

IOBC Newsletter 61

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

APRIL 1995

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

IOBC FORUM

A permanent IOBC office

The idea to organize cooperation for biological control arose in 1948 at the International Congress of Entomology in Stockholm. The initiative to found CILB („Commission Internationale de Lutte Biologique“ = International Commission of Biological Control) was realized in 1956. The name changed from CILB to OILB (Organization instead of commission) in 1965 and the present name of IOBC was adopted in 1969. At the general assembly in Rome in 1971 it was decided to establish regional sections under the umbrella of a new global organization. Since then, our organization has grown considerably. Six regional sections were established, approximately 60 working groups and commissions are functional today, the journal *Entomophaga* publishes yearly 500-600 pages of original results in biocontrol, a number of bulletins with over 2000 pages

are issued per year by the regional sections (mainly WPRS and EPRS), books are published under the patronage of IOBC, conferences are organized, identification services are run by regional sections, newsletters are published, consultation is given to governments and government organizations etc. This list of IOBC activities is by far not complete, but it certainly demonstrates that IOBC has grown tremendously since its foundation in 1956.

It is evident that increasing activity implies more administration/coordination and funds. All positions in IOBC are honorary and thanks to the idealism and spare time devoted by many members and officers, our organization has grown steadily. I am confident and convinced that IOBC will continue to grow and increase its importance all over the world. However, this means that we have to consider the possibility of establishing a permanent administration/coordination office which would function as a secretariat

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Vice-Presidents: B. Napompeh, National Biol. Control Res. Centre, Kasetsart Univ., P.O. Box 9-52, Bangkok 10900, Thailand
A.I. Smetnik, All-Russian Institute for Plant Quarantine, Pogradichnaya 32, Bikovo, Moscow Region 140150, Russia

Secretary-General: F. Bigler, Swiss Fed. Res. Station for Agronomy, Reckenholzstr. 191, 8046 Zürich, Switzerland Fax 1 377 72 01

Treasurer: E. Hoebaus, Ministry of Agriculture and Forestry, Abt. II C12, Stubenring 1, 1010 Vienna, Austria Fax 711 006 507

Past-President: J.R. Coulson, Inst. Biocontrol Lab., USDA/ARS, BARC East BD. 476, Beltsville MD 20705, USA

that would take care of the paper work done so far by the President, the Secretary-General and Treasurer of IOBC global and the regional sections. The council of IOBC global has discussed this idea at its meeting in February 1994 and has charged the Secretary-General and the Treasurer of IOBC global to investigate and evaluate possible models. They are working on it.

Duties of such an office would be:

- administer the finances of the global body (and possibly of regional sections) i.e. mailing of all invoices (partly on behalf of regional sections) and the many reminders, book-keeping of finances and all kind of contacts to treasurers of regional sections and chairmen of the global working groups etc.
- carry out the daily paper work that presently flows into the secretariats of our organization i.e. dispatch newsletters, bulletins, brochures, books and other information material, reply letters of request, keep contacts with regional sections and be of help for exchanges of information between sections, etc.
- administer member lists i.e. keep the member lists updated (of global and possibly the regional sections), up-date the Entomophaga, the newsletter and bulletin receivers lists, etc.
- be responsible for all contacts to the editing house of Entomophaga i.e. prepare the IOBC subscriber lists, send changes of addresses or names of new subscribers to the editor, administer the page charges, give complaints further to the editing house etc.
- compile and prepare all information relevant to IOBC and distribute it to the members

and other interested persons and organizations, i.e. prepare the global Newsletter, compile and actualize information on IOBC activities (working groups, publications, etc.)

The duties listed here are but the main ones and it would be easy to add others. Until now it is the task of the Secretary-General and the Treasurer to carry out all these responsibilities. It keeps them too busy to take care of other, more important duties, as for example, to make IOBC better known to governments and their organizations, keep contacts to national and international bodies (FAO, IUBS, EPPO, IIBC, EU, etc.), coordinate and improve cooperation between the regional sections, follow and guide activities and developments of the

working groups, generate funds for IOBC activities and for support of joint programmes with other international organisations. If IOBC wants to keep its influence on B. + F. control, more attentions must be payed to these tasks. (More attention must be payed to these tasks if IOBC wants to keep its influence on biological and integrated control). With the increasing importance of alternatives to chemical control it is an obligation for IOBC to increase its power. A permanent IOBC office would be a logical step in the history of the organisation and would contribute in strengthening IOBC.

Your opinions, suggestions, ideas and comments are appreciated.

F. Bigler

ENTOMOPHAGA

Entomophaga - the scientific journal of IOBC invites for contributions

Entomophaga is the scientific journal of IOBC since 1956. For decades it was the only periodical publishing exclusively articles on biological control. It is only recently that two new journals on biocontrol appeared on the market and they are competing now with Entomophaga. Therefore, IOBC would welcome and appreciate your support to Entomophaga by:

- submitting your personal scientific articles to ENTOMOPHAGA
- suggesting to your colleagues to consider the journal for publication of their scientific papers
- using ENTOMOPHAGA for publication of articles of your IOBC working group activities e.g. proceedings of scientific contributions, results of joint

activities of your WG, etc.

- planning the publication of interesting contributions of conferences related to biocontrol.

Do not hesitate to contact J.M. Rabasse, editor-in-chief of ENTOMOPHAGA, if you have any questions or suggestions.

Address: J.M. Rabasse, P.O. Box 2078, 06602 Antibes, France, Fax 33-93 67 88 98

F. Bigler

Ad-hoc Review Committee

The Review Committee has received a number of comments and suggestions since the publication of its report in Newsletter 60. A summary will be presented in the next IOBC Newsletter.

Report on the international training course and workshop on *Evaluation of Pesticide Effects on Natural Enemies and its Implications for Pesticide Registration*

This training-workshop was co-organized by IOBC, the International Institute of Biological Control (IIBC), and the Institut für Biologischen Pflanzenschutz in Darmstadt, Germany, in collaboration with Malaysia's Dept. of Agriculture (DOA) and the Malaysian Agricultural Research & Development Institute (MARDI). The course was sponsored by GTZ, SDC, and IOBC.

The training-workshop took place at the DOA Training Centre (formerly ASEAN-PLANTI) at Serdang from 13th - 26th March 1995, including a 4 day field trip to MARDI's field station in the Cameron Highlands. The key resource people were Drs. Paul Jepson and Pieter Oomen, members of IOBC/WPRS Working Group on *Pesticide Effects on beneficial Organisms*, Dr. Rob Verkerk, Imperial College, for his research experience on natural enemies in Malaysia, and Stephanie Williamson, IIBC, as training-workshop coordinator, with others from IIBC UK and Malaysia, CAB INTERNATIONAL, and MARDI. Dr. Gero Vaagt from GTZ provided valuable support at the workshop.

In total 16 participants attended from Japan, Laos, Indonesia, Vietnam, Thailand, the Philippines, China, Pakistan, Malaysia, Myanmar and Korea. Around half of the participants work as government pesticide registration officers and the remainder as IPM researchers or in agricultural extension programmes. All participants were extremely enthusiastic about the training content and methods and they drew up an ambitious list of

recommendations (see below) at the workshop for implementation in the region. As part of the training follow-up, it was agreed to form an informal network, the *Asian Network on Natural Enemies and Pesticides*, to be coordinated initially by S. Williamson from IIBC-UK. The training-workshop „proceedings“ will be published in the form of a training manual later in 1995. The organizers also plan to repeat the course in 1996.

