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OF NOXIOUS ANIMALS AND PLANTS (IOBC)

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

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EDITORIAL

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tions, BioControl has a particular significance in that it actually belongs to the international scientific community of biological control. It is *your* journal and through *your* efforts it will maintain its standards, expand its popularity and address those areas in our discipline which are most important to you and your colleagues. Congratulations are due to Prof. H. Hokkanen, its new Editor, and to his many colleagues in IOBC who have worked so hard to keep an international journal as part of the IOBC vision.

IOBC has also been busy in 1998 with stimulating the new research which will provide the journal publications of tomorrow. International meetings in Zimbabwe, Mexico, Switzerland and USA have helped to launch three new Global IOBC Working Groups on Water Hyacinth, Coffee Berry Borer and Trans

November 1998 marked the re-birth of IOBC's international journal in biological control. BioControl Volume 43 (so numbered to provide continuity with

Entomophaga, which it replaces) demonstrates IOBC's capacity to contribute a top-quality professional journal to the busy library shelf of biological control publications. Amongst these publica-

genic Organisms in Biological Control and IPM. Looking ahead to 1999, plans are well underway for an international Symposium on Evaluating Indirect Ecological Effects of Biological Control, organised by IOBC's Permanent Secretariat in Montpellier in co-operation with the « Complexe International de Lutte Biologique Agropolis » (CILBA). I

hope you will agree that IOBC is creating on all these fronts opportunities for biological control scientists to communicate with each other and thereby to be proactive in shaping the future of our discipline.

Dr J.K. Waage, President IOBC Global

A NEW EXECUTIVE COMMITTEE OF THE IOBC GLOBAL FOR 2000

The four years period of the Executive Committee will end after the next General Assembly that will be organised within the Framework of the next XXI International Congress of Entomology, Foz do Iguaçu, Brazil, in summer 2000. New officers are elected by all IOBC members by postal ballot which will be performed before the General assembly, likely in Spring 2000.

The Executive Committee consists of the President, the immediate Past-President, the two Vice-Presidents, the Treasurer and the Secretary General. According to the statutes of the IOBC Global, all officers, except the immediate Past-President, are elected by votes. 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. The details of the election procedure will be given in one of the following issues of the IOBC Newsletter.

IOBC EXECUTIVE MEETING

On September 18, 1998, a meeting of the Executive Committee of the IOBC Global was organised in Montpellier, France. The president, Dr J.K. Waage; the Treasurer, Dr H.K. Berger; one Vice-President, Dr L. Knutson; the Secretary General, Dr E. Wajnberg & the Permanent Secretary, Ms M. Montes de Oca were present. The different following points were discussed:

- The budget of the IOBC appears to be equilibrated. Royalties from our journal *Bio-Control* will be received as soon as the number of subscribers has reached a threshold that was decided with the contract signed with Kluwer (*i.e.*, the publisher of *Bio-Control*). We are currently still below this threshold. As soon as available, these royalties will be used mainly for

providing help to our Working Groups.

- Two new Global Working Groups were created: (1) one on « Transgenic Organisms in IPM and Biological Control », the other on « Coffee Berry Borer » (see below).
- The Global Working Group on « Quality Control of Mass Reared Arthropods » was reconstituted and renamed the Working Group on « Arthropod Mass Rearing and Quality Control » (see below).
- An International IOBC Symposium will be organised in Montpellier, France, 17-20 October 1999, on « Evaluating Indirect Ecological Effects of Biological Control » (see below).
- The name of the « South East Asian Regional Section » (SEARS) has been asked to be changed into « Asian-Pacific

Regional Section » (APRS). According to the statutes of the IOBC, the final official decision concerning this change should be approved, on the global level, by the Council of the IOBC at a Council Meeting.

- The IOBC will have its next General Assembly in 2000, within the framework of the next XXI International Congress of Entomology, at Foz do Iguaçu, Brazil. A new council should be elected on this occasion.
- A Website for the Global IOBC will be installed soon.

E. Wajnberg

IOBC INTERNATIONAL SYMPOSIUM

The IOBC is currently organising an International Symposium on:

« Evaluating Indirect Ecological Effects of Biological Control ».

This symposium will be held at Montpellier, France, 17-20 October 1999. It is organised within the framework of the « Complexe International de Lutte Biologique Agropolis » (CILBA).

Scope of the Symposium

Biological control is a method for managing and restoring ecosystems affected by particular, undesired pest species. How the introduction of biological control agents affects ecosystems is therefore critical to understanding and predicting their value and risk. Our understanding of the ecological and evolutionary processes underlying these effects of biological control is presently limited, and experimental methods sometimes lacking. This symposium will assess the current status of evaluation of ecological (including non-target) effects in biological control, and will apply current ecological and evolutionary research to the development of sound evaluation measures.

The aim of the symposium is to develop an improved ecological approach to biological control. It will consider all aspects of biological control, including « classical » and augmentative methods excluding genetic engineering. Taking lessons from the past, the symposium will focus on science based, theoretical and experimental approaches to assessment of biological control programs. It is not the purpose of the symposium to address procedures for risk analysis and national decision making on the use of biological control, but the outputs of the symposium should improve the scientific foundation for this process.

Dr J.K. Waage, President IOBC
Dr P. Ferron, President CILBA

Meeting themes

The first two days of the symposium will comprise sessions for keynote speakers, proposed papers and posters and the last day, a workshop session. Themes for papers will include:

Application of ecological theory and research:

- understanding population ecology and tropic interactions
- community and ecosystem level effects
- assessing spread and impact of introduced species
- evolution and ecology of host specificity

Case studies and analyses:

- non-target effects in biological control of weeds
- non-target effects of predators and parasitoids
- non-target effects of insect pathogens
- non-target effects of biological control of plant diseases

Assessment methodology:

- ecology of host range testing
- what contributions to biological control can be made by studying the ecology of agent and pest organisms in their native habitats?
- are there lessons to be learnt from ecological studies in other fields that are applicable to biological control?

Call for papers

The symposium will consist of invited papers and offered papers and posters. Contributions are invited on a world-wide basis from researchers who can con-

tribute to the understanding of the ecology of non-target effects of biological control. Biological control is interpreted in a wide sense, including the targeting of pest vertebrates, weeds, arthropods, and pathogens and includes any type of organisms used as biological control agents. The size of the venue restricts the number of delegates to 120-150, based on a first come first served basis. This will keep the meeting small and enable functioning of the workshop sessions that will occur on the third day. The official language of the symposium is English. The text of invited and offered papers and posters from the meeting will be published in the Symposium Proceedings. Completed papers are to be presented at the meeting.

