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OF NOXIOUS ANIMALS AND PLANTS (IOBC)

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EDITORIAL

KEEPING THE "I" IN IPM

In 1959, California entomologists Vernon M. Stern, Ray F. Smith, Robert van den Bosch and Kenneth S. Hagen intro-

duced the term "integrated control" in their classic paper published in *Hilgardia* [29 (2): 81-101]. They defined inte-

grated control as "Applied pest control which combines and integrates biological and chemical control" for a given

insect pest. Integration was synonymous with compatible i.e., chemical insecticides were to be used in a manner that was not disruptive to biological control. Integrated control gradually gave way to Integrated Pest Management (IPM) in the 1970's. IPM extended the concept of integrated control to all classes of pests and incorporated a greater number of suitable tactics. In the U. S., IPM was formulated into national policy by the late President Richard M. Nixon in 1972. However, almost 30 years later, there is growing concern that IPM is not being practiced to any significant extent-not only in the U. S., but in other parts of the world as well.

As specialists in biological control, we should maintain a keen interest in IPM implementation, and especially in the integration of tactics. Today, integration implies incorporation of natural-enemy and(or) pest-antagonist levels into decision making and, as noted above, the use of compatible control tactics that preserve natural enemies/pest antagonists. The compatibility com-

ponent of integration applies (1) to single classes of pests, such as the insect pests of a given crop (vertical or first-level integration), and (2) across classes of pests, such as the insects, weeds, nematodes and plant pathogens in a given crop (horizontal or second-level integration). For example, an insecticide should preserve natural enemies of insect pests and a fungicide should preserve microbial antagonists of plant pathogens (vertical integration); similarly, the same insecticide should preserve insects that suppress weeds and the same fungicide should preserve predatory mites that help control spider mites (horizontal integration). Where there is little or no integration of this kind, there is a good chance that natural enemies and (or) pest antagonists are being subjected to wholesale destruction.

For those who claim to have developed successful IPM programs, biological-control specialists should take the lead in asking the general question: "What is being integrated?" In the context of biological con-

trol, this can be broken down into three specific questions. First, are levels of resi-dent natural enemies/antagonists being monitored along with levels of the pests? Second, do treatment decisions take into account the predicted impact of the natural enemies/antagonists? Third, do the treatments that are applied preserve the natural enemies/antagonists? If the answer to these questions is no, then it begs the question: "Where is the 'I' in your IPM program?"

Biological-control workers have a major role to play in making IPM a global reality. This is especially critical in those regions where IPM implementation is quite limited or nonexistent. We must be vocal advocates for the plight of natural enemies and pest antagonists, and for the true integration of tactics as envisioned by the initial proponents of IPM. Otherwise, we may find that, in many of our crops and landscapes, IPM is nothing but an illusion.

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

IOBC EXECUTIVE MEETING

The new Executive Committee of the Global IOBC had his first meeting in Montpellier, France, January 22-23, 2001. With the exception of Dr. J.C. van Lenteren, all the members of the Executive Council were present, along with Dr. E. Wajnberg, former Secretary General, Dr. H.K. Berger, former Treasurer, Dr. Heikki Hokkanen Editor-in-Chief of BioControl, and the Permanent Secretary, Ms M. Montes de Oca. All the issues concerning the activities of the IOBC Global were discussed. A summary of these discussions is presented here. The detailed minutes of this meeting can be obtained by simple request to the IOBC Permanent Secretariat.

Global IOBC budget

The balance for 2000 is positive with a surplus of 2,900.46 SFR and a total receipt of 101,384.46 SFR. Membership fees of the Regional Sections for 2000 reached 32,611.99 SFR; this income is very similar to that of 1997 and 1998, but almost 30% lower than the membership fees in 1999.

Permanent Secretariat

The year 2000 was marked by the election of the new Executive Committee for 2000-2004. Ballots were sent in May to all Regional Sections to be distributed to their members. In all, 113 individual and 13 in-

stitutional votes were received. The results of the election were given by the former IOBC SG during the Assembly held on 24 August 2000 at Foz do Iguassu, Brazil.

Regional Sections

The situation in the EPRS section was reported by Dr. S. Pruszyński, a Vice-President of IOBC. There are no individual memberships. Some institutional members from central European countries belong at the same time to EPRS and WPRS. Institutional members from the Czech Republic now belong to WPRS. The E.C. has recognized that the border between WPRS and EPRS is

historical and that further changes in the geographic limits of the WPRS and EPRS can be expected. The next meeting of the EPRS Section will be held at Poznan, Poland, in July 2001.

The decrease in individual and institutional membership in the WPRS and EPRS sections is due to non-renewals. This is probably linked to the fact that members were displeased with

late delivery of BioControl and have cancelled their subscription. A few members have not received a single issue of BioControl in 2000.

The number in memberships for the APRS section is also slightly decreasing. The addition of Chinese members was welcome news.

The NTRS and ATRS sections need additional support and

interaction with the other Regional Sections and the Global IOBC. The ATRS section in particular is not functioning anymore. The E.C has asked the former president of ATRS, Dr. H. Zimmermann, to approach Dr. James A. Ogwang from Uganda to fill the position of Acting President of the ATRS Regional Section.

BioControl

Dr. David J. Larner, Kluwer Publishing Director, Science and Technology Division, was present at this session.

The Editor-in-Chief of BioControl, Dr. H. Hokkanen, gave a full report of the current status of our scientific journal. The number of papers published in BioControl has continued to increase: 29 (Volume 43), 34 (Volume 44)

and 36 (Volume 45). The breakdown of the manuscript inflow by subdisciplines remains steady as well. So far it is as follows: parasitoids, 34% of all papers; predators, 11%; insect pathogens, 12%; e-p nematodes, 8%; IPM, 10%; weed bc, 11%; plant pathogens, 12%; and semiochemicals, 2.3%.