Recommendations of the international training-workshop 13th - 26th March 1995:

1. *National and Regional Working Groups (including members from regulatory, research and industry organizations) should be set up in the next 12 months to coordinate development and use of appropriate natural enemy side effects test methods. WGsto be coordinated by IOBC/IIBC with SEARS, focussing initially on problem crops e.g. rice, vegetables.*
2. *Standardized test procedures and decision-making schemes following IOBC/EPPO/ESCORT model, should be adapted for use in Asia and incorporated within formal registration procedures, for harmonization region-wide.*
3. *Side effects data should be collected from the region to draw up a simple natural enemy hazard classification. This system would provide a basis for registration agencies to develop procedures (e.g. via*

pesticide labelling) to restrict the use of products which pose a hazard to key natural enemies.

4. *Training inputs should be developed to raise awareness of natural enemy side effects and their adverse economic impact, aimed at farmers, extensionists, researchers, industry and regulators.*
5. *A communication network should be set up immediately to encourage contact between participants, resource people, sponsors, IOBC and IIBC. It should also facilitate access to side effects databases and other interested people should be encouraged to join.*

For more information about the training course and the ANNEP network please contact:

Stephanie Williamson, Training & Information Officer
IIBC, Silwood Park, Ascot, Berks. SL5 7TA, UK
Fax +44 1344 875007
email s.williamson@CABI.org

REGIONAL SECTIONS

WPRS

West Palaeartic Regional Section

President: D.J. Royle, University of Bristol, Long Ashton Research Station, Bristol BS18 9AF, UK. FAX 275 39 4007.

Secretary General: S. Poitout, INRA Stat. Zool., B.P. 91, F-84143 Montfavet Cedex, France. FAX 90 31 62 70.

Treasurer: J. Huber, Institute for Biological Pest Control, Heinrichstr. 243, 62287 Darmstadt, Germany. FAX 6151 40790.

Professor R. Cavalloro deceased

Professor Dr. R. Cavalloro, Past-President of IOBC/WPRS, deceased on April 5, 1995 at the age of 70 years. Prof. Cavalloro was Vice-President of WPRS from 1985-1989 and President from 1989-1993. He played a prominent role in the activities and developments of IOBC/WPRS for a number of years.

EPRS

East Palaeartic Regional Section

President: A.I. Smetnik, All-Russian Institute for Plant Quarantine, Pogranichnaya 32, Bikovo, Moscow Region, 140150, Russia; FAX 95 924 2051.

Secretariat: Journal „Plant Protection“, Sadovaya-Spasskaya 18, attn. IOBC/EPRS Secretariat, Moscow, 107807, Russia; FAX 95 924 6655.

IOBC/WPRS Bulletins are now available for anyone

During the IOBC/WPRS Executive Committee meeting in Gödöllő, Hungary, April 6, 1995 it was decided to offer the IOBC/WPRS Bulletins to anyone who wants to subscribe. The Bulletins are used by WPRS to publish primarily results of its working groups and commissions. Eight to ten issues are published yearly with a total of 1500 to 2000 pages. Most articles published are topical

results of original research presented by working group members at conferences and workshops.

The subscription fee is CHF 100.- (US\$85.- approximately) per year for IOBC members and CHF 400.- for non-members. The amount should be transferred to the account of WPRS in Belgium: IOBC/WPRS, Kredietbank, account number 448-7987341-71, Martelaarslaan 310, B-9000 Gent.

Minutes of a joint meeting of the Executive Committees of IOBC/WPRS and IOBC/EPRS held in Gödöllő, Hungary, April 7, 1995

It was the first time that the Executive Committees (EC) of the West (WPRS) and East (EPRS) Palaeartic Regional Sections of IOBC held a joint meeting. On April 6, 1995, both EC organized separate meetings for discussions of specific issues related to WPRS and EPRS respectively. The Secretary-General and the Treasurer of IOBC Global were invited by WPRS to participate at those WPRS discussions which were related to IOBC Global. On April 7, the joint EC meeting was chaired by the Secretary-General of IOBC Global.

The objectives of the meeting were:

- to give an overview of both Regional Sections (RS) on structure and activities
- to define areas of mutual interests
- to recognize activities in both RS that could be coordinated and lead to future collaboration

- to discuss possibilities of exchanges of information and services (bulletins, books, working group reports etc.)

1. Each President (D. Royle, WPRS; A. Smetnik, EPRS) outlined the structure, membership status, fees, working group activities, commissions etc. of their RS. Differences between WPRS and EPRS were recognized in membership categories and annual fees of the members. EPRS has only recently complemented the institutional member status with individual, supporting and honorary membership. These categories, established for a long time in WPRS, became necessary because individual scientists and private producers of beneficial organisms has expressed their interest in IOBC. One of the serious

limiting factors for potential members of EPRS is finding funds for annual fees.

WPRS has presently 17 working groups, 5 study groups and 4 commissions established. EPRS has 16 ad-hoc working groups and 6 standing (permanent) commissions. The discussions demonstrated obvious differences, but also similarities in activities and duties of the different bodies in the two RS. As a result of the presentations of organization and structure of WPRS and EPRS, it was decided that summaries be prepared and published in one of the next IOBC Global Newsletters. The need for broader diffusion of this information was recognized and stressed by the participants. The EPRS secretariat will prepare a documentation set and send it to the Secretary-General of IOBC Global by August 31, 1995.

2. Activities of working groups and commissions are partly similar in both RS. Therefore, it would be of mutual interest to improve collaboration in these areas. It was proposed that working group meetings which are beneficial for both RS could more often be held in places bordering on WPRS and EPRS. If possible at least one active working group member (preferably the convenor) should attend meetings of the other RS which are of mutual interest and report to his working group. This would intensify cooperation and the exchange of information. The representative of Hungary made a proposal to explore possibilities of establishing two common working parties (IPM in cereals and intercropping systems).

The representatives of Poland informed about a new con-

ference centre in Poznah which will be built within the next months. This centre will offer all facilities necessary to organize workshops and conferences.

3. A better exchange of announcements of activities in WPRS and EPRS was suggested. It was decided that EPRS activities will be announced in the WPRS and Global Newsletters if the information is mailed in time to the editors, A. Minks and F. Bigler, respectively.

A Newsletter, issued by EPRS, would be highly desirable and convenient for diffusion of information to its members on WPRS and other IOBC activities. The President of EPRS announced the intention of EPRS to produce two Newsletter per year in the future.

4. The usefulness of regular exchanges of the WPRS and EPRS Bulletins was stressed. If the Council of WPRS agrees at its next meeting, 40 copies of each WPRS Bulletin (6 to 8 issues are released per year) will be forwarded, without charge, to the institutional members and the secretariat of EPRS. The copies will be mailed to the Secretary-General of IOBC Global who will distribute the Bulletins according to the member list of EPRS. In addition, WPRS will provide its Newsletter „Profile“ to the same members receiving Bulletins. „Profile“ will be mailed directly by the Editor A. Minks. For this purpose an updated EPRS mailing list will be forwarded by the EPRS secretariat once a year to the Secretary-General of IOBC Global and to the Editor of „Profile“.