How to offer a paper

Those interested in offering a paper should: (1) collect the pre-registration form at the following Web address:

<http://www.agropolis.fr/iobc/fom.html> or send an e-mail to: iobc.symp@agropolis.fr (2) complete the « offer of a paper » section, and (3) return it as soon as possible. The final deadline for the submission of offers is 1st March 1999.

Authors must provide an informative summary of 150 to 200 words for their paper (not for publication). The conference organisers reserve the right to select or reject proposed papers to ensure that the ecological aims of the meeting are met. Once a paper is provisionally accepted by the program committee, an abstract will be requested. This is to be supplied by 31 July 1999. Abstracts of papers will be compiled into a booklet of abstracts to be available at the meeting. A full draft of the paper will be required by 20 October

1999. These papers will be subjected to external refereeing. Any provisionally accepted paper may be rejected.

Organising committee

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BIOCONTROL

All subscribers to BioControl have now received the first issue of our journal (Vol. 43.1). The second issue is almost ready and should appear soon. During the first 13 months of activity, the journal received a total of 119 manuscripts, equalling approximately 2110 printed pages. The flow appears to be regular at about 9 manuscripts per month. Up to now, 28 papers have been accepted to be published (508 printed pages, actually slightly exceeding our annual quota of 496 pages), and 48 papers were rejected. Taking into account the papers that are currently under revision, the rejection rate has been about 60%, but we may have to even raise it a little bit if the manuscript flow keeps increasing.

BioControl issue 43.2 will contain the following papers:

- Mueller C.B. & H.C.J. Godfray - The response of aphid secondary parasitoids to different patch densities of their host.
- Rantinou A.A., M.P. Alexandri & J.A. Tsitsipis - Adult emergence rhythm of the egg-parasitoid *Telenomus busseolae*.
- Uygun N. & N.Z. Elekçioğlu - Effect of three diaspididae prey species on development and fecundity of the lady-

beetle *Chilocorus bipustulatus* in the laboratory.

- Mohaghegeh J., P. DeClercq & L. Tirry - Maternal age and egg weight affect offspring performance in the predatory stink bug *Podisus nigrispinus*.
- Riedel W. & T. Steenberg - Adult polyphagous coleopterans overwintering in cereal boundaries: Winter mortality and susceptibility to the entomopathogenic fungus *Beauveria bassiana*.
- Hajek A.E., L. Bauer, M.L. Mcmanus & M.M. Wheeler - Distribution of resting spores of the *Lymantria dispar* pathogen *Entomophaga maïmaïga* in soil and on bark.
- Scheepmaker J.W.A., F.P. Geels, L.J.L.D. van Griensven & P.H. Smits - Susceptibility of larvae of the mushroom fly *Megaselia halterata* to the entomopathogenic nematode *Steinernema feltiae* in bioassays.
- Hill M.P. - Life history and laboratory host range of *Stenopelmus rufinasus*, a natural enemy for *Azolla filiculoides* in South Africa.
- Olckers T. - Biology and host range of *Platyphora semiviridis*, a leaf beetle evaluated as a potential biological control agent for *Solanum mauritianum* in South Africa.

- Elad Y., B. Kirshner, N. Yehuda & A. Szejnberg - Management of powdery mildew and gray mold of cucumber by *Trichoderma harzianum* T39 and *Ampelomyces quisqualis* AQ10.

In addition, the following papers have been accepted for publication in BioControl, and consequently will appear in one of the next issues:

- Szauman-Szumski K.J., A. Peña, D.R. Kelly & M. Campos - Identification of chemicals attractive to the olive bark beetle, *Phloeotribus scarabaeoides*, in laboratory bioassays.
- DeClercq P., M. Vandewalle & L. Tirry - Impact of inbreeding on performance of the predator *Podisus maculiventris*.
- Makranzcy G., M. Tóth, J.-P. Chambon, R. Unelius, M. Bengtsson & P. Witzgall - Sex pheromone of pear moth, *Cydia pyrivora*.
- Villanueva-Jiménez J.A. & M.A. Hoy - Toxicity of pesticides to the citrus leafminer and its parasitoid *Ageniaspis citricola* evaluated to assess their suitability for an IPM program in citrus nurseries.
- Liu S., G. Zhang & F. Zhang - Factors influencing parasit-

ism by *Trichogramma dendrolimi* on eggs of the Asian corn borer *Ostrinia furnacalis*.

- Gerling D., T. Orion & D.L.J. Quicke - Oviposition mechanisms in the whitefly parasitoids *Encarsia transvena* and *Eretmocerus mundus*.
- Grasswitz T.R. & B.D. Reese - Biology and host selection behaviour of the aphid hyperparasitoid *Alloxysta victrix* in association with the primary parasitoid *Aphidius colemani* and the host aphid *Myzus persicae*.

- Dias S.C., M.A. Sagardoy, S.F. Silva & J.M.C.S. Dias - Characterisation and pathological evaluation of strains of *Bacillus thuringiensis* and *Bacillus sphaericus* isolated from Argentinian soils.
- Maniania N.K. & A. Odulaja - Effect of species, age and sex of tsetse flies on response to infection by *Metarhizium anisopliae*.

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>. You will find

there 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 that this subscription rate is low compared to other journal in the same field area, I 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

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).

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Dr R.E. McFadyen President, IOBC/SEARS

8-th meeting of the group of use of biological control agents in Japan

This meeting was held in Nagano, Japan, 3-4 December 1998. There were 250 participants and 20 presentations, which is more than the previous meeting held in 1997. During the present meeting, it was shown that sales of biological control agents in Japan are increasing.