In 2000, the Editor-in-Chief

received more than 100 papers, of which 36 were accepted and published in Volume 45. The rejection rate was higher (>60%) than in 1999 due to lack of space and an increasing number of good papers. Therefore, BioControl will increase from 495 to 600 pages, beginning 2002. It will then be published every two months, with 6 issues per volume.

BioControl is increasing from 495 to 600 pages, beginning 2002 with 6 issues per volume

The increased number of issues will reduce the time from submission to publication of papers and will increase the impact of the journal in the scientific community. The 20% increase in the number of pages of BioControl in 2002 will result in an increase in the subscription rate of 10% for individual members compared to 25% for institutional members. The subscription rate for 2001 remains as for 2000.

The production of Volume 46 (2001) is on time. Issue 46:1 is ready to go to the printers (7 papers, 125 pp.). Issue 46:2

is almost ready to go to the printers (special issue on biocontrol of weeds), to be released by mid-May. For issues 46:3 and 46:4, the papers are being processed (Issue 3 planned for mid-August and Issue 4 planned for mid-November). It should be noticed that the Editor-in-Chief has been pleased with the production of BioControl for the last three years.

Thus, the only problem is the distribution of the journal. This issue was discussed again with the Kluwer representative. For 2001 it was agreed that IOBC

will submit to Kluwer the lists of subscribers from the Regional Sections by the 15th of February, with confirmation of the mail to David Larner. At this time, if we do not have the complete lists of subscribers for 2001, then the 2000 lists will be used. IOBC will assume the risk. Kluwer will send one single invoice to the Global IOBC Treasurer by the end of February which will be paid in the following five days. This procedure will ensure that the distribution of the first issue of Volume 46 will be made in March.

From 2001 onwards, Regional Sections will be asked to submit their membership lists prior to December 31. It is essential for a normal and regular distribution of the journal that subscriptions are renewed before the end of the year.

From 2002, it will be absolutely necessary that the renewed list of subscribers to BioControl be sent to Kluwer by mid-January.

We also decided to recommend to the Managing Board to invite Dr. Eric Wajnberg (INRA, France) as an additional Associate Editor responsible for

insect parasitoids, jointly with Dr. Brodeur, who now alone deals with 34% of BioControl manuscripts. We are confident that the problems with the

distribution of BioControl will be solved in 2001. We apologize again for all the problems encountered in the previous years and we invite all IOBC members and BioControl subscribers to renew their subscriptions for 2001 and the following years.

At the end of the meeting,

David Larner mentioned that the agreement between IOBC and Kluwer specifies that in 2000 Kluwer could negotiate to buy the journal. No negotiation has yet occurred, but this issue will be put on the Agenda of

the next EC meeting. All IOBC members are invited to express their opinion about this matter and to send their comments to the Permanent Secretary of IOBC Global at Montpellier.

NEXT IOBC INTERNATIONAL SYMPOSIUM

Participants: Lester E. Ehler, Andre Gassmann, Heikki Hokkanen, Kim Hoelmer (USDA-EBCL), Alan Kirk (USDA-EBCL), Thomas Le Bourgeois (CIRAD), Mireille Montes de Oca, Stephan Pruszynski, Chuck Quimby (USDA-EBCL), John Scott (CSIRO), Rene Sforza (USDA-EBCL), Eric Wajnberg (INRA).

Following the very successful 1999 meeting on the indirect or non-target effects of biological control, the participants decided to have the next IOBC International Symposium at Agropolis in autumn 2002. Three themes were proposed. The first theme was the role of biological control in agro biodiversity and low input

systems, conservation biological control, and the role of biological control in integrated farming systems. The second theme focussed on the role of genetics and evolution on biological control. The third theme was related to risk assessment analyses in biological control and how to apply risk analyses used in other systems to biological control. After a long discussion, the participants decided to have a meeting entitled "**Genetics, Evolution and Biological Control**".

The participants agreed that this theme is a hot and controversial one which is rarely focussed on in biological control meetings. It is also a logical follow up from the

former meeting dedicated to non target impacts in biological control. The meeting will last three days and will focus on the following themes: 1) Genetic variation in pests and natural enemies, 2) Predicting evolutionary change in pests and natural enemies, 3) Tracing the origin of invasive species, 4) Compatibility of genetically modified crops and natural enemies, 5) Genetic diagnostic tools in biological control, 6) Genetically modified natural enemies. The participants agreed that the papers should not be too academic and theoretical, and that they should address problems closely related to biological control and for the benefit of biological control.

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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Workshop on the Southern African Stem borer Management Programme

The Southern African Stem borer Management Programme held their workshop in South Africa at the Plant Protection Research Institute (PPRI), Pretoria, and the Institute for Grain Crops at Potchefstroom between 10 and 21 September 2000. It was organized by PPRI in co-operation with ICIPE (Kenya) and funded by USAID. There were about 15 delegates from 7 countries from Southern Africa. Topics that were discussed included the taxonomy and identification of stem borers and their natural enemies, IPM and biocontrol, basic biologies, including those of the key parasitoids, rearing methods, collecting, preservation and dispatching of specimens for ID, field sampling, GIS mapping and biological and transgenic resistance to stem borers.

Workshop on the Biological Control of Cereal Stem borers in Africa

The International Workshop and Conference on the Status and Advances in Biological Control of Cereal Stem borers in Africa was held at ICIPE, Nairobi, between 16 and 20 October 2000. It was attended by about 50 delegates from 17 countries of which about 13 were from Africa. There were about 25 oral contributions preceded by several exercises including data capturing,

analyses and presentation and mapping.