EPRS will provide regularly 80 copies of its Bulletins to the

Secretary-General of WPRS who will distribute them. EPRS Bulletins are published in Russian and, therefore, it was strongly recommended by WPRS and IOBC Global to add extended English summaries to the scientific articles. The Bulletins would be even more useful and attractive for non-Russian reading colleagues if tables and headings of figures could be translated. The editor of the Bulletin (V. Savzdarg) promised to evaluate the possibilities.

Occasional publications of WPRS and EPRS will be mailed regularly to the respective secretariats and to the Secretary-General of IOBC Global.

5. Further discussions concerned the financial problems for many institutional members in paying their annual fees to EPRS and IOBC Global. Although funding is a serious problem in EPRS, the number of institutional members increased recently. This demonstrates the need of EPRS and the willingness of research institutions to support IOBC in this area.

6. A questionnaire, mailed on July 1994 by the Secretary-General on behalf of the Council of IOBC Global to the secretariats of all RS, was only occasionally returned. It was agreed that the questionnaire, which will assess the objectives and activities of all working groups and commissions, will be returned by the end of September 1995.

F. Bigler

NRS**Nearctic
Regional
Section**

President: G.R. Buckingham,
USDA/ARS, P.O. Box 147100,
Gainesville, Florida 32614.
FAX 904 374 6801.

Secretary-Treasurer: D. Landis,
Department of Entomology,
104B Pesticide Research
Center, Michigan State Uni-
versity, E. Lansing, MI 48824-
1115, FAX 517-353-5598.

Corresponding Secretary: R. van
Driesche, Department of Ento-
mology, University of Massa-
chusetts, Amherst MA 01003.
FAX 413 545 2115.

J.M. Nechols has resigned as
Secretary-Treasurer of NRS.
IOBC thanks him very much for his
efforts and time he devoted to the
organization. D. Landis was
elected as the new Secretary-
Treasurer. We welcome him and
wish him satisfaction and good
luck for the new position.

NTRS**Neotropical
Regional
Section**

President: Francisco Ferrer, Ser-
vicio Biologico, Carrera 5 No.
4-76, Urbanizacion del Este,
Barquisimeto, Estado Lara,
Venezuela. FAX 58-51 316
253.

Secretary: Miguel C. Zapater,
Facultad de Agronomia, Uni-
versidad de Buenos Aires,
1417 Buenos Aires, Argentina.
FAX 54-1 743 6461 or 522
1687.

Treasurer: Vanda Paes Bueno,
Departamento de Fitossani-
dade, Escola Superior de Agri-
cultura de Lavras, Caixa Pos-
tal 37, CEP 37200-000.
Lavras, Minas Gerais, Brasil.
FAX 55-35 829 1100.

An interesting Newsletter was
released by the end of 1994. Ask
M.C. Zapater for a copy.

SEARS**South East
Asian
Regional
Section**

President: R. Muniappan, Agri-
cultural, Experiment Station,
University of Guam, Mangilao,
Guam 96923 USA. FAX 671
734 6842.

Secretary-Treasurer: M. Marutani,
(same address as R. Muni-
appan)

**New working group in
SEARS is being formed**

A new biological control group is
being formed in SEARS, or the
South and East Asian Regional
Section of the IOBC.

The impetus for this new group on
integrated control in glasshouse
crops resulted from a meeting in
California in April 1993.

The idea of a similar group in this
region was raised at a gathering
of SEARS delegates at the
California meeting by Dr. Stephen
Goodwin, NSW Department of
Agriculture, Australia.

Mr. Goodwin discussed this fur-
ther with Mr. Robert Spooner-Hart,
lecturer in plant protection, Uni-
versity of Western Sydney, Australia,
and Dr. Nick Martin, Crop and
Food Research, New Zealand.
The discussion lead to this
invitation to any persons with a
professional or commercial inter-
est in biological control and IPM
in greenhouse crops, to join the
new working group.

The aim of this SEARS working
group would be to provide a
stimulus, through regular contact
by its members and via a news-
letter, to promote the development
and adoption of IPM in the
greenhouse industry in the
member countries, and to enable
a frequent exchange of infor-
mation and progress in research.

Ultimately, if this working group

became established, it might seek
to hold a future joint meeting of
regional sections, such as the
one which occurred in California.

The group also aims to encourage
participation from the obvious
member countries, as well as
other countries which feel a
greater affinity with the green-
house industries in this region,
than the existing working groups
in the NRS and WPRS.

For more information contact: Dr.
Stephen Goodwin, NSW Agri-
culture, P.O. Box 581, Gosford
2250, Australia, Fax 43 481 910.

ATRS**Afrotropical
Regional
Section**

President: Dr. Zimmerman, Plant
Protection Research Institute,
Private Bag x 134, Pretoria
001, Rep. S. Africa

Vice-President: Dr. Onayagode-
Bakary, Ivory Cost

Secretary-General: Dr. G. Bani,
Brazzaville, Congo

Treasurer: Dr. A. Paraiso, IITA
Centre de Cotonou, B.P. 08-
0932, Cotonou, Benin, FAX
229-350566 or 229-301466.

Full addresses will be indicated in
the next Newsletter

IOBC welcomes the new officers
of ATRS. We hope that the new
duties will give you satisfaction
and success.

**Share your
information**

Activities and events within
IOBC Regional Sections do
interest your colleagues out-
side the Sections as well. They
will most probably not be
informed if you don't tell them.
You may share information by
sending any kind of NEWS to
me.

F. Bigler, Editor

WORKING GROUPS

WG Quality Control of Mass-reared Arthropods

Chairman: N.C. Leppla, ASDA/APHIS, National Biological Control Institute, 4700 River Road Units, Riverdale, MD 20737-1229, USA. FAX 301 734 7823.

Co-chairman: M. Benuzzi, Biolab, Via Masiera 1, 1191, 47020 Martorano-Cesena, Italy. Fax 547 380795.

The next full meeting of the IOBC WG will be held in Santa Barbara, California, October 9-12, 1995.

The VII Workshop of the IOBC Global Working Group „Quality Control of Mass Reared Arthropods“ has been held in September 1993 in Rimini (Italy). More than 60 participants attended the workshop. 22 papers were presented and the guidelines for 11 natural enemies were outlined. Proceedings of the workshop are still available from the co-chairman.

In parallel, a concerted action supported by the European Union (EU) started in 1993 with the same aim: designing and implementing quality control of beneficial insects. The concerted action is coordinated by J.C. van Lenteren of Wageningen University, The Netherlands.

The second workshop of the concerted action has been conducted in Evora (Portugal) in September 1994: During the workshop improvement and adaptation of the guidelines for Q.C. tests of the 11 natural enemies were discussed and 4 new guidelines were outlined.

Moreover, data on biology of pests and natural enemies and additional elements of Q.C. tests

(particularly flight tests) were collected and discussed.

The work and the discussion of the EU-supported action programme will be very helpful, especially in the view of the next IOBC global workshop to be held in Santa Barbara, California. For more information contact the Chairman.

Reports of the Evora meeting, held on September 18-20, 1994 are available from M. Benuzzi.