Fortuitous biological control of a bugworm pest by a tachinid fly in Japan

The bugworm *Eumeta japonica* Heylaerts (= *E. variegata*) is known to be one of the most common pests of roadside and garden trees in urban areas of Southern Japan. During the last several years, however, it suffered a drastic reduction in this country. According to Dr H. Shima, a taxonomist of tachinids, such a rapid reduction in pest abundance seems to be due to a

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Secretary/Treasurer: Dr D. Holdom, CRC for Tropical Pest Management, Gehrman Laboratory,

SEARS Council will be holding a meeting in Kuala Lumpur, Malaysia,

on Wed 17 March, in association with the Symposium on Biological Control in the Tropics being organised by MARDI from 18 to 19 March 1999. Items to be discussed will include how to reduce the impact of the Asian economic crisis, especially the severe devaluation of several Asian currencies, on the ability of SEARS members to pay IOBC membership fees; and a possible change of the name of the regional section to Asian Pacific Regional Section or APRS. (see the summary of the last IOBC Executive Meeting, above).

tachinid fly *Nealsomyia rufella* (Bezzi). This fly was not known in Japan until it was collected in Fukuoka, Kyushu, in the fall 1995, and average parasitism rates reached almost 90% in this area (Shima H. & T. Tachi, 1996, Tachinid Times, Issue 9, page 3). *N. rufella* can now be found in other places of Kyushu, Shikoku and a Southern part of Honshu in Japan. In these areas, most of the bugworm cases on trees are found to be empty because of high levels of parasitism. *N. rufella* is recorded as a parasitoid of *E. variegata* from Malaysia (Crosskey, 1976) and was found in China (probably South China) in 1985. It is likely that an attempt of a domestic introduction of this parasitoid into Shantung Province, North China, was successful in controlling *E. variegata* in the early 90s. It is possible that *N. rufella* was accidentally introduced from China or Southern Asia into Japan.

Dr Y. Hirose, IOBC/SEARS

**AFROTROPICAL
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An informal working group « Southern African Citrus Insectary Working Group » was established with the aim of facilitating the implementation of the augmentative release of natural enemies in the citrus industry. A general meeting of the working group was convened on 30 October 1998 at which it was decided to transform the working group into the « Insectary Society of Southern Africa », a non-profit organisation providing a unified approach to enhancing the interests of the southern African insectary industry. The aims of the society are: (1) Certify adoption of a code of conduct by commercial insectaries, (2) Foster a programme which assures standardised quality, (3) Promote research on augmentation, (4) Promote optimal utilisation of the augmentation techniques, (5) Promote communication between research organisations and other interested parties, and (6) Provide a lobby group to address legislation that may affect the insectary industry. For more information contact Dr Vaughan Hattingh, Outspan Citrus Centre, P.O. Box 28, Nelspruit 1200, South Africa e-mail:

vaughan_hattingh@outspan.co.za

After six successive years of trials by INFRUITEC (a research institute of the Agricultural Research Council of South Africa) with the control of the codling moth on apple and pears by pheromone-mediated mating disruption, it is now possible to control codling moth very successfully by this method. Costs,

in the long-term, are very competitive, and use of the technique has enabled apple fruit growers to manage the resistance of codling moth to pesticides. About 7,000 hectares of apples are now under mating disruption. For more information contact Dr B. Barnes, INFRUITEC, Private Bag X5013, Stellenbosch 7599, South Africa, fax 00-27-21-809-3400.

Based on work done by the Plant Protection Research Institute of the Agricultural Research Council (Pretoria) and the UK based Natural Resources Institute, the METARSHIZIUM mycoinsecticide, trade name « Green Muscle », was recently registered under Act 36 of 1947 in South Africa. This made South Africa the first country to legalise the use of this product for the control of the brown locust.

Dr H.G. Zimmermann, President IOBC/ATRS

**NEARCTIC
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The IOBC/NRS organised its last meeting in conjunction with the joint meeting of the Entomological Society of America and American Phytopathological Society, Las Vegas, NV, USA, 8-10 November 1998. On this occasion, a new governing board was elected. IOBC welcomes the new officers of NRS. We hope that the new duties will give you satisfaction and success.

Report of the annual meeting of the IOBC/NRS

IOBC/NRS held its annual meeting in Las Vegas, Nevada, USA on November 8, 1998. A number of issues of interest to the membership were discussed, most notably the status of the journal *BioControl*. Dr A. Cameron, NRS Representative to the management board of the journal, requested that the membership continue to have patience and further asked members to view the first issue, which was available at the Kluwer exhibition booth. Secretary-Treasurer Dr R. Wiedenmann provided the membership with an overview of membership, expenses and assets and presented a budget for 1999 (which was approved). The 1998 IOBC/NRS Distinguished Scientist Award was presented by Dr J. Myers to Dr P. Harris (retired) of Agriculture Canada. Later, President Kring discussed various mechanistic issues involving

the Award, which has received excellent support from the membership. The membership discussed the recent formation (by the USDA) of an interagency « Biological Coordinating Committee » and its « Interagency Action Team ». Several IOBC/NRS members are a part of the Action Team, and the membership is looking forward to output from these entities.

President Kring announced the dates and location have been formalised for the IOBC/NRS sponsored international meeting to be held August 2-5, 2001 in Bozeman Montana, USA. The membership approved an IOBC/NRS Executive Committee resolution recognising the support and contributions made by the USDA/APHIS National Biological Control Institute on behalf of the science of biological control.

Biological Control Workshop

The « Alternative Paradigms for Commercialising Biological Control Workshop » was held 31 May - 2 June in New Brunswick, New Jersey, USA. This Workshop addressed the need for a new paradigm for biopesticides that emphasises their strengths, as distinct from the current paradigm, which has been to try to make biological control agents chemical analogues, an approach that tends to emphasise their weaknesses. The chemical model for commercialising biocontrol emphasises major crops and cheap, stable products that are easy to scale-up and use. Biological agents fit this model poorly: a new paradigm is needed rooted in biological realities. The Workshop was designed to identify potential opportunities, understand how to develop enterprises that implement and deliver biocontrol, recommend new research directions, and identify potential partnerships. The 110 participants, representing four continents, provided a challenging interdis-

ciplinary mix of expertise, including regulators, researchers, extension, industry, environmentalists, and growers to fulfil their charge to « think different. » Many speakers were from « outside the box » of biocontrol (e.g., the food industry, which meets similar difficulties in marketing highly perishable products) and served to stimulate discussion during the breakout sessions. Breakout participants were tasked with identifying novel opportunities for commercialising biological control that would have potential for development in the next ten years. Using these opportunities as a starting point, participants identified key legal, financial/business, scientific/technological, and education/communication issues that might play a role in promoting or constraining commercialisation, as well as suggestions for resolving obstacles. A key theme that ran through the recommendations was the concept of grower cooperatives playing a more central role in product registration and distribution, grower training, and political action. The Workshop identified a key bottleneck for developing a new paradigm to be the dearth of viable, small-scale, local businesses to supply biocontrol products.