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The Nearctic Regional Section of IOBC met at the Joint Annual Meeting of the Entomological Society of America, the Entomological Society of Canada and the Société d'Entomologie du Québec at the Palais de Congrès de Montréal in Montréal, Québec, Canada on December 5, 2000. The very well attended program included presentation of the NRS Distinguished Scientist in Biological Control Award to Dr. Richard D. Goeden, University of California – Riverside for his work in biological control of weeds. Speakers in the informal conference included Judy Myers, University of British Columbia on “The role of evolution and adaptation in biological control;” Tim Collier, University of Arizona, on “Interference competition among whitefly parasitoids: consequences for pest suppression;” Bernd Blossey, Cornell University, on “Evolution of invasive plants in enemy-free space and its impact on biological weed control agents;” and Jay Rosenheim, University of California-Davis, on “Using foraging behavior to predict the ecological roles of generalist predators.” Jacques Brodeur, Université Laval, had planned to speak on “Enemy-induced foraging changes in biological control agents” but was forced to postpone his talk until next year because of abducted slides.

The IOBC/NRS will be instituting a student member award. The first award, consisting of \$250 and a plaque, will be presented to a NRS student member at the NRS informal conference in 2001. In future years the winner will be invited to present a paper during the NRS conference. A committee was created to further explore funding sources.

The IOBC/NRS published 3 newsletters in 2000 and unveiled a new website last January at:
<http://www.entomology.wisc.edu/iobc/nrs.htm>

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Meetings and events

Workshop on Technology Transfer for Biological Control of Pink Hibiscus Mealybug

During 8-10 February 2000, a workshop was held in Colima City, Mexico on Technology Transfer for Biological Control of Pink Hibiscus Mealybug, *Maconellicoccus hirsutus*. The objective was to analyse the damage by this pest and to transfer the results that have been obtained in the Caribbean regarding its biological control. This mealybug is a quarantine pest for Mexico.

The meeting was attended by 58 people, including representatives from educational institutions and national and international companies. Also, 13 professionals of the Regional International Organization Agricultural Sanity (OIRSA) were in attendance (from Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica), as well as two professionals of the Honduran Institute the Coffee and one from Kentucky, U.S.A. This event was organized by the North American Plant Protection Organization (NAPPO), the National Commission of Animal and Plant Health (CONASAG)-Mexico through the National Reference Center for Biological Control, the United States Department of Agriculture (USDA) and the Mexican Society of Biological Control (SMCB).

Dr. Dale Meyerdirk, Dr. Douglas Miller, Dr. Richard Warkentin, Dr. Michael Schauff from USDA, and M.Sc. Hugo Arredondo Bernal from National Reference Center for Biological Control were the instructors.

It was noted that the best option to regulate populations of *Maconellicoccus hirsutus* is classical biological control, using the encyrtid parasitoids *Anagyrus kamali* and *Gyranusoidea indica*. The cost: benefit

of the program developed in the Caribbean is 1: 1500.

Submitted by Hugo César Arredondo Bernal and Pedro Pérez Serrato, National Reference Center for Biological Control

Workshop on Biological Control the Brown Citrus Aphid, *Toxoptera citricida*, Vector of Tristeza Virus

The brown citrus aphid, the main vector of tristeza virus of citrus (VTC), is a pest that seriously threatens the national and international citrus culture. Possible strategies to combat this insect include conservation biological control and augmentative release of exotic or native biological control agents.

A workshop devoted to technical training was held from 25-28 July 2000 in Merida, Yucatán, Mexico. This workshop was entitled "Biological Control of the Brown Citrus Aphid, *Toxoptera citricida*," and was organized by the General Director of Plant Health, through the National Reference Center for Biological Control, in coordination with the Secretary for Rural Development of the State of Yucatan, and the Mexican Society for Biological Control. Over 55 technicians and professionals attended. Eleven experts participated as instructors (10 from Mexico and 1 from the United States). The participants noted that predators such as *Harmonia axyridis* and *Ceraeochrysa* spp. were potential alternatives to insecticides for control of the brown citrus aphid, and that these agents should be evaluated as part of an overall IPM program for the aphid. Regarding the virus, it is necessary to consider aspects such as seed certification and movement of infested hosts.

Submitted by Hugo Cesar Arredondo Bernal and Pedro Perez Serrato, National Refer-

ence Center for Biological Control.

1st International Symposium on Formulation and Application of Entomopathogenic Fungi for the Biological Control of Locusts and Grasshoppers

During the XXXIII National Congress of Biological Control that was held from 16-18 November, 2000, in City Guanajuato, Gto., the National Reference Center for Biological Control (CNRCB), in coordination with the Technological Institute from Cd. Victoria, Tam. and the Mexican Society of Biological Control, organized the First International Symposium on Formulation and Application of Fungal Pathogens for the control of Locusts and Grasshoppers. The objectives were to present and exchange information and experience on the methods, formulation and application of these microbial agents.

Participants included those from CNRCB, the Technological Institute Cd. Victoria, Tam., Postgraduate College, and Dr. Richard J. Milner of the Commonwealth Scientific and Industrial and Research Organization (CSIRO) from Canberra, Australia, an expert in microbial control of locusts.

For further information:

M.C. Victor Manuel Hernández Velázquez
National Reference Center for Biological Control

Investigators from the People's Republic of China visit the National Reference Center for Biological Control

During 11-12 December 2000, the National Reference Center for Biological Control hosted a group of four investigators from the People's Republic of China (PRC). The Delegation was headed by Mr. Li Bin, who is in charge of Latin American affairs in the PRC Ministry Agriculture. The other mem-

bers of the delegation were Cai Wen, an Assistant Director of the PRC Agriculture Ministry, Yang Wei Xin, Agronomist from the Vegetable Protection Station of the Dept. of Agriculture in the County Guangdong and Mrs. Yan Su, Division of Pest Control at the National Center for Agrotechnology.

The main objective of the visit was to exchange experiences in aspects related to the biological control of agricultural pests, particularly the use the wasp *Trichogramma*, which has been used in Mexico for many years. Also, China seeks a bilateral agreement with Mexico that would include biological control and other aspects of plant protection.

The Chinese delegation was especially interested in the Mexican system for *Trichogramma* production using eggs of *Sitotroga cerealella*. The Chinese technology for using synthetic diet in artificial eggs was also discussed.

