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

IOBC Newsletter 59

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

MARCH 1994

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

Training, Information and Education in Biological Control

Governments all over the world are discovering the fascination of environmentally safe agriculture and acknowledge systems like Organic Farming, Integrated Production, Sustainable Agriculture etc.. Programmes are developed and aims, time frames and priorities are set. Biological control methods are among the first priorities with the primary objective to reduce pesticide use because of ecotoxicological concerns and build-up of resistant pest organisms. Discussions with government administrators and decision makers show the ignorance and information deficiency on the potential and merits of biological and natural control in agriculture and forestry. It is mostly not due to a lack of interest but mainly because the information is not at hand or it is presented in a way politicians and administrators do not perceive well.

It is our conviction that the future of biological control has never been as bright as it is at the present time. Let's take advantage! Let's inform decision makers, educate young people and train extension workers in biological control and let's tell them the merits and potential. One day they may be administrators and accept or refuse biological control projects.

The idea of forming an IOBC Working Group on training, information and education was born years ago. A formal proposal was addressed by E.S. Delfosse to the IOBC Global Council at the meeting in Beijing 1992. The response to the suggestion, first raised in Newsletter 57, has been very positive and enthusiastic. There is general agreement that increasing research and implementation in biological control is important for global survival; that scientists *must* do a better job of informing objectively our customers about the realities and benefits of biological control; and that the effort could benefit from entrepreneurship, coordination and facilitation on a global scale.

The IOBC Global Council Meeting in Montpellier (see minutes in this

Newsletter) has approved formally the proposal to form a new *Global Working Group* on Training, Information and Education (TIE). We are delighted to announce that Dr. Ren Wang, Assistant Director for Programme Development of the International Institute for Biological Control, has agreed to be co-chair of the *TIE WG* (a co-chair will be announced soon).

Dr. Wang seeks your input to help develop and steer this effort. Many suggestions for activities have been raised, including.

- Compile a worldwide database of biological control workers.
- Draw together written and video materials on biological control and integrated pest management from around the world.
- Produce bibliographies on specific topics of interest.
- Initiate adult training courses in quarantine, biological control and integrated pest management.
- Fund production of new informational material covering subjects usually only available in scientific literature (e.g., biological control of and with pathogens or nematodes; biological control by conservation of natural enemies; etc.).
- Document programs in informative, non-jargon summaries which cover items such as damage caused by target species, effects of agents, benefit: cost ratios, reduction in pesticide usage etc.
- Compile material in a series of *IOBC Bulletins*, which would be translated into several languages, and made available generally.
- Help to educate the world's children about ecology and biological control by producing focused materials for in a form that can be used by teachers.
- Develop age-specific lesson plans (written materials plus videos) are needed for pre-school through high school.
- Produce an *IOBC Educational Workbook*, and make it available in several languages.
- Find sponsors to help underwrite the cost of production, to maximize distribution of material around the world.

This is just a partial list. Obviously, this is an enormous task, with enormous potential long-term global gains. Under Dr. Wang's expert stewardship, and with your strong support and input, the Global Council is confident that the job will be done.

S. Delfosse and F. Bigler

Minutes of the IOBC Global Council Meeting 15-16 February 1994

Montpellier, France, Hotel Les Pins

Attending:

E.S. Delfosse, President IOBC Global; A.I. Smetnik, Vice-President IOBC Global and President EPRS; F. Bigler, Secretary-General IOBC Global; E. Hoebaus, Treasurer IOBC Global; J.R. Coulson, Past-President IOBC Global; D.J. Royle, President WPRS; S. Poitout, Secretary-General WPRS; A. Cameron for G.R. Buckingham, President NRS; Y.F. Savotikov, Council member EPRS.

Apologies:

R. Muniappan, President SEARS; M. Zapater, President NTRS; J. Boussienguet, President ATRS.

Tuesday
15 February (8:30-18:30)

1.Changes to statutes of WPRS and EPRS

F. Bigler and E. Hoebaus attended the EPRS General Assembly in Bratislava, April 5-9, 1993 (see NL 58, p. 9). Discussions there showed that most members wanted to stay with EPRS but wanted access to WPRS activities. WPRS should be opened to countries in EPRS and vice versa but the present statutes of both Regional Sections (RS) make this difficult. Four institutions from four countries of EPRS are institutional members in WPRS or applied for. WPRS Council will discuss possible consequences and formalities. EPRS agreed in Bratislava to harmonize statutes with WPRS. Suggested changes to most of both Sections' statutes are minor and approved.

The General Assembly of WPRS held in Lisbon, October 1993 agreed the following:

Article 1 (presently). Its activities cover the geographical region formed by the European countries, the countries of North Africa, and those of the Near East.

Article 1 (new). Its activities cover European and Near East countries belonging preferably to the West Palaearctic biogeographical region as well as North African countries.

Also minor changes to WPRS

statutes, articles 1a and 1b were accepted.

EPRS General Assembly approved the following:

Article 1 (presently). The activities of the Section cover East-European countries, Near East and Asia in the East Palaearctic zone.

Article 1 (new). The activities of the Section cover European, Near East and Asian countries (except Japan and Korea) belonging preferably to the East Palaearctic biogeographical region.

After much discussion, the Global Council approved the wording with the following rider: Its activities cover the West Palearctic or East Paleartic biogeographic region, and member countries preferably belong to this biogeographic region.

It was suggested to the Global Council to look at statutes of each Regional Section to ensure harmonization where needed.

2. IOBC Global Working Groups

New WG:

A new Global Working Group on Training, Information and Education in Biological Control was approved. Dr. Ren Wang IIBC, Silwood Park, UK agreed to be convenor (see FORUM article). Objectives relate to those of WPRS Commission on Promotion. Coordination with WPRS Commission will be necessary. The new WG was accepted by the Council.