In the closing address « Where do we go from here », Dr J.K. Waage, President of the IOBC, discussed « bending » the paradigm, principally via education. The need for training in biocontrol was a recurrent message throughout the meeting. He also emphasised a vision for biological control which focuses on self-perpetuating low-cost systems with local or regional processes and grower participation, all within a strong ecological context.

Follow up for the Workshop will be provided by the co-organisers: Rutgers University and the Experiment Station Committee on Policy – Working Group on

Biological Control (ESCOP-WGBC). The Rutgers co-organisers are preparing a document for distribution that presents the Workshop's discussions and recommendations, and a list of participants. The document will be accessible via the Internet at :

<http://wwwrci.rutgers.edu/~insects/biopesticides.htm>

Action steps were identified specific to government, universities, industry, and growers. Rutgers has already taken steps to implement one of the action steps identified for universities: to establish Biological Control Working Groups at the state level to improve communication. ESCOP-WGBC will also follow-up actions suggested at the Workshop, beginning with the need for a national assessment of current technologies and technology needs in biocontrol. ESCOP-WGBC will further serve as an advocate to further streamline the regulatory environment for biopesticides by establishing a broad dialogue with the appropriate federal agencies.

Dr R. Gaugler, reprinted from IOBC/NRS Newsletter #20/3

NEOTROPICAL REGIONAL SECTION (NTRS)



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Vice Presidents: (1) Dr R. Vergara, Universidad Nacional de Colombia, Facultad de Ciencias Agropecuarias, Seccional de Medellin, Apdo. 1779, Medellin, Colombia, Fax: 00-57-4-2300-420; (2) Ing. J. Jimenez, Productos Biologicos Perkins Ltda., Carrera 29 N° 53-51, Apdo. 1015, Palmira, Valle, Colombia.

Fax: 00-57-2)-27-33719; and (3)

Dr E. Botto, Insectario de Investigaciones para Lucha Biologica, IMYZA-CICA-INTA, Castelar (1712), CC 25, Buenos Aires, Argentina. Fax: 00-54-1-481-1316. e-mail:

postmaster@ebotto.inta.gov.ar.

EAST PALAEARCTIC REGIONAL SECTION (EPRS)



President: Dr A.I. Smetnik, All-Russian Institute for Plant Quarantine, Pogranchnaya 32, reg. Bikovo, Moscow Region, 140150, Russia.

Fax: 00-95-975-3971.

Vice President: Dr S. Pruszyński, Plant Protection Institute, 60-138 Poznan, Miczurina Str. 20, Poland.

Tel: 00-48-61-679-222,

Fax: 00-48-61-676-301,

e-mail: tjk@ior.poznan.pl.

General Secretary: Dr A. Orłowski, Present address: EPPO, 1, rue Lenotre, 75016 Paris, France. Tel: 00-01-45-20-77-94.

Fax: 00-01-42-24-89-43.

e-mail: hq@eppo.fr.

The East Palaearctic Regional Section (EPRS) of the IOBC recently celebrated the 20-th anniversary of its activity. This Regional Section is open to all organisations and persons who are willing to contribute to the development of biological plant protection and the international co-operation in this field. It includes 6 Permanent Commissions (Editorial-publishing, Entomophages and Phytophages of Weeds, Microbiological Plant Protection, Schemes of Integrated Plant Protection, Selective Methods of Plant Protection, Biological Forest Protection) and 16 interim working groups on actual problems of biological control.

More than 50 Research Institutes and Organisations from Bulgaria, Hungary, Poland, Slovakia, Macedonia, Yugoslavia and CIS countries are taking part in the elaboration of programs of IOBC/EPRS. The main aims of the Regional Section, that are formulated in its regulations, are the popularisation of world achievements in the field of biological plant protection and the assistance in the introduction of methods and means of plant protection, which are non harmful to beneficial organisms, animals, people and environment, into the practice of agriculture and forestry. The Section is publishing its own journal « Information Bulletin of EPRS of IOBC » (the last issue is #32, it contains the report of the last VII-th General Assembly, including the presentation of Dr J.K. Waage (IOBC President) and of other participants), organises Conferences and Symposia, maintains numerous international contacts.

The application to become member should be forwarded to the President of the Section - Prof. A.I. Smetnik. According to the Regulations of the Regional

Section, the decision on the membership is taken by the Council. Organisations or persons become members after a positive decision of the Council and the payment of the contribution. The amount of contributions and the order of their payment are decided by the General Assembly.

In 1999 the IOBC/EPRS will held the following Conferences and Symposia:

- The use of pheromones and other biologically active substances in plant protection and quarantine, 23-28 August, Anapa (Russia).
- Industrial technologies of production of means of « biologization » of agriculture, September, Odessa (Ukraine).
- Monitoring of entomophages, September, Odessa (Ukraine).
- New biotechnologies in the schemes of integrated plant protection, September, Varna (Bulgaria).

- Biological forest protection, October, Kyrgyzstan.
- Microbiological plant protection, December, Saint-Petersburg (Russia).

The address of the Secretariat of IOBC/EPRS is: 25, Goncharnaya Str., Moscow 109172 Russia.

Tel: 00-7-095-915-72-12,
Fax : 00-7-095-924-66-55.

Dr A. Orlinski, General Secretary of the IOBC/EPRS

WEST PALAEARCTIC 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.

Vice Presidents: Dr J. Huber, Institute for Biological Pest Control, Heinrichstr. 243, 62287 Darmstadt, Germany.

Fax: 00-61-51-40-7290, e-mail: j.huber.biocontrol.bba@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: 00-351-01-443-05-27,
Fax: 00-351-01-442-06-16.

Secretary General: Dr C. Alabouvette. INRA, Laboratoire de recherches sur la Flore pathogène du Sol, 17, rue Sully, BP 1540, 21034 Dijon Cedex, France.

Tel: 00-03-80-63-30-41,
Fax: 00-03-80-63-32-26, e-mail: 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

The last issue (# 25) of « PROFILE », the Newsletter of the IOBC/WPRS, has been released by August 1998. It is now edited by Dr H. Bathon, Institute for Biological Control, Heinrichstr. 243, 64287 Darmstadt, Germany,
Tel: 00-49-6151-4070,
Fax: 00-49-6151-407290,
email:h.bathon.biocontrol.bba@t online.de

The draft of IOBC/WPRS Convenors Handbook to all Convenors and Council members has been issued by September 1998. The Executive Commission of the WPRS Council will meet next time 3-6 June 1999 and the full Council will meet 2-4 October 1999.