Submitted by Hugo Caesar Arredondo Bernal and Pedro Pérez Serrato, National Reference Center for Biological Control

German student visits the National Reference Center for Biological Control

The German biologist Sebastian Tilch from the Technical University at Berlin visited the National Reference Center for Biological Control (CNRCB) for 4 months (June-September, 2000). During his stay, conducted research on "Biology and behavior of the three species *Trichogramma* using as hosts sugarcane borer, *Diatraea saccharalis* and *Helicoverpa zea*."

Submitted by Hugo Cesar Arredondo Bernal and Pedro Pérez Serrato, National Reference Center for Biological Control.

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The next IOBC/EPRS General Assembly will be held at Pozan, Poland, in July 2001.

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WORKING GROUPS

WG ARTHROPOD MASS-REARING AND QUALITY CONTROL

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WG BIOLOGICAL CONTROL of *PLUTELLA*

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

Co-chairman: Dr. A. Sivaprasam, Strategic, Environment and Natural Resources Centre, MARDI, GPO Box 12301, 50774, Kuala Lumpur, Malaysia. Fax: +60-3-948-7639, e-mail: sivasam@mardi.my.

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WG FRUIT FLIES of ECONOMIC IMPORTANCE

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

WG ECOLOGY of APHIDOPHAGA

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*

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 recent Fifth IOBC International Workshop on Biological Control and Management of *Chromolaena odorata* was held near Durban, South Africa

from 23-25 October 2000 with a post-workshop fieldtrip to northern KwaZulu-Natal. The Workshop was organized by the Plant Protection Research Institute, South Africa, in association with the IOBC and the KwaZulu-Natal Nature Conservation Service. It was attended by 20 delegates from 12 countries beside the 30 delegates from South Africa. Thirty-three oral and two poster presentations were made and covered the following general topics: Country and Regional Reports, Taxonomy, Ecology and Impacts of *Chromolaena*, Impacts and Management of *Chromolaena* and Biological Control of *Chromolaena*. The summaries and recommendations of the workshop have been published in the *Chromolaena Newsletter* No. 14 (2000).

The papers will be published in the proceedings that should be available in the course of 2001.

WG EGG PARASITIDS

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, NRA, 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.

Co-Chairman: Dr Guy Boivin, Research Station, Agriculture Canada, 430 Boul. Gouin, St-Jean-sur-Richelieu, Québec, Canada J3B 3E6, e-mail: boiving@EM.AGR.CA. Tel.:

(450) 346-4494 ext. 210. Fax:
(450) 346-7740.

A new co-chairman for the WG

After Dr. S.A. Hassan decided to step down as a co-Chairman of the WG (see the previous IOBC Newsletter), a new specialist on egg parasitoids was invited to chair the WG. He is Dr Guy Boivin, who holds a position of research scientist at Agriculture Canada at St-Jean-sur-Richelieu, and is also associate professor at the Department of Natural Resource Sciences of McGill University in Montreal, Québec, Canada. His current research interests are the behavioral and evolutionary ecology of egg parasitoids, mostly Mymaridae and Trichogrammatidae. He is also interested in the criteria used for determining individual fitness of parasitoids and selecting egg parasitoids suitable for specific biological programs.

Next International Symposium on "Egg Parasitoids"

During the last international symposium, organized within the framework of the XXI International Congress of Entomology, Brazil, August 2000, the chairmen discussed the location of the next International Symposium that will be organized in 2002. For this important event, the Institute of Agricultural Entomology at Perugia, Italy has announced its willingness to host the symposium. This will likely include sessions on all the important aspects of egg parasitoids' physiology and ecology, and their use for biological control programs worldwide. For further information contact: <http://www.unipg.it/eggpar>.

Dr. F. Bin & E. Wajnberg, Co-chairmen of the WG

WG IWGO – OSTRINIA AND OTHER MAIZE PESTS

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.

Convenor of the *Diabrotica* – Subgroup: Dr. Richard C. Edwards, Purdue University, 1158 Entomology Hall; West Lafayette, IN 47907-1158, Indiana; USA; e-mail: rich_edwards@entm.purdue.edu

Meetings, Workshops

The last two meetings of IWGO took place in 1) **Adana**, Turkey (XXth IWGO meeting; proceedings are available either from the convenor or the local organizer, Prof. Serpil Koranosor, University of Çukurova, Faculty of Agriculture, Plant Prot. Department, T-01330 Adana; Turkey), and 2) **Stuttgart**, Germany (VIIth International Workshop on *Diabrotica virgifera*, together with 5th FAO/TCP Meeting, the 6th EPPO ad hoc Panel and the EU Project Meeting).

Two meetings are planned for 2001. The first will be at **Venice**, Italy (XXIst IWGO, together with the VIIIth International Workshop on *Diabrotica virgifera*, the 7th EPPO ad hoc Panel and the EU – project Meeting) from October 27 to November 2nd, 2001. The local organizer is: Regione del Veneto, Servizio Fitosanitario, Ufficio di Venezia, Via A. Poerio 34; I-30172 Mestre (VE) Italy, Tel.: # 39 / 41 / 27 95 702 Fax # 39 / 41 / 27 95 703; e-mail: serv.fitove@regione.veneto.it Application forms for the meeting and a provisional program are available from the convenor. The second meeting

will be held in **Nitra**, Slovak Republic.

Publications

The Working Group released several publications, partly with the support of Global IOBC.

The most recent issue of the IWGO -NEWSLETTER, a scientific magazine, which has been edited by H. K. Berger (Vienna, Austria) since 1981 was released (Volume XXI / 1-2, December 2000). All earlier issues of the IWGO -NEWSLETTER can be obtained from the convenor. The proceedings of the XIXth IWGO Meeting (1999) in Adana, Turkey also can be obtained from the convenor. Recently, IWGO placed its own web page on the internet <http://www.infoland.at/iwgo/> It will contain the "IWGO – NEWSLETTER" in the future, along with relevant data and reports.