M. Benuzzi

WG Trichogramma and other egg Parasitoids

Co-chairmen: S.A. Hassan, Inst. Biol. Pest Control, Heinrichstr. 243, 6100 Darmstadt Germany. Fax 6151 40 790

E. Wajnberg, INRA Station Zool., 37 bv. du Cap, B.P. 2078, 06606 Antibes Cedex France. Fax 93 67 88 25

Report of the 4th International Symposium „Trichogramma and other Egg Parasitoids“, Cairo, Egypt, September 1994

The Symposium was sponsored by the Ministry of Agriculture of Egypt and IOBC Global. About 45 participants from 21 countries attended the symposium and 31 papers were presented. The local organizers made a great effort in organizing the meeting and the excursion. They made the stay in Egypt very pleasant for all participants. On behalf of the Working Group, I would like to thank them for their efforts and for the Egyptian hospitality.

The symposium topics were: 1) Biosystematics and genetics, 2) Host parasitoids relationship and

biology, 3) Physiology and behaviour, 4) Ecology and population dynamics, 5) Rearing (in vivo & in vitro), production and release, 6) Compatibility (environmental, biological, chemical, 7) Effectiveness, release and assessment.

Proceedings:

Most participants delivered manuscripts of their talks at the meeting, some shortly afterwards. A quick publication of the proceedings can therefore be expected. To make the publication more interesting for the readers, an introduction of about two pages for each section was added. The introductions include highlights, actual research problems and interesting projects on the subject and a short review of the literature with references. E. Wajnberg edited all the papers for the proceedings and S.A. Hassan wrote the introductions for the different sections. As usual, the proceedings will be published in „Les Colloques de l'INRA“. Please order your copy at: Service des Publications C.N.R.A., Rte de Saint-Cyr, 78026 Versailles Cedex, France. The price per copy will amount to approximately FF 130.- (US\$ 30.-). Copies of proceedings of previous Trichogramma symposia (Antibes 1982, Guangzhou 1986, San Antonio 1990) are still available (same address for orders).

E. Wajnberg

Trichogramma News 8 (1995)

The 8th issue of *Trichogramma News* is now in print and will be distributed soon. The issue includes 39 abstracts of current research projects, 30 short contributions on problems related to research and practical implementation of *Trichogramma* and

other egg parasitoids. The News also include a table on the commercial use of *Trichogramma* in 16 countries, a list of about 200 colleagues working on egg parasitoids as well as a list of 70 recently published articles on the subject.

S. A. Hassan

Short description of the Working Group „*Trichogramma* and other egg parasitoids“

The Working Group consists of 125 scientists from 36 countries and aims to promote research on this

group of beneficial arthropods. Topics of interest are: 1) Bio-systematics and genetics, 2) Host relation and biology, 3) Physiology and behaviour, 4) Ecology and population dynamics, 5) Rearing (in vivo & in vitro), production and

Subgroups	Convenors	Assistant convenors
Mass production Utilization Behaviour	Dr. S.A. Hassan Germany	Prof. Dr. Li Li-ying, China Dr. S.M. Grinberg, USA Dr. Y. Hirose, Japan
Systematic Genetic Ecology	Dr. E. Wajnberg France	Dr. Nagarkatti, India Dr. A. Hung, USA Dr. F. Bin, Italy

release, 6) Compatibility (environmental, biological, chemical), 7) Effectiveness and assessment.

Symposia are organized every 4 years and were held in France 1982, China 1986 in USA 1990 and in Egypt 1994. Meetings are also regularly held within the International Congress of Entomology every 4 years. The next one will be held at Florence, Italy, 25-31 August 1996.

Trichogramma News:

Issues were published in 1983, 1984, 1986, 1988, 1990, 1992, 1993 and 1995. The last 4 issues are still available. Contact S.A. Hassan for more information.

WG Fruit flies of Economic Importance

Chairman: M. Aluja, Inst. Ecol., A.C. Apdo Post. 63, Xalapa, Veracruz 91000, Mexico.
Fax 281 86 809

Co-chairmen: J. Piedade-Guerreiro, Div. Luta Biol., Inst. Invest. Cient. Trop., Junqueira 14, 1300 Lisboa, Portugal. Fax 364 20 08.

B.A. McPherson, Dept. Entomology, Pennsylvania State University, Univ. Park, PA 16802, USA. Fax 814 865 3048.

I would like to ask the chairmen to put my name on their mailing lists and send me all information on activities of their WG.

F. Bigler (address page 1)

WG Biological Control of Bruchids

Chairman: A. van Huis, Agric. Univ., Dept. Entom. P.O. Box 8031, 6700 EH Wageningen, NL. Fax 8370 84821

Co-chairman: J.P. Monge, Inst. Bloc. Exp., Univ. Rabelais, Fac. Sci., Parc Grandmont, 37200 Tours. France.

Dissolution of the WG

After consultation of the WG members, the chairman proposed a few month ago to discontinue the WG because there was very little interest in continuing collaboration in a WG. Very few scientists are working in biological control of Bruchids and therefore they prefer direct cooperation if needed.

The proposal was submitted to the Council of IOBC Global. It

was an unanimous decision of the Council to dissolve the WG.

F. Bigler

WG IWGO - Ostrinia

Chairman: H.K. Berger, Federal Institute for Plant Protection, Trunnerstr. 5, 1020 Vienna, Austria. Fax 1 216 08 25.

Co-chairmen will be elected in September 1995.

The next meeting is scheduled for September 11-16, 1995 in Romania. The meeting will take place in the Maize Research Institute in Turda; accommodations will be in Cluj, about 30 km away from Turda. For further information contact: Harald K. BERGER (Chairman).

Diabrotica virgifera now in Europe

IWGO was organizing an international workshop on *Diabrotica* in Graz, Austria on March 20-21, 1995. The meeting was sponsored by FAO, EPPO (European Plant Protection Organization) and the Austrian Ministry of Agriculture.

Diabrotica virgifera, an important insect pest of maize, was recently introduced from USA to Europe. A short report presented by F. Baca *et al.* at the workshop in Graz shows the status of the invasion:

Beetles of the pest were transferred from the USA to Europe by air transport probably in 1990. The first damage was detected by F. Baca in mid July in 1992. The presence of the high population of the new maize pest, known in literature as the western corn rootworm (WCR), was observed on a 0,5 ha small-farmer plot in the vicinity of the Belgrade airport. A more detailed study on WCR were conducted in July, August and September of 1993 and 1994. It was carried out in the entire area of Vojvodina; Srem,

Banat and Backa, then, Stig and Sumadija. On the basis of three-years observations, it was found that adult beetles quickly cover huge distances. The area invaded by the pest, especially in Vojvodina was 110.000 ha and 200.000 ha in 1993 and 1994, respectively. Until now the pest has crossed the rivers Sava in Sumadija, Danube and Tamis in Banat, but has not reached Backa yet. The air distance to the Rumanian and Hungarian border is about 50 km and 100 km, respectively.

WG Ecology of Aphidophaga

Chairman: D. Horn, Dept. Entom., Ohio State Univ., 1735 Neil Ave., Columbus OH 43210-1220, USA. Fax 614 292 2180

Co-chairmen: R. Chambers, Entom., AFRC Inst. Hort. Res., Worthing Rd. Littlehampton W. Sussex BN17 6LP, UK.