Dr P. Esbjerg, President of the IOBC/WPRS

WORKING GROUPS (WG)

WG ARTHROPOD MASS REARING AND QUALITY CONTROL

Co-chairman: Dr P. Greany, USDA-ARS, 1700 SW 23rd Dr, Gainesville, FL 32608, USA,
Tel: 00-1-904-374-5763,
email :

pgrany@gainesville.usda.ufl.edu

Co-chairman: Dr S. Grenier, INSA/INRA, Biologie 406, 20 Av.

A. Einstein, 69621 Villeurbanne Cedex, France,

Tel: 00-33-04-72-43-79-88,

Fax: 00-33-04-72-43-85-34,

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:00-1-601-323-2230 ext. 248,
Fax: 00-1-601-323-0478,

e-mail: donn@ra.msstate.edu.

During the last meeting of the IOBC Global Executive Committee that was held 18 September 1998 at Montpellier, France, the former IOBC Working Group on « Quality Control of Mass Reared Arthropods » was approved to be reconstituted and renamed the Working Group on « Arthropod Mass Rearing and Quality Control ». Dr N.C. Leppla, the long-time Chairman of

the former Working Group, has assumed the role of an advisor to the group. The new co-chairmen include: Dr P. Greany (USDA-ARS, Gainesville, FL, USA), Dr S. Grenier (INRA, Lyon, France). and Dr D. Nordlund (USDA-ARS, Mississippi State, MS, USA). The group will continue to focus on issues relating to the quality of mass reared arthropods, but in addition, will provide a hub for activities relating to arthropod mass rearing per se, such as use of artificial diets and presentation systems for rearing entomophagous and weed-feeding insects in support of augmentative biological control. The proposed reorganisation was discussed at the March, 1998 meeting in Cali, Colombia. The revision was based upon the recognition that quality is dependent upon rearing technology and that improvements in rearing systems are based in part upon feedback from quality assessment studies. Quality assessment also is important in certification. The new Working Group soon will be endowed with its own Website. A preliminary version of the site can be found at: www.amrqc.org. The history of the original working group already has been posted to this Website, along with contact information for the three new co-chairmen. Soon, we will post a searchable member database to the site, with provision for their mailing address, e-mail address, phone & fax numbers, and their area of interest. Other features we are working on include: (1) a comprehensive, electronically-searchable literature citation database with several thousand publications dealing with insect rearing, (2) archival copies of the Proceedings from all the previous working group's publications, available in pdf format directly from the internet (allowing printouts of facsimiles of the original publications), (3) all previous issues of «FRASS» in pdf format (which likely will be

known as the « Insect Rearing Newsletter » in the future), and (4) a « links » page, which will allow the user to quickly find many relevant biological control websites. In order to ensure to the new Working Group a good international communication, a symposium will be organised during the next International Congress of Entomology, to be held in Brazil in 2000. This symposium, « Rearing entomophagous insects on artificial diets: laboratory production to field evaluation », was already approved by Dr M. Wysoki and Prof. J.R.P. Parra (convenors of the session 8, « Entomophagous insects and biological control »). Another meeting of the new working group is slated to be held during 2001, It should be organised in France.

Drs P. Greany, S. Grenier & D. Nordlund, co-chairmen of the WG

Dr N.C. Leppla was very active in the former WG. IOBC wants to thank him for the excellent job he did all these years, and wishes all the best for his future activity. We also want to welcome the three new co-chairmen and hope that the new duties will bring them satisfaction and success.

WG BIOLOGICAL CONTROL of *PLUTELLA*

Co-chairman: Dr A.M. Shelton, Department of Entomology, Cornell University, New York State Agricultural Experimental Station, 416 Barton Lab Geneva, NY 14456, USA.

Tel: 00-1-315-787-2352,
Fax: 00-1-315-787-2326,
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: 00-60-3-948-7639,
e-mail: sivasam@mardi.my.

Co-chairman: Dr D.J. Wright, Department of Biology, Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, UK.
Fax: 00-441-34-429-4339,
e-mail d.wright@ic.ac.uk

WG FRUIT FLIES of ECONOMIC IMPORTANCE

Chairman: Dr B.A. McPheron, Dept. Entomology, 501 ASI Bldg., Pennsylvania State University, Univ. Park, PA 16802, USA. Tel: 00-1-814-865-3088, Fax: 00-1-814-856-3048, e-mail: bam10@psu.edu.

WG ECOLOGY of APHIDOPHAGA

Chairman: Dr D.J. Horn, Department of Entomology, Ohio State University, 1735 Neil Ave., Columbus OH 43210, USA.
Fax: 00-1-614-292-2180, e-mail: horn.1@osu.edu.

Co-chairman: Dr J.-L. Hemptinne, Faculté Univ. des sciences agronomiques, Zoologie générale et appliquée, Passage des Déportés, 2, B-5030 Gembloux, Belgium.

Co-chairman: Dr P. Wellings, CSIRO Division of Entomology, GPO Box 1700, Canberra, ACT 2601, Australia.

The next International Congress, « Aphidophaga VII », will be organised in Montreal, Canada, August 31st - September 4th, 1999. Those interested in offering a paper should complete the « Offer of a paper » form on the webpage (<http://www.er.uqam.ca/nobel/labscenv/aphidophaga.htm>) and return it as soon as possible. Alternatively, papers can be offered electronically by e-mail at: coderre.daniel@uqam.ca. For further information, please contact: Dr D. Coderre, Aphidophaga VII, Département des sciences biologiques, Université

du Québec à Montréal, C.P. 8888 Succ. Centre-ville, Montreal, Quebec, Canada H3C 3P8. Fax: 00-1-514-987-4647. e-mail: coderre.daniel@uqam.ca

Dr D. Coderre, Université du Québec à Montréal

WG CHROMOLAENA ODORATA

Chairman: Dr R. Muniappan, Agricultural Experimental Station, University of Guam, Mangilao, Guam 96923 USA. Fax: 00-1-671-734-6842, e-mail: rmuni@uog9.uog.edu

WG EGG PARASITOIDS

Chairman: Dr F. Bin, Agricultural Entomology Institute, University of Perugia, Borgo XX Giugno, 06121 Perugia, Italy. Tel: 00-39-75-585-6030, Fax: 00-39-75-585-6039, e-mail: fbin@egeo.unipg.it.