Major results and progress achieved

The most important recent event in IWGO is certainly the presence of *Diabrotica virgifera virgifera* in Europe since 1992. An number of meetings (Subgroup „*Diabrotica*“ – Convenor Prof. Richard Edwards, University of Purdue, Lafayette, Indiana, USA) have taken place. In the 5th Framework Program of the European Community for Research, Technical Development and Demonstration Activities, S. Vidal (Justus Liebig – University Giessen, Germany) as Coordinator, together with 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-Bioscience; Delemont, Switzerland) and the IWGO – convenor (H.K.Berger) were

successful in getting funds for a research project (“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. Several meetings of this group took place throughout the year.

WG WATER HYACINTH

Chairman: Dr Martin Hill, Agricultural Research Council, Plant Protection Research Centre, Weeds research Division, Private bag X134, Pretoria 0001, South Africa. Tel: +27 12329-5743, Fax: +27 12329-3278, Email: rietmh@plant2.agric.za.

The second global working group meeting was held in Beijing during October 9-12, 2000. There were 31 participants from 11 countries. Dr Ding Jiangqing and his colleagues are to be congratulated for the great venue and well arranged meeting and field trip. Several overview papers were presented on biological control of water hyacinth with arthropods and with pathogens, and on the status of biological control in China. Thereafter papers were presented and discussed that covered all aspects of the management of water hyacinth, from a reports of the recent first releases of insects in Egypt to successful control in African countries; from discussions of host specificity to surveys for new agents; from assessment of factors that limit control to gathering of information and developing models to better assist management of the weed. The proceedings are in preparation and will be published by the Australian Center of International Agricultural Research during early 2001 and will include up to 21 papers.

As with the first meeting of this working group in Harare in

1998, the working group was closed with the general meeting. During this meeting a mission statement was proposed that everyone was able to identify with. It was decided that the next meeting be held in Uganda on the shores of Lake Victoria in early August 2002. The organizing committee was relected; Chairperson, Martin Hill, PPRI South Africa; Members, Ding Jiangqing, CAAS China, Ted Center, USDA-ARS USA and Mic Julien CSIRO Australia.

One of the roles of this working group is to identify further research needs on water hyacinth. During the meeting several concepts were raised that require further investigation. These included:

- The impact of cold climates on the success of biological control-and it was suggested that in addition to investigating the thermal tolerance of the natural enemies used and collecting biological control agents from climatically similar localities, it would be worth investigating the impact of releasing large numbers of healthy, fertile females through the winter to obviate the lag time in population build up of the weevils following cool winters.
- Using plant competition studies between water hyacinth and other aquatic plants as an indication of how effective particular agents are.
- As the need for both short and long-term solutions to water hyacinth become necessary there should be further studies investigating the compatibility of the different control options to be integrated.
- There should be further surveys for additional natural enemies (both insects and pathogens) in the

area of origin of water hyacinth.

- Research on the interaction between the insect natural enemies with the pathogen natural enemies could be further pursued.
- The time was right for a thorough investigation into the development of myco-herbicide for water hyacinth. Hopefully the IMPECCA project will achieve this goal.

Global WG on TRANS-GENIC ORGANISMS IN IPM AND BIOCONTROL

Chairperson: Dr. Angelika Hilbeck, Swiss Fed. Inst. of Technology, Zurichbergstr. 38, 8044 Zurich, Switzerland. Tel: +41 1 632 4322, Fax: +41 1 632 1215, e-mail: angelika.hilbeck@ecostrat.ch

Summary of activities

The working group held its 1st international meeting on ‘Effective and sustainable use of agricultural biotechnology in integrated pest management in developing countries’ from November 27-30 in Hangzhou, China as a satellite meeting to the Rice IPM Network “International Conference on Raising Rice Productivity Levels – Implications for Pest Management”. The satellite meeting was fully incorporated into the Rice IPM Network final conference and expanded the emphasis of the rice meeting by including aspects of resistance management, environmental impact and transgene outcrossing to wild/weedy relatives of cotton and corn. In addition, senior administrators and regulators from Thailand, India and EU provided an update on the status of regulation and monitoring in their countries. It was quite impressive to see the amount of work being undertaken in China on investigating the environmental impact of transgenic Bt-crops. One

highlight of the meeting was the production of a consensus document on the 'Sustainable use of GM rice for pest management', which is currently being finalized. This was the result of a structured discussion on developing and implementing guidelines for resistance management and ecological monitoring for Bt crops. The conference was very successful and the goal was fully accomplished to establish collaborative links between scientists in developed and developing countries, and to provide scientists, regulators, and policy makers with up-to-date research and regulatory information of the various countries. Also the business meeting of our working group was very productive. Given the expertise and interest of the attendants of the business meeting, we focused dis-

ussion on evaluating pre-commercialization analysis of non-target risks. We identified several categories of non-target effects that probably should be treated separately. We also discussed the contrasting strategy of using indicator species versus an approach designed to investigate identifiable risks. In addition, several other questions were identified. It was decided to seek outside funding that will allow the group to further pursue this undertaking as a truly international initiative with representatives from all continents and major countries growing or likely to grow transgenic crops on a large scale in the near future. Upon successful funding, it was suggested to hold the next work meeting at ICIPE in Nairobi, Kenya, if at all possible still in 2001. The second issue of our

working group newsletter (publication anticipated by April 2001) will contain summaries of the key presentations at the joint-conference, the finalized consensus document and a summary of the working group business meeting.

WG ON COFFEE BERRY BORER

Chairman: Dr. J.F. Barrera Gaytan, Division de Tecnología Agropecuaria, El Colegio de la Frontera Sur, Carretera Antigua Aeropuerto, Km 2.5, Apartado Postal 36, 30700 Tapachula, Chiapas, Mexico. Tel: +52-962-81103. Fax: +52-962-81015.
e-mail: jbarrera@tapecosur.edu.mx,
Website: www.tapecosur.edu.mx/broca.