A new Chromolaena WG was established in November 1993. Dr. R. Muniappan, University of Guam, Mangilao, USA agreed to be convenor. The WG was accepted by the Council.

Convenors of Global WG should be responsible to Global Council particularly if the WG gets financial support. It is recognized by the Council that there is need to formalize the requirements for the formation of a WG and the reporting procedure. It is desirable to have convenors from different RS.

Suggestion: Publish in one of the next Newsletters a list of the Global and RS WG. The President of Global will look at the procedures for establishing WG in RS and submit a proposal to the Council for Global WG.

WG should have clear objectives, act in a coordinating role, sustain the support of RS and be of direct interest to the activities of at least 2 RG.

Coordination with WG of Regional Sections:

Interrelationships between Global WG and WPRS WG are an issue. At the WPRS General Assembly at Lisbon in October 1993 concern was expressed that there was some overlap; e.g. Fruit Flies WG. However it was pointed out that the Global WG facilitates and coordinates meetings and other activities of the WPRS & NTRS Fruit Fly WG.

Role of IOBC Global in Regional WG activities:

The Council felt that IOBC Global should be a facilitator. Global WG should be global in reality and bridges should be built with groups at RS level.

3. Participation of IOBC Global and WPRS in a training course on Side-effects of pesticides of natural enemies

This course will be organized by IIBC and IOBC with financial support of GTZ and probably other bodies.

There is a need of information and training in Asian countries to this topic. IIBC (J. Waage) suggested a training course with participation of IOBC. The course will be held at the MARDI/IIBC station in Malaysia probably in spring 1995.

IOBC is asked to provide instructors and cover their travel expenses. GTZ will pay for 8 participants. WPRS can probably help but needs more specific information for its March Council meeting. In addition GTZ will provide a person to talk about registration and toxicology.

In short, financial support for 12 participants (not IOBC) is needed. IOBC offers help in searching funds. E.S. Delfoss will discuss and clarify with J. Waage and R. Wang, IIBC. It was agreed that US$ 2000-4000.- would be an appropriate amount for IOBC Global to support the course. Coordination between IIBC and IOBC will clarify the open questions.

4. Finances of IOBC

Present status

Status sheets of current balances and debits were distributed by the Treasurer. The financial situation of IOBC Global is comparable to the previous 4 years period.

Membership fees of Regional Sections and contributions to IOBC Global

Institutional and supporting members: A few members have dual membership of RS and Global. Global encourages RS membership where possible. Contribution was fixed $150.00 when Entomophaga was $65.00 returning $85.00 to Global. Now Entomophaga is $90.00 ($85.00 in Europe) which returns $60.00 to Global. The Council suggested to increase institutional memberships to $200.00 from 1995. For WPRS it will remain SFr. 150.- (US$ 100.- approx.) because Entomophaga subscribtion for WPRS members is payed directly by WPRS. It will be necessary that some RS increase their membership fees 1995. Till now all RS contribute US$ 150.- per year per institutional member to Global except WPRS which pays sFr. 150.- because of direct payments of Entomophaga to the publisher. WPRS institutional members pay minimum SFr. 3000.- (US$2000.-) fee per year. WPRS contributes sFr. 75.- (US$50.- approx.) for each supporting member to Global.

The Council agreed that beginning in 1995 all institutional members of

RS will pay $200.00 to IOBC Global except WPRS which contributes SFr. 150.00 (for reasons mentioned).

Contributions for supporting members will be US$ 50.- per year plus subscription rate of Entomophaga except for WPRS which pays directly to the publisher.

It is IOBC policy that RS can set membership fees at any level they choose but minimum $10.00 for each individual member (without Entomophaga) will be sent to Global IOBC. Individual members with Entomophaga will contribute the subscription of Entomophaga plus US$10.00 to Global.

Agents i.e. commercial bodies selling any kind of service not primarly related to biocontrol cannot be members of IOBC. Libraries should be supporting members.

Searching for new funds and funding Regional Sections:

IOBC Global Council should try to generate external funds to establish a pool of money for specific items and support activities of RS with low budgets. E.S. Delfosse will contact the Presidents of ATRS and NTRS and propose specific actions.

5. Relationship to international organizations

e.g. USDA, FAO, IIBC, CSIRO, EPPO, IITA etc. and governments.

Related objectives were discussed at the WPRS Executive Committee meeting in Madrid in January 1994. EC relationships have been around for several years and joint courses have been held. Some WPRS WG obtain funds from EC. D. Royle intends to write to Directorate-Generals of EC about IOBC. Similarly for EPPO. WPRS felt that the larger bodies (FAO, IIBC, OECD, WHO etc.) are better approached by Global IOBC. Opportunities will be explored after getting replies. Helping developing countries is an example that might impress FAO, Rockefeller Foundation, World Bank etc.

6. Interactions between Regional Sections and common activities of IOBC

WPRS recommendations from the General Assembly in Lisbon (see this Newsletter p. 9) recommend that Global IOBC should be a facilitator and WPRS with Global could produce a "White Paper" on positive aspects of biological control. It would promote the positive aspects of biological control to counter negative aspects of regulations that hamper biological control. WPRS has identified many positive case histories. Several position papers are developped by the Ent. Soc. of America and we could get biological control as one of these. E.S. Delfosse will follow up.

7. IOBC Global Newsletter

Printing and redistribution costs

NRS spent $816 last year to redistribute two issues to 272 members or >$3.00/person for the Global Newsletter plus ~$1.00 for other mailings. The figures given by NRS were calculated and based on 3 issues per year however, there were 2 only. Thus, the real total costs for redistribution amounted to approximately US$550.- in 1993.