Co-Chairman: Dr E. Wajnberg, INRA, Parasitoids Ecology, 37 Blvd. du Cap, 06600 Antibes, France.

Tel: 00-33-04-93-67-88-92,

Fax: 00-33-04-93-67-88-97,

email: wajnberg@antibes.inra.fr.

Co-Chairman: Dr S.A. Hassan, Institute for Biological Pest Control, Heinrichstr. 243, 64287 Darmstadt, Germany.

Tel: 00-49-6151-407223,

Fax: 00-49-6151-407290, e-mail:

s.hassan.biocontrol.bba@t-online.de.

The proceedings of the 5th International Symposium on «Eggs Parasitoids», held in Cali, Colombia, March 4 to 7, 1998, has been edited by Dr S.A. Hassan and has been published in the «Mitt. Biol. Bundesanst. Land-Forstwirtschaft.», Berlin-Dahlem (Vol. # 356, 1998). It is a 197-pages book presenting all the talks given during the meetings. 25 chapters are provided, organised into six different field areas: (1) Physiology and Behaviour,

(2) Ecology and Population Dynamics, (3) Natural Occurrence and Compatibility, (4) *In vitro* Rearing, (5) Quality Control of Mass Reared Arthropods, (6) Production and Release. Ask Dr S.A. Hassan for a copy.

The 10th issue of «Egg Parasitoid News» has been distributed July 1998. It includes events, abstracts of current research, news in 30 words, scientific problems, commercial use, natural distribution of egg parasitoids, list of recent publications and list of members. This WG newsletter is now available on the Web at the following address:

<http://www.bba.de/eggpara/eggp.htm>.

Dr E. Wajnberg

WG IWGO - OSTRINIA AND OTHER MAIZE PESTS

Chairman: Dr H.K. Berger, Federal Office and Research Center for Agriculture, Institute for Phytomedicine, Spargelfeldstr. 191, P.O.B. 400, 1226 Vienna, Austria.

Fax: 00-43-1-28816-5225, email: hberger@relay.bfl.gv.at.

Meetings, workshops

Since the last meeting in Braga (Portugal), September 1997, the following meetings took place:

October 1997: Meeting of the IWGO subgroup «*Diabrotica*» in Goedoelloe, Hungary (together with the FAO and the EPP0).
October 1998: Meeting of the IWGO subgroup «*Diabrotica*» in Rogaska Slatina, Slovenia (together with the FAO and the EPP0)

The next meetings are planned for: 4-10 September, 1999, meeting of the IWGO-Group. It will be held in Adana, Turkey, and will be hosted by Prof. S. Kornosor. For more information, please contact Prof. S. Kornosor, University of Çukurova, Faculty

of Agriculture, Plant Prot. Department, TR-01330 Adana, Turkey. October/November 1999: Meeting of the IWGO – «*Diabrotica*» subgroup, to be held in France. Further details will be provided within the next IOBC Global Newsletter. Future meetings will be organised every year. They will be announced within the next IOBC Global Newsletter.

Publications

The WG released several publications, partly with the support of Global IOBC: The following issues of the IWGO newsletter (a scientific magazine, which is edited by the chairman of the WG since 1981) were released: XVIII/1, released in March 1998; and XVIII/2, released in December 1998.

Papers presented at the IWGO/EPP0/FAO meeting in Goedoelloe, fall 1997, are released as proceedings in the Austrian Journal «Pflanzenschutzberichte» (1998) 57/2. The proceedings of the IWGO Meeting in Braga will be issued in Spring 1999. All publications can be ordered from the chairman of the WG.

Major results, progress achieved

The most important event in IWGO is certainly the appearance of *Diabrotica virgifera virgifera* in Europe since 1992. A numerous amount of meetings (Subgroup «*Diabrotica*» - Convenor Prof. R. Edwards, University of Purdue, Lafayette, Indiana, USA) took place. A FAO research program together with Hungary, Croatia, Bosnia & Herzegovina and Romania was established and will last until end of 1998. The goal of this program is a widespread monitoring in infested (Serbia, Croatia, Bosnia & Herzegovina, Hungary, Romania, Bulgaria) and threatened countries (Austria, Slovakia, Moldavia, Ukraine, Poland) as well as different control trials in

heavily infested countries. Since its appearance in Serbia the pest spread out in Hungary, Croatia, Bosnia & Herzegovina, Romania, Bulgaria and since 1998 also Italy (close to Venice). The full co-ordinates of the convenor of the « *Diabrotica* » subgroup are: Dr R.C. Edwards, Purdue University, 1158 Entomology Hall, West Lafayette, IN 47907-1158, Indiana, USA, e-mail: rich_edwards@entm.purdue.edu.

Dr H.K. Berger, chairman of the WG

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: 00-27-12329-3276,
Fax: 00-27-12329-3278, e-mail: RIETHGZ@PLANT2.AGRIC.ZA

The IOBC Water Hyacinth Working Group held its first international workshop in Harare between 16 and 19 November 1998. The Workshop was attended by 50 delegates from 21 countries. Thirty five oral contributions were delivered that covered a broad spectrum of views on the biological and integrated control of water hyacinth with emphasis on the problem in Africa. The full proceedings will be published in the first quarter of 1999 and will be available from the editor, Dr M. Hill, Plant Protection Research Institute, Private Bag X 134, Pretoria 0001, South Africa, e-mail: RIETMH@PLANT2.AGRIC.ZA The next workshop will be held in the Peoples Republic of China in 2000.

WG TRANSGENIC

ORGANISMS IN IPM AND BIOLOGICAL CONTROL

Chairman: Dr A. Hilbeck, Swiss Federal Research Station for Agroecology and Agriculture, Reckenholzstr. 191, 8046 Zurich, Switzerland.
Tel: 00-41-1-3777-410,
Fax: 00-41-1-3777-201, e-mail: angelika.hilbeck@fal.admin.ch.

During the last meeting of the IOBC Global Executive Committee that was held 18 September 1998 at Montpellier, France, the creation of a new WG on « Transgenic Organisms in IPM and Biological Control » was decided. This was in accordance with the discussion launched by our President Dr J.K. Waage in his editorial for the previous IOBC Newsletter (#67).