SCIENTIFIC EVENTS

53rd International Symposium on Crop Protection, Faculty of Agriculture and Applied Biological Sciences, Ghent University, Ghent, Belgium, 8 May 2001.

The symposium will give attention to all topics related to crop protection. Deadline for the submission of abstracts is January 31, 2001. The full programme will be available in March 2001. The proceedings will be published in a special issue of the journal *Mededelingen Faculteit Landbouwkunde en Toegepaste Biologische Wetenschappen, Universiteit Gent*. All practical information on the symposium can be found at our website: <http://allserv.rug.ac.be/~hvanboost/symposium>

All correspondence should be sent to the secretary general Prof. Dr. P. De Clercq, Department of Crop Protection, Faculty of Agricultural and Applied Biological Sciences, Ghent University, Coupure Links 653, B-9000 Ghent,

Belgium. E-mail: Patrick.DeClercq@rug.ac.be, Tel: 32 (0)9 264 61 58, Fax: 32 (0)9 264 62 39

4th International scientific seminar on Plant Health, International Conventions Center "Plaza América", Varadero, Cuba, June 11-15, 2001. The county of Matanzas, where Varadero is located, is a rich region in cultural and historical traditions, with natural treasures such as the Caves of Bellamar, the Valley of Yumurí and the Coral Reef at the North. Also in Matanzas, the largest citrus growing area in the country, is the well known Sugarcane Experimental Stations of Cuba, "Julio Mesa" at Jovellanos.

The Center of Conventions Plaza América, located in Varadero, is a modern complex of highly integrated facilities and services. It has a total room capacity for 1900 people and has well-prepared and specialized personnel, able to satisfy

the expectations of the organizers and participants of the events held there.

In this forum for investigators, professors, extension agents and officials of different countries, recent developments in plant health and plant protection will be discussed, along with projected trends for the new millennium. The following scientific meetings will take place during the Seminar:

- IV International Scientific Seminar on Plant Health.
- 33rd Annual Meeting of the Organization of Nematologists of Tropical America (ONTA 2001)
- 41st Annual Meeting of the American Phytopathological Society, Caribbean Division (APS-CD 2001).
- X Latin American Workshop on Whiteflies-Geminiviruses
- VII Symposium on Ant Pests

- II Conference of the Neotropical Regional Section of IOBC
- Workshop on Scientific Information on Plant Protection
- International Workshop on Pests and Diseases in Banana: Current Situation and Challenges for the New Century. (INISAV-CENSA-PROMUSA)

National Organizing and Scientific Committees have been created for each one of these events. Nevertheless, coordination will be required among the committees for the presentation and discussion of common topics to the different meetings, with a view to guarantee the participation of the delegates and to enrich the scientific debate. Scientists, specialists and students linked to Plant Health and Plant Protection, including the members of ONTA and APS-CD, are invited to submit the summaries of their papers to be presented either as posters or oral presentations. This is extended to all those that have been previously contacted as invited speakers in the symposia or workshops. A copy of the summaries should be received before March 30, 2001. (Check the instructions for the summaries and posters). The inscription and summary forms (Check inscription and summary models) should be sent by electronic mail (e-mail) to varadero@hotmail.com with copy to the President of Local Organizing Committee of the specific meeting that you want to participate. It is necessary to clarify the type of presentation (poster or oral) and the audiovisual means that will be used. Publication of the Program and the Abstract Book will not be carried out until one week before the event to facilitate the inclusion of last minute changes. For this reason, the mentioned documents will not be mailed to the pre-registered participants. The program will

be available at our web site by October of 2001. General information on the scientific seminar will be found at the web site of the Portal of the Cuban Science (<http://www.cubaweb.com>) and the Desk of Conventions of Cuba: <http://www.buroconv.cubaweb.cu>.

For more information, please contact Dr. Esther Lilia Peralta, Plant Protection Division, CENSA, P.O. Box. 10, San José de las Lajas, Habana. Phone: (5364) 6-3014, Ext. 45; Fax: (5364) 6-3897 e-mail: varadero01@hotmail.com

International Symposium on the Systematics and Biology of Aphelinidae and Trichogrammatidae, University of California, Riverside, June 18-19, 2001. Organizers: John Heraty and John Pinto.

[for a formatted copy of the flyer see: <http://entomology.ucr.edu/events/flyer.pdf>

Trichogrammatidae and Aphelinidae (Hymenoptera: Chalcidoidea) are minute wasps parasitizing scale insects, whiteflies, aphids, leafhoppers, Lepidoptera, and several other groups of insects. For biological control purposes, these wasps rank among the top ten most important taxa. While Trichogrammatidae are important for augmentative control programs, Aphelinidae are primarily used for classical biological control involving importation, release and establishment against such pests as olive scale, citrus blackfly and purple scale, to name a few. The taxonomic diversity and relationships of both groups are poorly understood. Trichogrammatidae are represented by 75 genera and 675 valid species, and Aphelinidae have 38 genera and more than 975 valid species. However, little is known about species of either family in most habitats. Knowledge is especially poor in tropical regions, where, it

has been suggested, microparasitic wasps attacking early or cryptic life stages may be the dominant fauna. Both families exhibit peculiarities in behaviour associated with host choice, competition and sex ratio distortion, which have made them model organisms for numerous studies.

The symposium will bring together more than 20 of the world's leading systematists, behaviourists and biological control specialists from China, India, England, Europe, Canada and the USA. The meeting will promote an exchange of ideas across disciplines, stimulate greater interaction among participants, and perhaps most importantly, provide a single venue for training students from various disciplines interested in these parasitic wasps. Registration is limited to 100 participants.

This workshop was initiated and partially sponsored by a National Science Foundation grant through the Partnerships in Enhancing Expertise in Taxonomy (PEET) program. Additional support was made available through the College of Natural and Agricultural Science (UC Riverside) and the Department of Entomology (UC Riverside).