I. Hodek, Inst. of Entomology, Czech Academy of Sciences, Branisovska 31, 37005 Ceské Budejovice, Czech. Republic.

The second part of the Proceedings of the IOBC Symposium «Aphidophaga V», held in Antibes (France) is now available and has been distributed to the participants. This part deals with 'Augmentation and enhancement of aphidophaga'. It is published in a special issue (52(1), 65pp) of «Agriculture, Ecosystems & Environment».

The contributions of the Aphidophaga Symposium are now published in two special issues of international journals. The first part dealing with «Behavioural Ecology of Aphidophagous insects» has already been published in «European Journal of Entomology» 90(4), 107 pp.

Extra copies of each special issues can be ordered at the price of 27 US\$ (Europe) and 30 US\$ (other countries). Send orders to M. Rabasse, Aphidophaga V, Antibes, France, Fax 33 93-67-88-98

The sixth WG meeting is scheduled for 2-6 September 1996 at the University of Gembloux, Belgium. For more information contact the Chairman or Co-chairmen, or Dr. Jean-Louis Hemptinne, Faculté des Sciences Agronomiques, Passage des Déportés 2, B-5030 Gembloux, Belgium.

WG Training, Information, Education (TIE)

Co-chairmen: R. Wang, CABI/IIBC, Silwood Park, Buckhurst Road, Ascot, Berkshire SL5 7TA UK. Fax 344 875 007.

M. Orazé, Nat. Biological Control Institute, USDA/APHIS/NBCI, 4700 River Road Unit5, Riverdale, MD 20737 - 1229, USA, Fax 301 734 4329

R. Wang was much involved in

raising funds and in coordinating the joint international training course on «Evaluation of Pesticide Effects on Natural Enemies and its Implications of Pesticide Registration (see report on page 3 in this Newsletter)

WG Chromolaena odorata

Chairman: R. Muniappan, University of Guam, Agricultural Experiment Station, Mangilao, Guam, 96923 USA. Fax 671 734-6842.

The working group on *Chromolaena odorata* has released two newsletters in 1994. Copies of these newsletters are available upon request to R. Muniappan. Proceedings of the Third International Workshop on Biological Control and Management of *Chromolaena odorata* is with the printers and it should be soon available for distribution.

WG Biological Control of Plutella

Co-chairmen: N.S. Talekar, AVRDS, P.O. Box 42, Shanhua Tainan 74199, Taiwan, Fax 06 583 0009.

J.K. Waage, CABI/IIBC, Buckhurst Road, Silwood Park, Ascot, Berks SL5 7TA UK. Fax 344 875 007.

The Third International Workshop on Diamondback Moth and Other Crucifer Pests will be held from 5 to 8 December 1995 in Grand Hotel, Kaohsiung, a southern port city of Taiwan. This meeting is sponsored by the Asian Vegetable Research and Development Center and Council of Agriculture, Republic of China. The meeting programme will be structured on the following topics: ecology, biological control, chemical control and insecticide resistance, microbial control, *Bacillus thuringiensis* and recent advances in biotechnology and IPM. Besides

IOBC International Conference

„Technology Transfer in Biological Control“

Montpellier, France, September 9-11, 1995

Anyone who intends to organize a special workshop during the Conference is invited to address its interest to J.P. Aeschlimann, CSIRO, Campus de Baillarguet, 34982 Montferreier-s.-Lez, France, Fax 67 599040. Special consideration to the Conference in Montpellier should be given by the Chairmen of the IOBC Working Groups. It will be an excellent opportunity to convene your WG meeting 1996 before or after the Conference.

Plutella, the conference will discuss recent advances in the control of crucifer pests such as *Hellula* spp., *Crociodolomia* spp., *Phyllotreta* spp., and *Pieris/Artogeia* spp. For more information, please write to: N.S. Talekar, AVRDC, P.O. Box 42, Shanhuah, Tainan 741, Taiwan, ROC. A satellite meeting during the workshop will discuss orga-

nizational matters of our global working group. Expansion of the group to include biological control of other important crucifer pests will be discussed. We hope most of you will attend the conference and participate in our group's activities. We look forward to seeing you at the meeting.

N.S. Talekar

Reports on Bio-Control Activities

Worldwide insect database on the horizon

The Systematic Entomology Laboratory (SEL) of the U.S. Department of Agriculture has developed a project to create a nomenclatorial database to catalog all known insects of the world. Under a broad array of SEL computer-related information tools, BIOTA (Biosystematic Information on Terrestrial Arthropods) is an exciting new resource under the supervision of Ronald Hodges (chair), Robert W. Poole, and F. Christian Thompson. According to Hodges, "We envision the day when a global network of information databases and other tools developed by a union of individuals (including SEL) will exist and when anyone, anywhere will be able to access all available information on a terrestrial arthropod species from his/her computer."

Other information tools being developed in the SEL are catalogs (Biosystematic Database of World Diptera, systematic catalog of world-wide cutworm moth), specimen label databases, the Fruit Fly Expert System (automated identification tool for extension specialists and quarantine in-

spectors), and other automated identification systems. The database will be available on Internet and CD-Rom.

From IOBC / SEARS Newsletter, Vol. 2, Nr. 4, 1994

Cold storage of predatory bug *Orius insidiosus*

The effects of cold storage on the survival rate of diapausing adult female *Orius insidiosus* (Say) were investigated. Egg production and consumption of thrips by survivors and their granddaughters were measured. Storage in a refrigerator at 9°C and 50 % RH for 14 - 17 weeks was considered feasible because survival was about 58 - 67 %. In addition, the daily egg production of females following storage and of granddaughters of females stored for 14 weeks exceeded that of females taken from a continuous culture. The consumption of thrips by female stored for 14 - 17 weeks was less than that of females from the continuous culture. These results suggest that, following storage in diapause, female *O. insidiosus* can produce more eggs

with a lower level of thrips consumption than females taken from a continuous culture. As a result, populations from storage may establish more readily in a crop than populations taken from a continuous culture. Alternatively, the higher daily egg production of female *O. insidiosus* taken from storage could be exploited to increase the size of a colony for release or sale at a later date. It is likely that combining readily available water and a saturated atmosphere could increase the survival of highly fecund females following storage at low temperatures. In summary, cold storage of *O. insidiosus* in diapause is a feasible method for reducing its cost to growers and insectary operators. Further studies are needed to determine the effects of transferring *O. insidiosus* from storage into greenhouses under early winter conditions.

G. Ferguson, Ontario Ministry of Agriculture, Food & Rural Affairs, Fax +519 738 2929 and J. Schmidt, University of Guelph, Ontario.

Suitability of selected cultivars as plant hosts for *Orius insidiosus*

The effects of selected cultivars of greenhouse vegetables on several life history parameters of *O. insidiosus* were studied to determine their suitability as plant hosts. Two cultivars each of tomato (Trust™ and KR381™), cucumber Jessica™ and Corona™ and sweet pepper (Cubico™ and Mazurka™) were evaluated. *O. insidiosus* was able to oviposit on all the cultivars tested. The mean egg-laying rate was higher on petioles from cucumber than on those from pepper. The percentage hatch was high on all

the cultivars but hatching was higher from petioles of cucumber than from those of pepper. Survival of first instars was high on all the cultivars which were also similar in their effects on female longevity. The predators were able to consume thrips in dishes containing leaf disks from all the cultivars tested. However, the mean consumption of thrips by adult female *O. insidiosus* was reduced in dishes containing leaf disks of cucumber. This initial study suggests that the leaf surface properties of cucumber interfere with the consumption of thrips by female *O. insidiosus*. There was no evidence to suggest that the leaf surface properties of tomato and pepper interfere with the consumption of thrips.