Scope and activities of the working group

With the rapid recent development and deployment of transgenic organisms in agriculture comes a need for greater involvement of scientists from public sector institutions, including universities and government agencies, in the study of these organisms and their use in IPM and biological control. As with all crop production methods, their use and development should meet the needs of farmers and consumers while providing for a more environmentally friendly agriculture to the benefit of society. This WG is a new initiative designed to engage and bring together scientists from public sector institutions in developed and developing countries around the world. It will encourage scientific studies and multidisciplinary cooperation in areas outlined below. While the WG is intended for scientists from public sector institutions, it will establish mechanisms to regularly exchange information and ideas with private industry and non-

governmental organisations. Among other, the activities of the WG will:

- Provide a network for information exchange between scientists. This WG will provide a forum for disseminating information on published and ongoing research, and for discussion on scientific issues relating to transgenic organisms in IPM and biological control.
- Identify research needs for understanding the efficacy and environmental impact of transgenic plants, and develop methods and protocols for their evaluation. Methods for measuring non-target effects of transgenic organisms need to be improved upon and related to the impact on the field and landscape level.
- Develop methods and protocols for resistance management. Resistance to transgenic organisms is a potential constraint in their deployment and effective resistance management strategies are an important component of the use of transgenic organisms in IPM and biological control.
- Develop methods and protocols for monitoring. There is a need to develop scientifically sound monitoring systems for early detection of resistance and all other environmental changes arising from the release of transgenic organisms.
- Provide a scientific basis for making decisions about the value of deploying or developing transgenic organisms for particular IPM systems. Successful IPM involves the participation and cooperation of farmers, extensionists, researchers, regulatory authorities and policy makers in designing and implementing appropriate local IPM systems. All of these stakeholders need to be

empowered and involved in the process of deciding whether and how to use transgenic organisms as components of IPM.

- Advocate the role of scientific information as a basis for policy making. The working group is committed to rapid and extensive communication of scientific information and progress to the public, and to the proper use of scientific information in developing policy on the use of transgenic organisms in IPM and biological control. Its outputs, in the form of publications and protocols will be made available to all.

The working group will be producing its first newsletter early 1999.

Dr A. Hilbeck, Chairman of the WG

IOBC wants to welcome the new chairman and hope that the new duties will bring her satisfaction and success.

Intercontinental Conference on Coffee Berry Borer, held from 29 March to 2 April, 1998, in Tapachula, Chiapas, Mexico. In this meeting, 132 people participated and 66 institutions and organisations representing 24 countries: Brazil, Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Ethiopia, France, Germany, Guatemala, Honduras, India, Ivory Coast, Jamaica, Kenya, Malaysia, Mexico, The Netherlands, Nicaragua, Philippines, Uganda, United Kingdom & USA. The main objective of the meeting was the interchange of experiences on research and technology transfer on the coffee berry borer, *Hypothenemus hampei* (Ferrari) (Coleoptera: Scolytidae), an insect considered to be the most important pest of coffee in the world. In the first part of the meeting 29 communications were presented, dealing with different aspects of the borer. For example, the status of the pest, its biology and ecology, new species of natural enemies, ecological and decision making models, mass production of its parasitoids and pathogens,

several other relevant information) can be found in English and Spanish in the home page of the Working Group on Coffee Berry Borer:

<http://www.tapecosur.edu.mx/br oca>.

During the meeting, it was agreed to invite all participants to publish articles concerning the borer in a special edition of the journal of the Mexican Entomological Society, «Folia Entomologia Mexicana». Any interested party may submit a manuscript even if they did not participate in the Tapachula meeting. The manuscripts may be standard format papers, short communications, technical papers, monographs or essays. Authors should follow the guidelines laid out in Folia Entomologia Mexicana, that can also be found in the WG home page. Manuscripts should be sent to: Dr A.A. Guerra, Subtropical Agricultural Research Center, ARS USDA, 2301 South International Blvd., Weslaco, Texas 78596, USA. The 3rd Intercontinental Conference on Coffee Berry Borer will be held in London in 2000.

SCIENTIFIC EVENTS

WG ON COFFEE BERRY BORER

Chairman: Dr J.F. Barrera Gaytan, Division de Tecnología Agropecuaria, El Colegio de la Frontera Sur, Carretera Antiquo Aeropuerto, Km 2.5, Apartado Postal 36, 30700 Tapachula, Chiapas, Mexico.

Tel: 00-52-962-81103.

Fax: 00-52-962-81015. e-mail: jbarrera@tap.ecosur.mx.

During the last meeting of the IOBC Global Executive Committee that was held 18 September 1998 at Montpellier, France, the creation of a new WG on «Coffee Berry Borer» was decided. The idea to formalise this Working Group came from the 2nd

strategies and tactics of pest management, and experiences with coffee growers. In the second part, six working groups were created to discuss on: (1) Nutrition, artificial diets and mass production of the borer and its natural enemies, (2) Evaluation of control methods of the borer in the field, (3) Analysis and modelling systems of coffee, the borer and its natural enemies, (4) Integrated pest management of the borer: definitions and strategies, (5) The farmers: participatory research and technology transfer, and (6) Information systems, co-ordination and networks. The abstracts of the communications and the conclusions with recommendations of the working groups (and also

Dr J.F. Barrera, Chairman of the WG

IOBC wants to welcome the new chairman and hope that the new duties will bring him satisfaction and success.

«**51-st International Symposium on Crop Protection**», May 4, 1999, Gent, Belgium. The symposium will focus on new developments in all aspects of crop protection. The program will include a plenary session with two invited papers and parallel sessions with submitted papers related to the following subjects: Agricultural Entomology, Nematology and Acarology; Phytopathology, Phytovirology, Phytobacteriology; Herborology; Biological and Integrated Con-

trol of Pests, Diseases and Weeds; Pesticide Residues, Toxicology and Ecotoxicology. This year, a special session will be organised on «integrated control of aphids». For information, contact: Prof. P. De Clercq, Faculty of Agriculture and Applied Biological Sciences, University of Gent, Coupure Links 653, 9000 Gent, Belgium, Tel: 00-32-09-264-61-58, Fax: 00-32-09-264-62-39, email: Patrick.DeClercq@rug.ac.be, Web site: <http://allserv.rug.ac.be/~hvanbost/symposium>.

