third

been achieved. For example, *Phymastichus coffea* introduced from Colombia to all the participating countries (except Jamaica) and its rearing is

participating countries are using participatory tools to enhance the transfer of technology and the

time, doing IPM with small farmers; these are considered to be the first steps in IPM farmers.

## S E V E N T S

**10<sup>th</sup> International Symposium "Millennium"**, Rennes, France, 3-8

will take place at the High School of Agronomy, Rennes, and will be organised by the research team

staff from both INRA and NSAR.

assessment by a scientific committee. For more information,

Committee, INRA

Zoologie, Domaine de la Motte, 35653 Le Rheu Cedex, France.

aphid@rennes.inra.fr.

**"4 European Workshop on Invertebrate Ecophysiology"** St. Petersburg, Russia, 9-14 September 2001. The Workshop will continue the sequence of the

Paimpont, France (1992), Ceske Budejovice, Czech Republic

(1998). It will be dedicated to the

memory of the late Pr. A.

former head of the Department of Entomology, on occasion of his 50<sup>th</sup> anniversary and of the 40 year since the appearance of his famous book "Photoperiodism

Insects" first printed in Russian in 1961. The workshop will cover

terrestrial invertebrates (mainly arthropods), the main themes for

nological strategies, (2) temperature requirements of development, (3) over wintering and cold hardiness, (4) water relations and respiration, and (5) impacts and responses to climate change. Other sessions will also be added to the programme if there are a substantial number of oral presentations that lie outside of the main themes. The official language of the Workshop will be English. The main form of presentation will be oral papers, but a poster session will be also arranged. The "European Journal of Entomology" is expected to continue a tradition of publishing a special issue of papers presented at the Workshop, subject to the normal refereeing procedures of the journal. There will be a participation fee of around 100 US\$ to cover the costs of publicity, production of the Workshop materials including the book of abstracts, welcome party, coffee breaks, and social programme. For more information, contact Pr. V.E. Kipyatkov, Department of Entomology, Faculty of Biology St. Petersburg, State University 7/9 Universitetskaya emb., St. Petersburg, 199034 Russia. Tel: +7-812-3289679, Fax: +7- 812-4277310, e-mail: vk@socium.usr.pu.ru.

**"Resistance 2001. Meeting the Challenge"**. IACR-Rothamsted, Harpenden, UK, 23-26 September 2001. This major international conference, the 4<sup>th</sup> in an ongoing series, will review the latest research on the origins, nature, development and prevention of resistance to insecticides, fungicides and herbicides. It will provide a forum for researchers, consultants, regulators and industrialists to present and discuss approaches to overcoming this increasingly important constraint to effective crop protection. Themes will include: (1) Current status of resistance in pest control, (2) Mechanisms of resis-

tance, (3) Population biology of resistance, (4) Assessment of resistance risks, (5) Transgenic crops, (6) Strategies for managing resistance. For more information, contact the Conference Secretariat Office, Resistance 2001, IACR-Rothamsted, Harpenden, Herts AL5 2JQ, UK, Tel: +44-0-1582-763133, Fax: +44-0-1582-760981, Website: <http://www.iacr.bbsrc.ac.uk/iacr/meeting.html>, e-mail: [res.2001@bbsrc.ac.uk](mailto:res.2001@bbsrc.ac.uk).

**"XIV<sup>th</sup> International Congress of the International Union for the Study of Social Insects"**. Sapporo, Japan, 28 July – 3 August 2002. This congress is addressed to all scientists interested in the various aspects of inquiry into social and parasocial arthropods, including applied aspects. The official language of the congress will be English. Six plenary sessions and 20-30 symposia will be organised. For more information, please contact Pr. Seigo Higashi, Graduate School of Environmental Earth Science, Hokkaido University, Sapporo, 060-0810, Japan, Tel: +81-11-706-2250, Fax: +81-11-706-4867, e-mail [hise-mato@ees.hokudai.ac.jp](mailto:hise-mato@ees.hokudai.ac.jp).

**"VIII<sup>th</sup> International Colloquium on Invertebrate Pathology and Microbial Control"** and **"VI<sup>th</sup> International Conference on *Bacillus thuringiensis*"**. Foz do Iguassu, Brazil, 18-23 August 2002. For more information, contact the organising committee, F. Moscardi, Chairman, Fax: +55-371-6100, e-mail: [moscardi@cnpso.embrapa.br](mailto:moscardi@cnpso.embrapa.br).

**"VII<sup>th</sup> European Congress of Entomology"**. 7-13 October 2002, Thessaloniki, Greece. An outstanding scientific program will be organised focusing on all aspects of Entomology. It will include 1-2 days of lectures, 3-4 days of specialised symposia and

a one-day excursion. The official language will be English. For more information, please contact the congress secretariat, Laboratory of Applied Zoology and Parasitology, Aristotle University of Thessaloniki, 540-06 Thessaloniki, Greece, Tel/Fax: +31-998853, e-mail [matilda@agro.auth.gr](mailto:matilda@agro.auth.gr).

**"XV<sup>th</sup> International Plant Protection Congress"**. Beijing, China, 6-11 July 2003. The congress will focus on the current progress in the plant protection sciences and technology, and its foreseeable development in the 21<sup>st</sup> century. To meet the new challenge facing plant protection in the new millennium, the tentative theme of the congress is "The first great gathering for plant protection in the 21<sup>st</sup> century". The researchers, crop protection consultants, practitioners, extension workers, representatives of regulatory agencies (quarantines, pesticides, biotechnology), administrators, and representatives of industry (chemicals, biologicals, genetic modification, diagnostics, monitoring equipment, software, etc.) are cordially invited to participate to the congress. The scientific program will include opening and closing lectures, plenary lectures, symposia, workshops and poster sessions on more than twenty different topics. The official language of the congress will be English. For more information, please contact Me. WEN Liping, Secretariat, XV<sup>th</sup> IPPC, c/o Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing 100094 China, Tel/Fax: 00-86-10-62815913, e-mail: [ippc2003@ipmchina.cn.net](mailto:ippc2003@ipmchina.cn.net), Website: <http://www.ipmchina.cn.net/ippc>.