Symposium Outline Systematics

"Introduction and outline of chalcidoid relationships." John Heraty, UC Riverside.

"Higher classification (taxonomy) of Aphelinidae." Mohammad Hayat, Aligarh Muslim University, Aligarh, India.

"Phylogeny of Aphelinidae." Jim Woolley, Texas A&M University, College Station, TX.

"Systematics of Eretmocerus (Aphelinidae)." Mike Rose, Montana State University, Bozeman

"Systematics of Encarsia." Andy Polaszek, The Museum of Natural History, London.

"Molecular systematics of Encarsia." John Heraty, C.S.

Babcock (UC Riverside), P. DeBarro, F. Driver and S. Schmidt (CSIRO, Canberra, Australia)

"Aphelinidae of China." Jian Huang, Fujian Agricultural University, Fujian, P.R. China

"History of classification of Trichogrammatidae." Gennaro Viggiani, University of Naples, Naples, Italy

"Species problems in the Trichogrammatidae." John Pinto, UC Riverside.

"Molecular systematics of Trichogrammatidae." Richard Stouthamer, Wageningen Agricultural University, Netherlands and University of California, Riverside

Diversity

"Collecting methods and estimates of chalcidoid diversity." John Noyes, The Museum of Natural History, England

"Diversity and ecology of the really, really small." Brad Hawkins, University of California, Irvine

Biological Control

"Biological control of whiteflies." Tom Bellows, University of California, Riverside

"Biological control of armored scales." Lisa Forster, University of California, Riverside

"Biological control with Trichogrammatidae." Sandy Smith, University of Toronto, Canada

"Biological control using Trichogramma." Nick Mills, University of California, Berkeley

"Commercial production of parasitic Hymenoptera." Synthya Penn, Beneficial Insectary, Redding, CA

Behavior

"Sex ratio distortion." Richard Stouthamer, Wageningen Agricultural University and University of California, Riverside

"Sex ratio strategies." Bob Luck, University of California, Riverside

"Competition and biological control with Aphelinidae." Molly Hunter, University of Arizona, Tucson, AZ

"Aphelinus - who or what art thou?" Keith Hopper, USDA-ARS, Delaware

"Integration of systematics biological control and behavior." Mike Schauff, Systematic Entomology Laboratory, Washington, DC.

Please mail registration to: Systematics Symposium, c/o Phyllis Crabtree, Department of Entomology, University of California, Riverside, CA 92521 USA.

[For further information, contact Phyllis Crabtree, Department of Entomology, University of California, CA 92521, USA, Tel: (909) 787-3718; fax: (909) 787-3086;

phyllis.crabtree@ucr.edu or Doug Yanega, Dept. of Entomology, Entomology Research Museum, Univ. of California - Riverside, Riverside, CA 92521, phone: (909) 787-4315, <http://entmuseum9.ucr.edu/staff/yanega.html>

6th International Symposium on Aphids – Aphids in a New Millennium, Rennes, France, 3-8 September 2001. The symposium will take place at the High School of Agronomy, ENSAR, and will be organised by the research team in aphid population biology, with staff from both INRA and ENSAR. Contributed papers will be published in a book, after referee assessment by a scientific committee. For more information, contact: Aphid Symposium Committee, NRA, Laboratoire de Zoologie, Domaine de la Motte, 35653 Le Rheu Cedex, France. Fax: +33-2-23-48-51-50, e-mail: aphid@rennes.inra.fr.

4th European Workshop on Invertebrate Ecophysiology. St. Petersburg, Russia, 9-14 September 2001. The Workshop will continue the sequence of the three previous meetings held in Paimpont, France (1992), Ceske Budejovice, Czech Republic (1995) and Birmingham, UK (1998). It will be dedicated to the mem-

ory of the late Pr. A. Danilevsky (1911-1969), the former head of the Department of Entomology, on occasion of his 90th anniversary and of the 40th year since the appearance of his famous book 'Photoperiodism and Seasonal Development of Insects' first printed in Russian in 1961. The workshop will cover all aspects of ecophysiology of terrestrial invertebrates (mainly arthropods), the main themes for separate sessions being as follows: (1) life cycles and phenological strategies, (2) temperature requirements of development, (3) overwintering 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

1st International Symposium on Biological Control of Arthropods, Radisson Waikiki Prince Kuhio Hotel, Honolulu, Hawaii, September 17-21, 2001

PURPOSE: To bring together biological control practitioners from around the world to promote and address international issues relating to arthropod biological control. A full day will address pertinent aspects of each of the following major topics: 1) Classical Biological Control, 2) Augmentative Biological Control, 3) Conservation of Natural Enemies in IPM Systems, and 4) Examples of Classical Biological Control. An additional day mid-week will offer visits to ongoing biological control projects and sites of ecological interest. For a copy of the draft program of the meeting, contact Roy Van Driesche at: vandries@fnr.umass.edu or, in the near future, you can visit our soon to open website www.biocontrol.ucr.edu/isbca

WHY IS THIS MEETING NEEDED AND UNIQUE? In 1964, practitioners of biological weed control inaugurated a series of international meetings for weed biocontrol scientists that has been held every four years since the original meeting. This series of meetings has been a vital force for information exchange, development of internal strength and cohesion in their group, helping them to resolve issues and meet new challenges to practical use of biological weed control. As a result, weed biological control has prospered. In contrast, no such forum exists for biological control of insects and mites. We are scattered in larger meetings (such as the Entomological Society of America, or other national societies) or have drifted into narrowly focused meetings such as those on host specificity testing, nontarget impacts, or natural enemy biology. This lack of a forum for our group is holding back our discipline and making us less effective in meeting new challenges to the practical use of our science (which are many and growing). Our intent is to start such a meeting series for biological control of arthro-

pods, beginning in HI in 2001 and continuing every 4 years thereafter. Come join us.