«**X International Symposium on Biological Control of Weeds**», July 4-9, 1999, Bozeman, Montana, USA. For general information contact either co-chairmen: Dr R. Nowierski, Montana State University, Bozeman, MT 59717-3020, USA, Tel: 00-1-406-994-5080, Fax: 00-1-406-994-6029, e-mail: nowiersk@montana.edu, or Dr N. Spencer, USDA-ARS-NPARRL, 1500 North Central, Sidney, MT 59270, USA, Tel: 00-1-406-482-9407, Fax: 00-1-406-482-5038, email: nspencer@sidney.ars.usda.gov, Web site: <http://www.symposium.ars.usda.gov/>.

«**XIVth International Plant Protection Congress**». July 25-30, 1999, Jerusalem, Israel. Plant protection towards the third millennium - Where chemistry meets ecology. The congress will be dedicated to the memory of Prof. D. Rosen. The organising committee in proposing nine main topics: (1) IPM toward the 3rd millenium - Progress in strategies and technologies, (2) IPM implementation programs, difficulties and achievements, (3) Ecological issues in plant protection, (4) Biotechnology in plant protection, (5) Resistance to pesticides: Evolution and management, (6) Innovative approaches in pesticide chemistry and chemical ecology, (7) Tech-

nology for optimisation of pesticide application, (8) Regulations and risk assessment, and (9) ecotoxicology and fate of pesticides in the environment. For information, contact: XIVth International Plant Protection Congress, Congress secretariat, P.O. Box 50006, Tel Aviv 61500, Israel. Tel: 00-972-3-514-0000, Fax: 00-972-3-514-0077, e-mail: IPPC@Kenes.com.

«**XII International Entomophagous Insects Workshop**». September 26-30, 1999, Pacific Grove, CA, USA. This meeting is organised on the scenic Monterey Peninsula of Central California, USA. Detailed information (including materials for submitting talks and posters, registration information, along with a web-site address for meeting information) can be obtained by contacting: Dr J.A. Rosenheim, Sabbatical address (until September 1, 1999): Museum of Comparative Zoology

Harvard University, 26 Oxford Street, Cambridge, MA 02138 USA, Tel: 00-1-617-495-3820, Fax: 00-1-617-495-5667, e-mail: jarosenheim@ucdavis.edu.

IOBC International Symposium on «**Evaluating Indirect Ecological Effects of Biological Control**». October 17-20 1999, Montpellier, France. See the beginning of this Newsletter for scope, meeting themes, call for papers, how to offer a paper, organising committee and contact addresses.

1st International Symposium on «**Development of biological control in Middle East and neighbouring countries**». October 24-29, 1999, Alep, Syria. Organised by the University of Alep, Syria, and the Arabic Society of Plant Protection. Five sessions will be organised: (1) Using parasitoids, (2) using predators, (3) using micro-organisms, (4) using plant extracts, and (5) using other means of biological control. The symposium will only discuss on pests present in the Middle East. There will be no registration fees. For more information, please contact: Dr A. Babi, University of Alep, Faculty of Agronomy, B.P. 12352, Alep, Syria, Fax: 00-963-21-2229184.

«**XXI International Congress of Entomology, 2000**». Foz do Iguaçu, Brazil. For further information, contact: c/o Dr D.L. Gazzoni, Caixa Postal 231, 86001-970 Londrina-PR, Brazil. Tel: 00-55-43-3716213, Fax: 00-55-43-3716100, e-mail: gazzoni@cnpso.embrapa.br.

BOOKS

« **Insect Viruses and Pest Management** », Hunter F., H. Evans, P. Entwistle & N. Crook (eds.), 1998. This book presents a 4-part text that is both a broad, contemporary overview of the topic as well as a summary of specific practical techniques for the laboratory and field. The editors have organised the contributions of 20 international scientists to provide a coherent global survey and an essential

guidebook. The hardbound, 620-page work, is published by John Wiley & Sons Ltd., Baffins Lane, Chichester, West Sussex PO19 1UD, UK, Tel: 00-44-1243-779777, e-mail: cs-book@wiley.co.uk, Web: www.wiley.co.uk. « **Weed Management in Horticultural Crops** ». McGiffen M. (ed.). 1998. This book provides a practical guide to techniques including integrated weed man-

agement and biological control that farmers can use to manage weeds in fruit, vegetables, and landscape plants. It is based on information presented at a joint workshop sponsored by the American Society for Horticultural Science and the Weed Science Society of America. USDA 29.95 plus shipping, order from: ASHS Press, 600 Cameron Street, Alexandria, VA 22314, USA, Tel: 00-1-703-836-2418.

MISCELLANEOUS

International postgraduate course on « Integrated Pest and Disease Management in Protected Cultivation ». To be held in Wageningen, The Netherlands, 22-27 March 1999. This course is organised by the International Training Group (PHLO), Wageningen University and Research Centre, The Netherlands. The objectives are: (1) to outline the principles of Integrated Pest and Disease Management, (2) to provide an up-to-date overview of IPM as applied in protected cultivation, (3) to

describe the origin and development of pests and diseases affecting protected cultivation in order to be able to identify the best method of control, (4) to give an overview of pests and diseases, and methods to prevent and control them in greenhouse situations, (5) to review the specific problems for development of IPM in vegetables and ornamentals, and (6) to demonstrate and use computer systems for pest and disease in greenhouses. The course is aimed at researches and managers working in pest and disease manage

ment, extension workers, workers in production and trade of crop protection agents, government administrators, and college and university teachers. The maximum number of participants will be 30. For more information, please contact: The International Training Center (PHLO), Wageningen University and Research Center, P.O. Box 8130, 6700 EW Wageningen, The Netherlands, Tel: 00-31-317-484092, Fax: 00-31-317-426547, e-mail: geraldta.fonteijn@secr.phlo.wau.nl.

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, this is your opportunity to let others know what is going on in biological control. Take a few minutes and mail fax or (even better) e-mail items on biological control to E. Wajnberg (address on first page), so they can be included in the next issue. Deadline for submitting items for the Summer 1998 issue of IOBC Newsletter is 15 June 1999.

We would like to express our grateful thanks Ms Annette Greathead at CABI BIOSCIENCE UK Centre (Ascot) for re-reading this issue.

Any comments or remarks on this Newsletter are welcomed. Do not hesitate to contact me if there is some information you would like to see here on biological control.

Editor: E. Wajnberg, General Secretary of the IOBC, with assistance of M. Montes de Oca.
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