Items raised by NRS and NTRS

Could the Newsletter be printed on lighter paper or sent directly to members by Global? No. Can the Newsletter be sent by second class mail? Yes; it's up to the RS. Can we have a translation to Spanish? All RS are free to translate the Newsletter in any language. Can it be placed on electronic Bulletin Board Systems? No.

Scope of the Newsletter

The decision to reduce the issues from 3 to 2 and produce a high-quality product was approved. Printing costs/Newsletter is $0.75/copy; mailing costs $1.50 overseas. Yearly costs for printing and mailing is US$ 4.- to 5.-/year for 2 issues. Bulk shipping to all but ATRS (with few members) saves a lot of money. Copies are also bulked to convenors of Global WG. Printing costs are covered by IOBC Global whereas mailing costs are payed by the Swiss Federal Research Station for Agronomy Zurich.

Wednesday
16 February (8:30-12:30)

8. Entomophaga

The Report of the Management Committee held in Avignon, France in April 1993 and presented in IOBC Newsletter 58 and the activity report 1993 presented by the editor-in-chief (M. Rabasse) were discussed.

Papers are preferred and encouraged to be in English, but English, French, German and Spanish are official IOBC languages. The proposal of the Management Committee to exclude German and Spanish in the future was not approved because it will discourage Latin American colleagues from participating. French abstracts are already provided for articles in English or German, but German or Spanish abstracts are not provided. It was suggested that English be kept as the primary language with abstracts in French or Spanish as appropriate. This was not approved due to the cost and potential time delays in publication (only 3% of papers were in Spanish; >80% in English in 1992). However, translation of abstracts into Spanish for local distribution by NTRS is encouraged.

Ad-hoc committee review of Entomophaga

Now there are two additional journals for biological control which compete directly with Entomophaga. Thus we need to re-examine Entomophaga, its competitive ability, quality and value.

NRS does not have a positive view

of Entomophaga and deeply feels concerned. Cost has risen to $90.00 which is considered too high. However, page costs are less than in comparable journals. Concerns about delay in publication and galley proofs are addressed by NRS members. The small copy run (900) could be handled by other publishers who would handle all aspects except for peer review.

A principle concern is the question that Entomophaga may not represent all IOBC interests and the name represents entomology only and excludes non-entomology disciplines. Subtitles don't make up for the fact that the primary name is exclusionary and not representative. The Council feels that the IOBC journal should be a much better financial success and wants a period of reappraisal in the broad sense. NTRS' main concern is in not having articles available in Spanish.

An independent committee including auditing would be the best way to conduct the reappraisal preferably with people who have experience with journals. The committee would report to IOBC Council for a decision at the 1996 General Assembly meeting. Views from IOBC worldwide should be solicited. A new contract with Lavoisier for three years should thus be renegotiated.

It was discussed that an ad-hoc review committee be established on 1 April 1994 with co-chairs from NRS and WPRS plus the Past President of IOBC Global to ensure liaison. The committee would choose one additional member each from NRS and WPRS (additional disciplines to entomology should be represented). The charge to the committee is to determine what an appropriate IOBC journal should be in the broad sense (including the possibility of a new journal, financial, editorial, publishing and potential transitional aspects) and deliver a final report to the President of IOBC Global by April 1996 for presentation to the General Assembly at the 1996 meeting. The committee will solicit views from all RS and IOBC members. Periodic written progress reports will be provided to IOBC Global Council.

A. Cameron and J. Coulson agreed to serve as NRS and Past-President respectively. D. Royle will inform Cameron and Coulson of the WPRS co-chair and a meeting will be arranged by Cameron and the WPRS representative as soon as possible.

Future amendments of Entomophaga

It was agreed to seek renewal of the contract with Lavoisier for three years pending the review by the ad-hoc committee. The Council decided to raise page charges 1995 for non-IOBC-members from $20.00 to $40.00 per page (except for manuscripts already received).

9. IOBC Conference

J.P. Aeschlimann summarized the history of the proposed conference: proposal in United States a few years ago; discussions at the International Conference of Entomology at Beijing, support from IUBS to hold an independent meeting (which shouldn't interfere with the Intern. Congress of Entomology (ICE). J.P. Aeschlimann discussed with Montpellier local governments and scientific groups which indicated support in principle (and possibly financial). Agropolis is the umbrella agency for agricultural research in Montpellier involved with funding, education and related subjects. Agropolis is funded by local governments and scientific bodies (INRA, CIRAD etc.). It doesn't conduct research but represents 2000 agricultural scientists in Montpellier. Biological control is a discipline of Agropolis through CILBA which has 10 members to date (including French groups, USDA and CSIRO) and was instrumental in obtaining and servicing land at Baillerguet for an international biological control complex (CSIRO already in new facilities; USDA building and INRA to come).

A supporting concept for the biological control conference was to involve disciplines other than entomology in biological control. IOBC shares this goal. The conference would start off as a unique event but may be continued if support for the meeting is strong.

IOBC Newsletter notices about an IOBC biological control conference were positive.

Agropolis has a series of "Entretiens" forums on particular topics. Advantages are that in 1996 most of the CILBA (Complexe International de Lutte Biologique Agropolis) facilities will be in place.

The Council agreed that a joint conference is held in Montpellier in the second week of September 1996 as part of "Entretiens d'Agropolis" with technology transfer as the major theme. The organizing committee will consist of scientists and locals. WPRS will discuss this recommendation during their Council meeting on 25-26 March in Gent. They are very likely to be interested in the IPM aspects of this and will take part in the scientific and technical aspects.

A meeting with CILBA was held in the afternoon where more technical and administrative details were discussed.

The theme of the Conference will be: Technology transfer in biological control: from research to practice (see announcement on page 6).

10. Other items

Most Council members would appreciate a better information about activities within IOBC RS. IOBC Global Newsletter can be used for spreading RS' information to all IOBC members. It was agreed to list all available bulletins from all RS. Delfosse asked that each RS send him a list of WG.