MORE INFORMATION: Contact Dr. Roy Van Driesche, Dept. Entomology, Univ. of Massachusetts, Amherst, MA 01003, Ph 413-545-1061, e-mail: vandries@fnr.umass.edu. A website at: www.biocontrol.ucr.edu/isbca provides details on the purpose, program agenda, regional contacts, and registration information.

“Resistance 2001. Meeting the Challenge”. IACR-Rothamsted, Harpenden, UK, 23-26 September 2001. This major international conference, the 4th 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 resistance, (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/tmeeting.html> e-mail: res.2001@bbsrc.ac.uk. Final announcement and registration form are available at <http://iobc.ethz.ch/events/index.html>

IVth International Workshop on the Management of Diamondback Moth and Other Crucifer Pests, The University

of Melbourne, Victoria 3010, Australia, 26-29 November 2001.

The diamondback moth (DBM), *Plutella xylostella* (L.), has risen to major pest status around the world, due to the disruption of its natural enemies and its ability to develop resistance to insecticides. It causes serious damage to *Brassica* vegetables (e.g. cabbage, cauliflower, broccoli, Brussels sprouts and Asian leafy brassicas) particularly in tropical climates and in Australia, is also becoming a damaging pest of broadacre *Brassica* crops (e.g. canola and forage turnips). The fourth international DBM workshop will continue the tradition of the first two workshops held in Taiwan and the third workshop held in Malaysia, of bringing together scientists and others involved with the *Brassica* industry from around the world. Themes of the workshop will focus on revision of progress made in *Brassica* Integrated Pest Management in the past two decades since the first workshop and will aim to identify the major impediments to its further progress. Emphasis will be placed on innovations in pest management techniques.

For further details, please contact: Fiona Campbell, Conference Management, The Old Physics Building, The University of Melbourne, Victoria 3010, Australia, Email: fionacam@unimelb.edu.au Tel: +61 (03) 83 44 63 89, Fax:+61 (03) 83 44 61 22,

Website:

<http://www.student.admin.unimelb.edu.au/moth>

Proposed themes of invited papers: 1) Improving the integration of pest management practices: the theoretical and practical challenges, 2) *Brassica* IPM adoption: progress and constraints, 3) New chemistries: modes of action and effect on beneficial organisms, 4) The principles and practice of insecticide resistance management with particular refer-

ence to *Bacillus thuringiensis*, 5) Advances in insecticide application techniques for mechanised and labour-intensive *Brassica* production systems, 6) Recent innovations with microbial control of DBM, and, 7) Enhancement of parasitoid performance through selective breeding. Note that there will be no concurrent sessions. Contributed papers and posters may fit into the themes outlined above. Other topics may include host plant resistance, ecology, behaviour of pests and parasitoids, host plant interactions, pheromones and chemical control. Time for discussion: the last session of each day will be run as a broad discussion led by eminent participants in diamondback moth research and development. Language: the official language of the workshop will be English. Field Trip: a field trip to an intensive vegetable-growing region close to Melbourne is being planned at the end of the workshop for interested participants. Additional information on the diamondback moth can be seen at the www site of the International Working Group for Diamondback Moth: <http://www.nysaes.cornell.edu/ent/dbm/>

Vth International Society of Hymenopterists Conference Dates

The Vth Conference of the International Society of Hymenopterists will be held in Beijing, China from July 22-26, 2002. It is timed to complement the IUSI Congress to be held in Sapporo, Japan July 28-Aug 3, 2002.

Conference Venue

This conference will take place at the Friendship Hotel, Beijing, which is very close to Institute of Zoology, Chinese Academy of Sciences. Accommodation will be available in this hotel as well as others in Chinese Academy of Agriculture.

Scientific Program

The conference will consist of

- invited plenary speakers
- sessions for submitted talks
- symposium presentations
- specialist discussion groups and
- poster sessions.

We are currently soliciting nominations for plenary speakers, and looking for ideas and organizers for symposia and special discussion groups. Any suggestions should be sent to the conference organizers at sea@panda.ioz.ac.cn.

Visit the conference web page at:

<http://www.ioz.ac.cn/zcd/>

Contact addresses:

Chao-dong ZHU Institute of Zoology, Chinese Academy of Sciences Beijing, Haidian, Zhongguancun Road 19# P. R. China

E-mail: sea@panda.ioz.ac.cn

Tel: + 08610-82628389

Fax: + 08610-62565689

Organized by

Institute of Zoology, Chinese Academy of Sciences
Chinese International Conference Center for Sciences and Technology

XIVth 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 hisemato@ees.hokudai.ac.jp.

VIIIth International Colloquium on Invertebrate Pathology and Microbial Control and VIth 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.

VIIth 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.

“XVth International Plant Protection Congress”. Beijing, China, 6-11 July 2003. The congress will focus on current progress in the plant protection sciences and technology, and foreseeable developments in the 21st 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 21st 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, XVth IPPC, c/o Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing 100094 China, Tel/Fax:+86-10-62815913, e-

mail:ippc2003@ipmchina.cn.net
Web-site:<http://www.impchina.cn.net/ippc>.

BOOKS

Evaluating Indirect Ecological Effects of Biological Control. Edited by E. Wajnberg, J.K. Scott and P.C. Quimby. Published by CABI Publishing, 261 pp. The book of the IOBC

International Symposium held at Agropolis International, Montpellier, in October 1999, is arranged in 11 chapters. The different topics were chosen in order to present both general

considerations and detailed case studies of non-target effects in classical and augmentative use of arthropods and microbes for biological control of pest insects and alien weeds.

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/fax or even better e-mail items on biological control to A. Gassmann (address on first page), so they can be included in the next issue. Deadline for submitting items for the summer 2001 issue of IOBC Newsletter is 1st June 2001.

Thank you all for renewing your membership to IOBC and subscription to BioControl.

We would like to express our grateful thanks to L. E. Ehler at the University of California, Davis for editing and proof 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.

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