Evaluation of the cultivars under commercial conditions could give a more reliable assessment of their effects on the performance of the predator. Overall, this study indicates that all the cultivars tested are good candidates for the biological control of thrips using *O. insidiosus*.

G. Ferguson, Ontario Ministry of Agriculture, Food & Rural Affairs, Fax +519 738 2929 and J. Schmidt, University of Guelph, Ontario.

European Weed Research Society Workshop

An EWRS Workshop on Biological Control of Weeds was held in Montpellier, France on 8-

10 February 1995. The workshop was attended by about 80 scientists from 16 countries, mostly European, but participants from other countries including Canada and the U.S.A gave the Workshop an international character. Also, the CSIRO and USDA scientists gave examples of international programs for biological control of

weeds.

The welcome address by the local organizers, Siraj Hasan, CSIRO and Luca Fornasari, USDA was followed by the welcome by G. Matheron, CIRAD (hosting Institute) and Heinz Müller-Schärer, Secretary of the EWRS working group on biological control of weeds.

The Workshop included 6 sessions with 22 lectures, 3 discussion sessions and 11 posters. The sessions included inundative biological control, classical biological control, and novel aspects in biological control. Among the invited speakers, Dr. R. Charudattan spoke on the „Status and Progress of Research in Florida and Other States of the U.S.A“ and Dr. R. Labrada-Romero (FAO, Italy) gave an overview on the „Code of Conduct for the Import and Release of Biological Control Exotic Agents“. The team of Dr. H. Müller-Schärer from Fribourg University (Switzerland) presented papers on weeds of European crops especially on the resistance in weed pathogens. He also summarized the present status of the action COST-816 concerning biological control of weeds in crops. Drs. S. Hasan, R. Groves (CSIRO, Montpellier) and A. Caesar (USDA, Bozeman, U.S.A) spoke about the classical use of European pathogens for weed control. Dr. R. Prasad spoke about the interaction of pesticides and adjuvants with the possible bioherbicide, *Chondrostereum purpureum*, against forest weeds in Canada. The classical biocontrol of weeds using arthropod parasites was covered by the teams of Drs. D. Schroeder (IIBC, Delemont, Switzerland) and L. Knutson (USDA, Montpellier). Dr. L. Fornasari (USDA, Montpellier) presented the project for biological control of *Tamarix* in the U.S.A and discussed the nature of the problem. Dr. Schroeder also moderated a discussion session

on the selection of test plants and screening test methodology. Similarly, Drs. M. Greaves and P. Scheepens led discussions on, respectively, the role of formulation for effectiveness and reliability of mycoherbicides and genetic variability in weed and pathogen populations with respect to susceptibility/resistance/virulence. One of the novelties at this meeting was the presentation of CD-ROMS by Drs. T. Lebourgeois (CIRAD, Montpellier) and N. Spencer (USDA, Sydney, U.S.A), on weed identification and illustrated databases, respectively.

Abstracts of the oral papers and posters presented at the Workshop are available and if you are interested in obtaining a copy please write to: Dr. Siraj Hasan, CSIRO Biological Control Unit, International Campus of Baillarguet, 34982 Montferrier-sur-Lez Cedex, France.

National Research Council of Thailand and Kasetsart University Bangkok, Thailand

Summary Report 1993

The National Biological Control Research Center (NBCRC) was established in 1975. NBCRC is a joint cooperative and collaborative venture of various academic institutions and government agencies dealing with R&D (Research and Development) and R&E (Research and Extension) in biological control and integrated pest management (IPM) in Thailand. It is coordinated by the NBCRC Executive Subcommittee of the National Research Council of Thailand (NRCT) reporting directly to the NRCT Executive Committee. The overall implementation is undertaken by Kaset-

sart University in close coordination with NRCT and in parts with its cooperating agencies from the Ministry of University Affairs, Ministry of Agriculture and Cooperatives, the Ministry of Public Health, the Ministry of Science, Technology and Environment, and the government enterprises consisting of the Thailand Institute of Scientific and Technological Research (TISTR) and the Electricity Generating Authority of Thailand (EGAT), and the Budget Bureau of the Ministry of Finance.

NBCRC has its headquarters located at the Bangkhen Campus of Kasetsart University in Bangkok. The headquarters consists of various laboratories and quarantine facility, R&D Section, R&E Section, and training facilities for undergraduate and graduate students enrolled at Kasetsart University and other universities, and personnel from other cooperating agencies, government agencies as well as those interested in biological control and IPM from within and outside Thailand. In addition to its headquarters, NBCRC has its Regional Centers located at key geographical areas of the country.

Current research projects

NBCRC Headquarters

1. Survey, collection and evaluation of endemic natural enemies of insect pests of agricultural importance in Thailand.
2. Study, collection and evaluation of natural enemies of weeds in Thailand.
3. Identification and information services in biological control.
4. Introduction of natural enemies for biological control of pests of economic importance in Thailand and exportation of available natural enemies to other countries.
5. Biological control of water hyacinth in Thailand.
6. Biological control of the giant sensitive plant in Thailand.
7. Survey, collection and evaluation of

effective pathogens for biological control of insect pests and weeds in Thailand.

8. Biological control of *Salvinia cucullata* in Thailand.
9. Biological control of diamondback moth and crucifer pests in Thailand.
10. Biological control of *Thrips palmi* in Thailand.

NBCRC Central Regional Center

1. Survey, collection and evaluation of endemic natural enemies of insect pests of economic importance in the Western Region of Thailand.
2. Study, survey and evaluation of natural enemies of weeds in the Western Region of Thailand.
3. Mass rearing of natural enemies for augmentative biological control of insect pests of economic importance.

NBCRC Northern Regional Center

1. Biological control of water hyacinth and the giant sensitive plant in the Northern Region of Thailand.
2. Biological control of *Leucaena psyllid* in the Northern Region of Thailand.

NBCRC Northeastern Regional Center

1. Biological control of the brown planthopper in the Northeastern Region of Thailand.

NBCRC Southern Regional Center

1. Effects of pesticides used for the melon fly control on the parasite, *Biosteres arisanus*.
2. Preliminary study on the use of nematode, *Steinernema carpocapsae*, for the control of sweet potato weevil, *Cylas formicarius*.

NBCRC projects with cooperating and collaborating agencies in Thailand

1. Improvement and evaluation of various serotypes of *Bacillus thuringiensis*.
2. Survey and study on the longan pedicel borer, *Conopomorpha* sp. and its parasites.
3. Conservation study on the

natural enemies of insect pest of mungbean.