Updated promotional material. Delfosse will update one-page brochure and a flyer. A short article about duties of IOBC Global, RS etc. should be prepared.

E. S. Delfosse and F. Bigler

IOBC Conference 1996

Theme:Technology transfer in biological control: from research to practice

Time: September 8-11, 1996

Venue: Montpellier, France

After the Council's decision at the Beijing meeting 1992 to organize such a conference we received many positive (few negative) reactions. In the meantime, J.P. Aeschlimann explored together with representatives of the Technology Park "Agropolis", members of French research organizations and CILBA (Complexe International de Lutte Biologique Agropolis) opportunities (localities, financial support) for the conference. At its meeting in Montpellier, the Council of IOBC Global met with representatives of CILBA, ORSTOM, INRA, USDA and CSIRO to discuss common interests and traced future plans for the conference.

It was agreed that the main objectives will be: 1) to advance biological control methods to practice of IPM and sustainable agriculture, 2) show the importance and potential of biological control by presenting successful case studies , 3) strengthen cooperation between biocontrol scientists in public/private research and plant protection advisors, 4) investigate the main difficulties in implementing biological control methods in plant protection programmes and 5) bring plant pathologists, weed scientists and entomologists together and promote interactions and cooperation.

The Council has designated an organizing committee which will follow up and carry out the basic decisions. (Other details can be seen in the meeting minutes on page 5).

ENTOMOPHAGA

Reasons to subscribe Entomophaga

Founded in 1956, at the same time as the International Organization for Biological Control (IOBC), the scientific journal ENTOMPHAGA publishes original research articles dealing with the various aspects of biological control of pest organisms.

Papers accepted deal with the use of parasitoids, predators, and microorganisms to control populations of arthropods, nematodes, weeds, and pathogens considered as noxious to cultivated plants, in forests, recreation areas, nature reserves, to stored products, etc., or in terms of human and animal health.

Control methods involved encompass the whole range of classical (inoculative) releases to inundative liberations including augmentative techniques which may also be part of integrated pest management schemes.

Each volume of ENTOMOPHAGA comprises 4 issues of some 150 pages each per annum. Most articles are in English, but French, Spanish and German is also accepted. Manuscripts submitted are refereed by two reviewers, either members of the Editorial Board or internationally recognized experts. The journal is abstracted in the main literature data bases.

Subscription rates 1994 **for IOBC members:**

France:	FF	585.-
Europe:	US$ 80.-	
Others:	US$ 90.-	

With some 600 pages published per year, Entomophaga is one of the leading journals in biological control worldwide. IOBC members profit of a 40% reduced subscription rate. Subscribing Entomophaga means that you receive a lot for a reasonable price. IOBC would like to encourage you or your librarian to subscribe Entomophaga.

Reasons to publish your articles in Entomophaga

Entomophaga has long been the only scientific journal devoted exclusively to biological control of noxious organisms. With approximately 900 copies subscribed it has a considerable distribution worldwide and it is a much appreciated journal among biocontrol scientists.

Entomophaga represents the international biocontrol community. Europe, north America and the other geographical areas together contribute approximately one third each of all papers published. The management committee would like to encourage scientists from all parts of the world to make use of Entomophaga for the publication of their results. Short articles (max. 3 pages), opinion contributions and review articles are welcome and will strengthen attractiveness of the journal.

The title of the journal suggests a limited range of representation of the different disciplines of biological control. This is wrong, of course! All biocontrol subjects are equally welcome and those scientists working in areas, which make up a small percentage of the papers published are especially stimulated to submit more articles. A series of invited papers on microbial control of insects and weeds will be published in volume 39.

All submitted manuscripts are screened by the editor-in-chief and two reviewers who guarantee the quality of the papers.

Entomophaga is registered in all

important data bases and thus, worldwide access to its articles is assured.

IOBC members (either individual members or scientists of institutional and supporting members) can publish 8 pages free of charges per year. Flexibility will be shown for papers with several IOBC members as co-authors.

Finally, publication time will be shorter in future. Our aim is to speed up the procedures so that publication time will be less than nine months in average.

As scientific journal of IOBC, Entomophaga is **your** journal as well. By submitting your first quality papers you will strengthen IOBC.

F. Bigler
for management committee

Subscriptions 1994

Many IOBC members may have received a letter in November 1993 from Lavoisier, the publisher of Entomophaga, asking for renewal of the subscription. This letter was mailed without the consent of IOBC and this unusual procedure was chosen erronously by Lavoisier. Consider the letter invalid and renew your Entomophaga subscription 1994 as usual by paying the rate together with your IOBC membership fee. The sooner you renew the earlier you will receive Entomophaga.

F. Bigler

WORKING GROUPS

WG Fruit Flies of Economic Importance

Chairman: P. Liedo Fernandez, CIES, Apdo Postal 36, Tapachula Chiapas 30700 Mexico Fax 962 60'815.

Co-chairmen: M. Aluja, Inst. Ecol., A.C. Apdo Post. 63, Xalapa, Veracruz 91000, Mexico Fax. 281 86'910 J. Piedade-Guerreiro, Div. Luta Biol., Inst. Invest. Cient. Trop., Junquiera 14, 1300 Lisboa, Portugal, Fax 364 20 08.

"Fourth International Symposium on Fruit Flies of Economic Importance" Sand Key, Florida, USA, 5-10 June 1994. Contact J. Hendrichs, IAEA Laboratories, A-2444 Seibersdorf, Austria. Tel. 43- 222-2360, Fax 43-1234564; or P. Greany, USDA ARS, 1700 SW 23rd Drive Gainesville, FL 32608, USA. Fax 904 374-5781.

WG Ecology of Aphidophaga

Chairman: D. Horn, Dept. Entom., Ohio State Univ., 1735 Neil Ave., Colombus OH 43210-1220, USA.