## BOOKS

**"An Illustrated guide to the Parasitic Wasps Associated with Citrus Scale Insects and Mealybugs in Australia"**. By

Drs M.B. Malipatil, K.L. Dunn and D. Smith. 2000. ISBN 0-7311-4458-9. 152 pages. This resource guide aims to help the

citrus IPM consultant, field worker and specialist entomologist with identification of 53 common parasitoids. It provides

easy-to-use, illustrated identification keys, less technical diagnostic characters, and, where possible, photographs of individual species. Sources of original

synonyms, diagnosis and biological notes, host lists, and key references are provided for each species. By consulting these (particularly on

Australia)

please contact: Dr M. Malipatil, Systematic Entomology Unit,

PMB  
Centre, Victoria 3176 Australia.  
Tel: 00-61-03-92109-3222, Fax:

Mallik.Malipatil@nre.vic.gov.au.

“  
**Bugs in Northern California**”.

bugs feast on crops in tropical and temperate regions throughout

a three-year study on stink bugs that was conducted at a northern SA. The

bugs whose eggs were exploited by predators such as the common

parasitic wasps. His analysis suggests that an understanding of

pests and their natural enemies will improve our ability to devise

systems for these pests. The book is the latest in the Thomas Say

more information, please refer to the Entomological Society of

<http://www.entsoc.org>, or contact E Sales, 9301 Annapolis Road, Lanham, MS 20706, U , e-mail: [sales@entsoc.org](mailto:sales@entsoc.org).

**Field manual of techniques in invertebrate pathology. Application and evaluation of pathogens for control of insects and**

Edited by Drs L.A. Lacey and

this Field Manual provide the tools required for planning experiments with entomopathogens

field. Basic tools include chapters on the theory and practice of

equipment and application strategies. The major pathogen groups are covered in individual chapters

nematodes). Subsequent chapters deal with the impact of naturally

pathogens and inundative application of microbial control agents. The largest section of the

evaluation of entomopathogens in a wide range of agricultural,

habitats. Mites and slugs broaden the scope of the book. Supplementary techniques and media

are described. Three final chapters cover the evaluation of Bt transgenic plants, resistance to

manage it, and guidelines for evaluating the effects of MCAs

readership of the book is: researchers, graduate students, practitioners of integrated pest

those doing environmental impact studies. The book is a stand-alone reference, but is also complementary to the laboratory-

Insect Pathology and similar comprehensive texts. The book is

Publishers, Dordrecht, NL. Hard bound, ISBN 0-7923-6269-1. For more information, connect the

<http://www.wkap.nl/book.htm/0-7923-6269-1>.

**Biological control in the tropics**”. 2000. Edited by Dr Loke *et al.* Biological control has been central to many

management programmes. It is also the natural choice where

particularly important. This book reviews current knowledge of

the tropics, particularly in devel

oping countries. It is based on papers presented at a symposium

Contributors include authorities from Europe, North America and

East Asia. The book is published by C Publishing, UK. Paper back ISBN: 0851994628. For more information, connect the

[http://www.cabi.org/bookshop/book\\_detail.asp?isbn=0851994628](http://www.cabi.org/bookshop/book_detail.asp?isbn=0851994628).

**Sampling and monitoring in crop protection: The theoretical basis for designing practical**”. 2000. Edited by Drs M.R. Binns, J.P. Nyrop

covers the statistical concepts of sampling in agricultural pest m-

data from the field and how to use the data in decision-making.

natural enemies, spraying with pesticide, or adopting a wait-and-l-

reader, but only minimal mathematical background is assumed. Working examples using the

Mathcad are also included. The book is published by C Publishing, UK. Hardback ISBN: 0851993478. For more information, connect the Website:

[ok\\_detail.asp?isbn=0851993478](http://www.cabi.org/bookshop/book_detail.asp?isbn=0851993478).

“  
**of Success**” 2000. Edited by Drs

as examining successful biological control programmes, this book analyses why the majority

other negative effects of biological control are also dealt with. Chapters contributed by leading

practitioners in all areas of biological control afford the book a breadth of coverage and depth of n-

with the use of other experts to review chapters and editorial

integrity of the volume, this book provides the most authoritative

analysis of biological control published. Key aspects addressed include how success may be measured, how successful biological control has been to date and how may it be made more successful in the future. With

extensive use of contemporary examples, photographs, figures and tables, this book will be invaluable to advanced undergraduate and postgraduate students as well as being a "must" for all involved in making bio

logical control successful. The book is published by Kluwer Academic Publishers, Dordrecht, NL. Hardbound, ISBN 0-412-84280-7. For more information, connect the Website: <http://www.wkap.nl/book.htm/0-412-84280-7>.

**Newsletter contributions:** I would like to thank all those members who are taking time to send items for this 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 mail or fax (even better e-mail) items on biological control to Dr A. Gassmann (address on first page), so they can be included in the next issue. Deadline for submitting items for the winter 2000 issue of IOBC Newsletter is 15 November 2000.

This is the last issue of the IOBC Global Newsletter that I have been edited during the last four years. It was a real pleasure to work together with all of you. I am grateful to those who shared their information with me and I hope you will continue to do so with the new editor of this Newsletter.

*E. Wajnberg, past Secretary General of the IOBC*

We would like to express our grateful thanks to L. B. Maller and L. E. Ehler at the University of California, Davis for proof reading this issue.

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