4. IPM strategies for the diamondback moth using biological control and botanicals.
5. Mass rearing of *Brachymeria lasus*, the parasite of teak defoliator, *Hyblaea puera*.
6. Infectivity tests of *Beauveria* sp. and *Metarrhizium* sp. on teak defoliator, *Hyblaea puera*.
7. Biological control of *Salvinia cucullata* using *Bagous nodeiri*.
8. Biological control of the golden snail, *Pomacea canaliculata*, in the rice paddy using some native fishes.
9. Biological control of snails of veterinary importance using marsh fly of the genus *Sepedon*.
10. Study on the sporulation of *Bacillus sphaericus* H5 isolated from Ayuthya and Kanchanaburi.
11. Study on the production of *Bacillus sphaericus* 2362 using solid state medium.
12. Use of the Chinese grass carp, *Ctenopharyngodon idella*, for biological control of aquatic weeds in Tha Tunq Na Dam reservoir.

Other NBCRC cooperative projects

1. Biological control of the giant sensitive plant (CSIRO Division of Entomology/Department of Primary Industry and Fishery/ACIAR).
2. Biological control of water hyacinth in Thailand (CSIRO Division of Entomology/ACIAR).
3. Biological control of *Thrips palmi* (University of Florida).
4. Survey, collection and study of entomogenous fungi in Thailand (Xenova, UK).
5. Survey of natural enemies of *Rubus* spp. in Thailand (Natural History Museum, Paris, France).
6. Graduate dissertation research on ecology of *Leucaena psyllid* (University of California, Berkeley, USA).

B. Napompeth,
Executive Director NBCRC and
Vice-President IOBC Global

PERIODICALS - PROCEEDINGS

IOBC/WPRS Bulletin Vol. 17(5)
1994.

Working Group „Integrated Control in Protected Crops, Mediterranean Climate“. Proceedings of the Meeting held at Lisbon (Portugal), 21-23 September 1994. Edited by R. Albajes. 241 pp. ISBN 92-9067-063-0.

IOBC/WPRS Bulletin Vol. 17(6)
1994.

Working Group „Fruit Flies of Economic Importance“. Proceedings of the Meeting held at Lisbon (Portugal), 14-16 October 1993. Edited by J. Piedade-Guerreiro. 273 pp. ISBN 92-9067-064-9.

IOBC/WPRS Bulletin Vol. 17(7)
1994.

Proceedings of the 7th General Assembly of the West Palaearctic Regional Section (IOBC/WPRS), Lisbon (Portugal), 19-20 October 1993. 206 pp. ISBN 92-9067-065-7.

IOBC/WPRS Bulletin Vol. 17(8)
1994.

Working Group „Integrated Control in Field Vegetable Crops“. Proceedings of the Working Group Meeting held at Einsiedeln (Switzerland), 1-3 November 1993. Edited by S. Finch & E. Brunel. 206 pp. ISBN 92-9067-066-5.

IOBC/WPRS Bulletin Vol. 17(9)
1994.

Working Group „Integrated Plant Protection in Orchards“. Proceedings of the Meeting

held at Bologna (Italy) 5-7 October 1994. Edited by J.V. Cross & E. Dickler. Guidelines for integrated production of pome fruits in Europe: IOBC technical guideline III. 40 pp. ISBN 92-9067-067-3.

IOBC/WPRS Bulletin Vol. 17(10)
1994.

Working Group „Pesticides et Beneficial Organisms“. Side-effects of pesticides on beneficial organisms: Comparison of laboratory, semi-field and field results. Edited by H. Vogt. 178 pp. ISBN 92-9067-068-1.

Kaufman W.C. and J.E. Nechols (eds.), 1992. Selection criteria and ecological consequences of importing natural enemies. Entomological Society of America. 117 pp. ISBN 0-938522-42-6.

REQUESTS & OFFERS

A film on Fruitflies

A video film (in french language) on fruitflies was recently produced by CIRAD (Centre de Cooperation Internationale en Recherche Agronomiques pour le Développement). It shows the biology and control of fruitflies.

Requests for a copy (free, except mailing costs) should be sent to S. Quilici, B.P. 180, F-97455 St. Pierre Cedex, France.

BOOKS

Altman J., 1993. Pesticide interactions in crop protection: beneficial and deleterious effects. 579 pp. CRC Press, Boca Raton. ISBN 0-8493-6339-X.

Ananthakrishnan T.N., 1992. Dimensions of insect-plant interactions. 184 pp. New Delhi: Oxford and IBH. ISBN 81-204-0668-0.

Bender J., 1994. Future harvest: Pesticide-free farming. 159 pp. University of Nebraska Press. Lincoln, USA.

Brodsky A.K., 1994. The Evolution of insect flight. 224 pp. Oxford University Press, UK ISBN 0-19-854681-5.

Coombs R.F. & Lisansky S.G., 1993. Dictionary of biological control and integrated pest management. 174 pp. CPL Newbury. ISBN 1-87269-195-1.

Dafni A. 1992. Pollination Ecology: A practical approach. 266 pp. Oxford University Press, UK. ISBN 0-19-963298-7.

Duke S.O., Menn J.J. & Plimmer J.R., 1993. Pest control with enhanced environmental safety. 357 pp. ACS Symposium Series Nr. 524, Washington. ISBN 0-8412-2638-5.

Haccou P. & Meelis E., 1992. Statistical Analysis of Behavioural Data: An approach based on time-structured models. 404 pp. Oxford University Press, UK. ISBN 0-19-854663-7.

CALENDAR

Harborne J.B., 1993. Introduction to ecological biochemistry. 4th Edition, 318 pp. Acad. Press, London. ISBN 0-12-324686-5.

Hedin P.A., Menn J.J. & Hollingworth R.M., 1994. Natural and engineered pest management agents. 552 pp. ACS Symposium Series Nr. 551. Washington. ISBN 0-8412-2773-X.

Hill D.S., 1994. Agricultural entomology. 635 pp. Timber Press, Portland, USA.

Itô Y., 1993. Behaviour and social evolution of wasps. The communal aggregation hypothesis. 168 pp.; Oxford University Press. ISBN 854046-9.

Joergensen S.E., 1994. Fundamentals of ecological modelling, 2nd Edition, 628 pp. (Developments in environmental modelling, Vol. 19), Elsevier, Amsterdam. ISBN 0-444-815778-3.

Pedigo L.P. & Buntin G.D., 1993. Handbook of sampling methods for arthropods in agriculture. 714 pp. CRC Press, Boca Raton. ISBN 0-8493-2923-X.

Sampson R.N. & Adams D.L. (eds.), 1994. Assessing forest ecosystem health in the inland west. 461 pp. Food Products Press, New York. ISBN 1-56022-052-X.

Zadoks J.C. (Ed.), 1993. Modern crop protection: developments and perspectives. 220 pp. Wageningen Pers. ISBN 90-7413406-8.

May 29 - June 2, 1995

Training course on production and application of agents for biological control. La Habana, Cuba. Contact: Humberto Hernández Casta eda INISAV, Calle 110-514, entre 5ta B y 5ta F, Playa Miramar, Ciudad Habana, Cuba. FAX 537 33-0535 y 33-3703

June 26-29, 1995

„Third International Symposium on Population Dynamics of Plant Inhabiting Mites“. Gilleleje, Denmark. For more information contact: Dr. G. Nachman, Zoological Institute, University of Copenhagen, Universitetsparken 15, DK-2100, Denmark.