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.

Reports of the 5th symposium held in Colle-sur-Loup, France, September 6-10, 1993 are available from the chairman. The contributions to the section "Augmentation and Enhancement of Aphidophagous Insects" will be published in "Agriculture, Ecosystems and environment". Papers of the sections "Behavioural Ecology of Aphidophagous Insects" are now published in the "European Journal of Entomology, Vol. 90, No. 4, 1993. Orders to Inst. Entomology, Czech. Acad. Sci. Branisovska 31, 37005 C. Budejovice, Czech Republic.

WG Quality Control of Mass-reared Arthropods

Chairman: N.C. Leppla, ASDA/APHIS, Fed. Bd., 6515 Belcrest Road, Hyattsville MD 20782 USA. Fax 301 436 6013.

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

Proceedings of the 7th meeting held in Rimini, Italy, in September 1993 will soon be available. Orders can be mailed to M. Benuzzi.

A European Union (EU) sponsored QC meeting will be organized in Evora, Portugal, September 17-20, 1994. More than 20 participants from 10 EU and 3 non-EU countries cooperate in this project.

The next full meeting of the IOBC WG will be held in San Diego, California, in autumn 1995.

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

1. The WG is organizing the 4th International Symposium in Cairo, Egypt, October 3-7, 1994, under the sponsorship of the Ministry of Agriculture, Egypt and IOBC. The publication of papers in "Les Colloques de l'I.N.R.A." is planned. For more information contact S.A. Hassan or E. Wajnberg.

A book with the title: "Biological control with egg parasitoids" is being prepared under the leadership of the two chairmen. Content: 1. Systematics of Trichogrammatidae with Emphasis on *Trichogramma*.

2. World-Wide use of *Trichogramma* for Biological Control on Different Crops: A Survey. 3. Strategies to Select *Trichogramma* Egg Parasitoid Species for Use in Biological Control. 4. Rearing of *Trichogramma* and Other Egg Parasitoids on Artificial Diet. 5. Quality Control in *Trichogramma* production. 6. Methods of *Trichogramma* Release for Biological Control. 7. Biological Control with Egg Parasitoids Other than *Trichogramma*. 8. Habitat Location by *Trichogramma*. 9. Host Recognition and Acceptance by *Trichogramma*. 10. Physiological Interactions between Egg Parasitoids and their Hosts. 11. Overwintering Strategy of Egg Parasitoids. 12. Intra-Population Genetic Variation in *Trichogramma*.

The book will be published by CAB International and released in September 1994.

Provisional orders to E. Wajnberg.

Trichogramma News Nr. 7 were released in December 1993 and are still available from S.A. Hassan.

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 1993 Newsletter will be available in April 1994. Contact N.S. Talekar for a copy.

The 2nd WG meeting is scheduled for December 1995 in Nagoya, Japan during the 3rd Intern. Workshop on the Management of Diamondback Moth and other Crucifer Pests.

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.

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

WG Chromolanea odorata

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

This WG has been founded at the 3rd intern. workshop on biological control and management of *C. odorata* in Abidjan, Ivory Coast, November 1993.

We are looking forward to activities and the success of this WG and the fruitful cooperation between members of different continents!

Background history to the formation of the new WG

(R. Muniappan)

In 1982, it was brought to my attention that *Chromolaena odorata* has become a serious problem in the pastures of the Island - Rota. At the same time we found it to become a dominant weed on roadsides and vacant lands on Guam. In 1983, the Tropical and Subtropical Agricultural Research Program of the U.S. Department of Agriculture funded a project for biological control of this weed on Guam. We obtained the natural enemy *Pareuchates pseudoinsulata* from Trinidad and India and established it on Guam in 1985. Eventually it was introduced and established in the Northern Mariana Islands of Rota, Tinian and Saipan. Based on this success story the First International Workshop on Biological Control of *Chromolaena odorata* was held in Bangkok, Thailand in 1988 hosted by Dr. B. Napompeth. There were 6 countries represented in this workshop. As an outcome of this workshop, the proceedings were published and *Chromolaena odorata* newsletters were initiated with support from College of Agriculture and Life Sciences, University of Guam. BIOTROP in Bogor, Indonesia hosted the Second International Workshop on Biological Control of *Chromolaena odorata* in 1991. There were 13 countries represented in this workshop. Also, an International Network on *Chromolaena* was initiated with headquarters in Guam. Australian Centre for International Agricultural Research provided support for the publication of subsequent newsletters. The proceedings of this second workshop was published by BIOTROP and financed by ORSTOM, France.

In 1993, IDEFOR of Cote d'Ivoire and FAO Regional Office at Ghana hosted the Third International Workshop on Biological Control and Management of *Chromolaena odorata* at Abidjan and 20 countries were represented. Proceedings of this third workshop is being edited. *Chromolaena* IOBC Global Working Group was formed during this workshop.

Chromolaena Newsletters are published periodically. Ask the Chairman for a copy.

WG Training, Information, Education (TIE)

Co-chairman: R. Wang, CABI/IIBC, Silwood Park, Buckhurst Road, Ascot, Berkshire SL5 7TA UK. FAX: 44 344 875 007.

A second co-chairman will be designated within the next weeks.

This new WG was approved at the Council meeting in Montpellier, February 15-16, 1994.

We hope that many biocontrol scientists will participate in this WG and thus contribute to the dissemination of information on biological control methods. We are looking forward to the activities of the WG and would like to encourage all of you to become more involved in transferring information of biocontrol from science to the public.

REGIONAL SECTIONS

WPRS West Palaearctic 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

Recommendations of the VIIth General Assembly of IOBC/WPRS, Lisbon (Portugal), 19-20 October 1993

(These recommendations are subject to approval by WPRS Council)

The VIIth General Assembly of the West Palaearctic Regional Section of the IOBC, held at Lisbon, Portugal from 19-20 October 1993 at the invitation of IPPAA (Instituto de Protecçao da Produçao Agro-Alimentar) and CNPPA (Centro Nacional de Protecçao da Porduçao Agricola), having reviewed and approved the work carried out by the Regional Section during the period 1989-1993, states or recommends that:

1. Constructive interactions between IOBC/WPRS and the IOBC Global body have been established. However, there are some problems of overlapping activities and, for example, common working or study groups might consider combining or else establishing more active relations. The global body should concentrate more on being a co-ordinator and organiser of meetings, providing broad platforms for scientific discussion.

2. In a decade where biocontrol, IPM and IP become "the alternatives" for future agriculture, IOBC/WPRS should try to establish better contact, for example through meetings with representatives of EC, FAO, EPPO and OECD in order to make the work of IOBC better known.

3. Urgent consideration should be given to organising a workshop with limited participation in which key members of EC, EPPO, OECD and other organisations are supplied with finely tuned information on IOBC/WPRS activities. Ways need to be explored as to how the interests of IOBC/WPRS and these organisations might be related. Good case studies should be selected for this forum.

4. The press and general public are eager for good information on environmental issues. IOBC/WPRS should seek more opportunity to "go public", in order to explain the nature of biological and integrated control, its achievements (using good case studies) and the important role that it can play in future agriculture. Also, there should be more communication to Ministries of Agriculture and Environment, which have a particular interest in reducing pesticide usage.

5. IOBC/WPRS could play an important role in assisting the development of proper registration criteria for biocontrol agents. There needs to be a form of registration appropriate to biocontrol agents. Delay in this initiative could result in biocontrol agents being registered by the EC using similar criteria to chemical pesticides.

6. IOBC Global and WPRS could jointly produce a "white paper" on the positive aspects of biocontrol. Environmental groups in the USA and Europe are promoting a negative attitude towards biocontrol. Some governments consider that the importation of natural enemies presents the same environmental risks as the introduction of genetically modified organisms.

7. There is some concern among members about the procedures being taken by the IOBC/WPRS Guidelines Commission to establish and validate IOBC/WPRS guidelines for integrated production. Council should examine carefully the positive apsects, (for example, IP-supporting and IOBC-promoting), of IP labels and guidelines against the possible risk of IOBC/WPRS sacrificing scientific integrity by proceeding too far down this route. IOBC/WPRS should ensure that the high standards embodied within guidelines are reflected in the protocols for implementation.

8. IOBC/WPRS Council should examine and rectify any tendency to exclude genuinely active participants from meetings of the Working Group on Integrated Farming Systems and any other working or study group in future.

9. Efforts should be made to encourage more commercial companies to become supporting members of IOBC/WPRS.

10. IOBC/WPRS Council should establish interactions with IOBC working groups within eastern Europe, for example by holding meetings of appropriate WPRS working and study groups in eastern Europe and by occasional joint meetings of the WPRS and EPRS Executive Committees.

11. Activities of IOBC/WPRS, for example of its working and study groups, should continue to be advertised and explained in the IOBC/WPRS newsletter PROFILE.

12. Recent changes in the layout of the cover of IOBC/WPRS Bulletins are an improvement. However, the WPRS Promotion and Publications Commissions should reconsider the choice of colour and the need for a clear IOBC/WPRS identification, for example, a suitable logo, which is

still missing.

13. Working and study group convenors should be asked to identify key individuals within their groups in order that a list of active IOBC/WPRS participants with their areas of specialisms can be assembled and published.

14.A change in size and focus of some working groups should be considered. For example, the Integrated Plant Protection in Orchards Group might be divided into two groups: Pome and Stone Fruits, and the Integrated Control in Cereals Group should modify its goal to include more ecology and pathology.

15. Each working and study group should give more attention to plant pathology and weed science. The establishment of a study group on integrated control of weeds needs considering carefully in the light of the European Weed Research Society's involvement in this area.

16. Collaboration between Working Groups should be encouraged, for example the Mediterranean subgroup of the Protected Crops Group with the Field Vegetables Group and the Protected Crops Group with the Breeding Group.

17. IOBC/WPRS should hold a workshop for convenors every 2 years to allow them to exchange ideas, discuss policy, integration of activities etc.

18. Consideration needs to be given to establishing a Study Group on control of nematodes.

19. Consideration should be given to establishing a new Study Group to address the role of modelling in integrated crop protection, with fresh objectives to those of the original IOBC/WPRS group which was disbanded in 1989.

20. The Publication Commission should investigate options for waiving page charges to authors of those papers submitted to *Entomophaga* which report results of working group activities.

21. The following topics were suggested for incorporation into group activities: IPM in ornamentals, standardisation for quality control of biocontrol agents, biological control of sclerotial diseases in vegetables, biological control of root diseases in artificial growing conditions, and biological control of mildew.

22. Although co-operation towards international courses is taking place between individual members and NATURA, more attention should be paid to other possibilities, for example, co-operation with the EC in further development of ETIC (European Training in Integrated Crop Protection).

23. There should be a clearer declaration of objectives for the next General Assembly.

Version: January 31, 1994

EPRS East Palaearctic 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.

NRS Nearctic Regional Section

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

Secretary-Treasurer: J.M. Nechols, Department of Entomology, Kansas State University, Manhatten, KS 66505. FAX: 913 532 62 32

Corresponding Secretary: R. van Driesche, Department of Entomology, University of Massachusets, Amherst MA 01003. FAX: 413 545 2115

SEARS South East Asian Regional Section

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

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

NTRS Neotropical Regional Section

A new NTRS Executive Committee was elected for 1994-98. We congratulate the members of the new committee and wish them pleasure and success.