June 26-30, 1995

International course on plant protection. Contact: Humberto Hernández Casta eda INISAV, Calle 110-514, entre 5ta B y 5ta F, Playa Miramar, Ciudad Habana, Cuba. FAX (537) 33-0535 y 33-3703

July 2-7, 1995

13th International Plant Protection Congress, The Hague, The Netherlands. Contact the XIII International Plant Protection Congress, c/o Holland Organizing Centre, Lange Voorhout 16, 2514 EE The Hague, The Netherlands. Tel 37-70 365 780 50; Fax 31-70 361 48 46

August 27 - September 1, 1995

Joint IOBC/WPRS and IOBC/EPRS working groups meeting on „Insect pathogens and insect parasitic nematodes“.

Poznan, Poland. Contact: J.J. Lipa (local organizer) Institute of Plant Protection, Miczurina 20, 60-318 Poznan. FAX 4861676301 or P. Smits (convenor WPRS working group), IPO-DLO, P.O. Box 9060, 6700 GW Wageningen, The Netherlands. FAX 318370 10113

August 28 to September 2, 1995

„The International Conference on Integrated Fruit Production“, Cedzyna near Kielce, Poland. Contact: Dr. R.W. Olszak (local organizer), Research Institute of Pomology and Floriculture, Pomologiczna 18, 96-100 Skiernewice, P.O. Box 105, Poland, FAX 48 40 33 3228, or F. Polesny (convenor of the WPRS working group), Bundesamt und Forschungszentrum für Landwirtschaft, Bereich Pflanzenschutz, Trunnerstrasse 5, 1020 Vienna, Austria; FAX 43 1 216 0825

September 17-20, 1995

IOBC/WPRS working group „Breeding for host plant resistance to insects and mites“. The 7th meeting of the complete working group will be held at the Conference Centre „Alteveer“, at Arnhem, The Netherlands. Contact: Kees Reinink & Chris Mollema (local organizers), CPRO-DLO, P.O. Box 16, 6700 AA Wageningen, The Netherlands; FAX 31 8370 16513 or P.R. Ellis (convenor), Horticulture Research International, Wellesbourne, Warwick CV35 9EF, UK. Fax 789 470 552.

September 18-22, 1995

International symposium on principles and practice of management of insect populations „Biorational forestry protection

of territories suffered from Chernobyl accident". Contact: Dr. L. Krushev, Forestry Institute Belorussian Academy of Sciences, Proletarskaya str. 71, 246654 Gomel. Fax 0232 53 68 12 or 53 75 60.

September 23-29, 1995

1st International Symposium of Biological Control in European Islands. Ponta Delgada - Azores (Portugal). Contact: Universidade dos Açores, Dep. de Biologia, Centro de Luta Biológica, Rua Mãe de Deus, 58, Apart. 1422, 9502 Ponta Delgada Codex. Fax 351-96 65 34 55.

September 26-30, 1995

International symposium on „Ecological problems of Plant Protection and modern Agriculture". Slovakia, Stari Lesni. Contact: A. Blahutiak, Institute of Experimental Phytopathology and Entomology, Nám. Padl ch hrdinov 7, 90028 Ivanka-pri-Dunai. Fax 427 943-431.

October 18-19, 1995

Congress on „Microbial Control Agents in Sustainable Agriculture: Field Experience, Industrial Production and Registration". For information contact: Camillo Rosso, Fondazione per le Biotecnologie, Viale Settimio Severo 63, 10133 Torino, Italy, Fax 11 660 3535.

November 6-10, 1995

XVIII Congreso Nacional de Control Biologica; Congreso Americano de Control Biologico, Tapachula, Chiapas, Mexico. Contact: P. Liedo-Fernández, Centro de Investigaciones Ecológicas del Sureste, Unidad Tapachula,

International Course on IPM in Greenhouse Crops

19-30 June, 1995 (60 hours)

An International Course on IPM in Greenhouse Crops is planned by the two IOBC/WPRS Working Groups on Protected Crops, the Mediterranean as well as the Continental Group. This course will be held at the Instituto Mediterráneo in Zaragoza, Spain, from 19-30 June, 1995 (60 hours). Course contents deals with the basics and application of integrated control of arthropod pests and diseases in greenhouses. Simultaneous translations into english, french and spanish will be assured by professional translators. More information is available from: Dr. Ramon Albajes, convener Mediterranean Group, Centre UdL-IRTA, 25006 Lleida, Spain. FAX 34 73 238301.

Carretera Antiguo Aeropuerto
Km 2.5, Apartado Postal No.
36, 30700 Tapchula, Chiapas,
México. Fax 962 6 08 15

December 5-8, 1995

Third International Workshop on Management of Diamond-back Moth and Other Crucifer Pests. Kaosiung, Taiwan. For details and pre-registration contact: N.S. Talekar, AVRDC, P.O. Box 42, Shanhua, Taiwan 741, Republic of China.

January 21-26, 1996

IX International Symposium on Biological Control of Weeds. Stellenbosch, South Africa. Contact: J.H. Hoffmann, Zoology Department, University of Cape Town, Rondebosch 7700, South Africa, Fax 27 21 650 3726.

August 25-31, 1996

XX International Congress of Entomology, Florence, Italy. Contact the Organizing Secretariat O.I.C., Via A. La Marmora, 24, 50121 Florence, Italy, Fax 39 55 500 19 12.

General Assembly of IOBC Global

The General Assembly (GA) of IOBC Global will be held at Montpellier, France, during the International Conference on „Technology Transfer in Biological Control: From Research to Practice“, September 9-11, 1996.

The purposes of the GA are (see statutes of IOBC Global) the provision of information on the affairs of the Organization, and the provision of opportunities for members to express opinions on the activities of the Organization and to make recommendations to the Council. Try to attend - it's important!

9. - 11. September 1996, Montpellier, France

IOBC Conference on Technology Transfer in Biological Control: from Research to Practice

Contact person for the local organizing committee: J.P. Aeschlimann, CSIRO Biological Control Unit, F-34982 Montferrier-s.-Lez Cedex, FAX 33 67 59 90 40.

Correspondence concerning the programme should be sent to R.H. Groves (till June 30, 1995) and W.M. Lonsdale (after July 1), same address as J.P. Aeschlimann.

Chairmen of IOBC Working Groups and other persons interested in organizing a special meeting or workshop before, during or after the IOBC Conference are asked to contact R.H. Groves / W.M. Lonsdale.

Membership fees 1995

Please pay your 1995 fee promptly. Budgets of IOBC depend on your subscription. Delayed payments cause a lot of unnecessary administration and costs. Moreover, ENTOMOPHAGA subscribers are notified on the mailing list of the journal only if their fees are paid.

REQUESTED: NEWSLETTER CONTRIBUTIONS

I would like to thank all those members who are taking time to send items for the 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 biocontrol. Take a few minutes and mail or fax items of biological control to the Newsletter editor, so they can be included in the next issue. Deadline for submitting items for the October 1996 issue of IOBC Newsletter is **September 15, 1995**. Send items to F. Bigler (address on page 1).

Editor:

F. Bigler, Secretary-General IOBC Global

with assistance of K. Casada, A. Guignard, U. Kläger and E. Weibel,
Swiss Federal Research Station for Agronomy, 8046 Zürich