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

1st Vice-President: Evoneo Berti Filho, Universidede de Sao Paulo, (ESALQ), Departamento de Entomologia, Caixa Postal 9, 13418-900 Piracicaba, SP, Brasil. FAX: 55-194 33 0562

2nd Vice-President: Ronald Cave, Depto de Proteccion Vegetal, Escuela Agricola Panamerciana "El Zamorano", Apartado 93, Tegucigalpa, Honduras. FAX: 504 76 6242

3rd Vice-President: Renato Ripa, INIA, Centro Nacional de Entomologia "La Cruz", Chorrillos 86, Casilla 3, La Cruz, Chile. FAX: 56-33 31 0666

Secretary: Miguel C. Zapater, Facultad de Agronomia, Universidad de Buenos Aires, 1417 Buenos Aires, Argentina. FAX: 54-1 743 6461

Treasurer: Vanda Paes Bueno, Departamento de Fitossanidade, Escola Superior de Agricultura de Lavras, Caixa Postal 37, CEP 37200-000. Lavras, Minas Gerais, Brasil. FAX: 55-35 829 1100

The resigning Executive Committee has done an excellent job during the last 4 years and we would like to express our thanks to all of them.

IOBC/NTRS Bulletin 6 has been released in October 1993 and is still available from the Secretary of NTRS.

ATRS Afrotropical Regional Section

President: J. Boussienguet, Prog. Nat. Lutte Biol., B.P. 1886, Univ. O. Bongo, Libreville, Gabon. FAX: 241 73 13 30

Secretary: N.T.C. Echendu, Nat. Root Crops Res. Inst., Biocontrol, Umudike, Umuhia, Nigeria.

Report of the General Assembly

The first General Assembly of the Afro-Tropical Regional Section of IOBC took place at the African Development Bank (ADB) at Abidjan (Ivory Coast) on Friday, November 19, 1993. The major points are briefly reported here.

- The President presented the opening address and gave the floor to J.-P. AESCHLIMANN, past Secretary-General of IOBC for a brief presentation of the Gobal IOBC.
- The President announced that IOBC/ATRS has now 28 individual members residing in 21 countries and 11 institutional members.
- Because of the absence of the Treasurer, it was not possible to report precisely on the financial situation. Given the present rate of membership fees, one of the major problems is the shortage of funds. The General Assembly recommended the Executive Committee to evaluate the situation, to explore the possibilities to improve the financial resources of ATRS and to submit a plan of action to be discussed at the next General Assembly.
- Referring to the identification of activities and research programmes of common interest in the Afro-tropical Region,
- the President reminded the proposal of the Executive Committee to focus on *Chromolaena odorata*, *Zonocerus variegatus* Stem borers of maize, sorghum and sugar cane and on the establishment of a regular Newsletter.
- because of the inter-relationships between *Zonocerus* and *Chromolaena* it has been decided to set up a Regional Working Group on Biological Control of both *Chromoleana* and *Zonocerus*, with close linkage to the Working Group on Biological Control of *Chromolaena odorata*.

The General Assembly charged the President to make the appropriate arrangements for the creation of this Working Group.

Dr. Zimmermann (Plant Protection Research Institute, Pretoria) has been charged by the General Assembly to explore the possibility of the edition of an IOBC/ATRS-Newsletter.

J. Boussinguet

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 don't tell them. You may share information by sending any kind of **NEWS** to me.

F. Bigler, Editor

Reports on Bio-Control Activities

Biological Control Information Needs and Resources

Biological control information and documentation needs and resources will be the subject of discussions in the United States organized by the U.S. Department of Agriculture (USDA). The first in a series of workshops on the subject is scheduled to be held at Beltsville, Maryland, 5-6 May 1994, and will focus on the USDA database "Releases of Beneficial Organisms in the United States and Territories" (ROBO). This computerized database, which first came on-line in 1985, was discussed by J.R. Coulson in the journal Crop Protection (vol. 11, pp. 195-205) in 1992, and IOBC Institutional Members have received copies of the first two publications from this database. The Beltsville workshop is being organized by USDA's National Biological Control Institute (NBCI) of the Animal and Plant Health Inspection Service (APHIS), and the Biological Control Documentation Center (BCDC) and Germplasm Resource Information Network (GRIN) of USDA's Agricultural Research Service (ARS). The purpose of the workshop is to make the ROBO database more efficient, useful, and "userfriendly", and to take advantage of advances in computer technology since origination of the database in 1985. About 20 contributors to and users of the ROBO database will participate in this first workshop. Recommendations developed at the workshop will form the basis for broader discussion and debate. Future workshops will focus on emerging issues identified from the first workshop and other sources, to include the needs and

mechanisms for development, integration, and delivery of other databases of potential interest to the biological control community worldwide.

Contributed by M.J. Oraza (NBCI) and J.R. Coulson (BCDC).

Geocoris ochropterus as biocontrol agent of tea pests

In India detailed bioecological reports on Geocorines are confined to the commonly available species *G. jucundus* Fieb. and *G. ochropterus* Fieb.

In a recent study, *Geocoris ochropterus* was observed in prey-predator complex on tea bushes and surrounding weeds. In Darjeeling tea-plantations, this species was available during summer season on the weed, *Polygonum* spp.

Tea aphids (*T. aurantii*) were mostly preyed by early instars and adults of *G. ochropterus*, whereas thrips (*S. dorsalis*) were largely preyed by the advanced instars of the species. Predation of aphids and thrips gradually increased up to the 3rd instar of the entomophage. Aphids as food, supported a stable increase in body weight in different developmental stages of the predator however, thrips, and more particularly the red spider mites (*O. coffeae*) were unable to support complete metamorphosis. Field performance of the predator, in experimental gardens, when caged with aphid-infested tea twigs, was promising.

In IPM, since use of rational amount of pesticide is recommended, the present study also considered tolerance of *G. ochropterus* to two commonly used pesticides (Endosulfan 35% EC and Dicofol 18.5% ECD) in tea. Following IOBC/WPRS guidelines it was found that 3rd instar nymphs and adults of *G. ochropterus* were safe at field recommended dosages. However, at higher doses, Thiodan was more toxic with a lower LD_{50} value than that of Kelthane.

Considering *G. ochropterus* as a potential predator, successful laboratory rearing was carried out using cold-preserved ant pupae (*Oecophylla smaragdina*) and twigs of a common weed, *Leucus linifolia*. The females mated every fortnight and were found to lay a number of eggs which was closely comparable to the number of eggs laid by females in constant male company. This finding may help in economising the rearing cost for males in large scale rearing programme in insectary. Various combinations of diet showed that animal component in a diet was indispensable for optimal growth and reproductive performance of the predator.

A. Mukhopadhyay & S. Sannigrahi, Dept. of Zoology, North Bengal University, Siliguri-734 430, Darjeeling (W.B.) / India.

Biological control in African forestry - a new regional initiative

Exotic conifer plantations, which form the backbone of the timber and fuelwood industries in East and Southern Africa, are now at risk from 3 introduced aphid species which have already inflicted estimated economic losses of more than £60 million.

Although the most serious of these, the cypress aphid, *Cinara cupressi*, was only discovered in 1986, its rapid spread over a wide host range threatens not only the forestry sector but indigenous cypresses and junipers, commonly used for hedging and as ornamentals. Colonies feed in twigs and branches in the crown, leading to dieback and eventual death of the tree. Only young seedlings are killed outright by the other two pest species, the pine woolly aphid, *Pineus boerneri*, and the pine needle aphid, *Eulachnus rileyi*, but needle drop and yield loss can be considerable. Chemical control is both economically and environmentally unacceptable, while clearfelling or burning of infected plots has failed to contain all 3 pests.

Since 1991 the International Institute of Biological Control, (IIBC) with funding from ODA, CIDA and FAO, has been working with scientists in ten African countries on potential biological agents as the only feasible immediate control strategy. Several host-specific aphidiine parasitoids of the genus *Pauesia* have now been discovered on cypress aphids in Europe and extensive laboratory testing has indicated their suitability for classical introduction. The most promising, *Pauesia juniperorum*, has been successfully reared and screened and the first shipment recently sent to IIBC's Kenya station for work on mass production and final quarantine testing. For the pine woolly aphid, the predatory larvae of a chamaemyiid fly, *Leucopis tapiae*, appear to be specific to this host and other closely related species. Ecological research in Britain is focussing on rearing methods for host and enemy. Progess is rarely smooth in biocontrol and while the predatory flies have been reared easily, their aphid host has not proved so amenable, mainly due to the difficulty of keeping the trees growing well in CT rooms over the 2-3 month lifecycle of this species. A European parasitoid, *Praon bicolor*, has been identified as a potential agent for the pine needle aphid.

One of the problems with these pests of worldwide distribution is pinpointing their geographical origin: the cypress aphid was first considered native to Europe, but recent taxonomic work suggests it may be more closely related to New World species, possibly North American. IIBC is now collaborating with the United States Forest Service in exploratory surveys. As with the other pests species, both cypress aphid and its enemies are infrequently encountered in their European and North American ranges.

probably due to efficient regulation by a complex of generalist and specialist enemies.

Perhaps the most innovative aspect of this biocontrol project is the combination of basic research with intensive training at all levels from entomologists to forest monitors. Malawian entomologists have been bench-trained at IIBC UK and Kenya and are currently running field surveys of aphid damage, and rearing material. Other participating countries will be helped with laboratory equipment, motorbikes and other basic items to set up their own enemy rearing facilities and to monitor both pests and agents, as part of the project aim to predict the impact of eventual releases. 25 representatives from Tanzania, Uganda, Rwanda, Burundi, Ethiopia, South Africa, Kenya, Mozambique, Zambia and Zimbabwe have now received training in Kenya in biological control principles and release and survey methods. The long-term goal is to build a regional network of African specialists with the expertise to handle biocontrol programmes for any forest pest. Raising awareness biocontrol and IPM amongst all those employed in the forestry sector forms the message behind this exciting venture.

For more information contact: Sean Murphy, Project Leader, Tropical Forestry Research Programme, IIBC, Silwood Park, Buckhurst Road, Ascot, Berks. SL5 7TA, UK. Gill Allard, Regional Coordinator, TFRP, IIBC Kenya, PO Box 76520, Nairobi, Kenya.

Ecogen launches insecticidal nematode program

Ecogen Inc., a leader in agricultural biotechnology specializing in biological pest control, has initiated a broad-based international research effort to develop insecticidal nematade products. Dr. Gaugler, as Director of Nematode Research, coordinates the overall program. Much of the research program, particularly in the areas of nematode discovery, development, and formulation is based at Ecogen-Europe, a subsidiary of Ecogen Inc. located in a new, state-of-the-art research facility near Perugia, Italy. Dr. Richard Daoust is the General Manager of this laboratory. Ecogen-B10 Germany was recently formed near Kiel to address issues of nematode liquid fermentation; Dr. Ralf Ehlers is providing leadership for this team of researchers. Research on methods development and quality control is being conducted at Ecogen's international headquarters in Langhorne, Pennsylvania. Process research and development is underway at Ecogen's nematode manufacturing plant, Ecogen-Australia, located in Hobart, Tasmania and administered by Dr. Dennis Thiele. Nematode storage research has been contracted to a team led by Dr. Robin Bedding of CSIRO in Canberra, Australia. In addition, Ecogen is supporting research on more basic aspects of heterorhabditid and steinernematid nematodes at Rutgers University in the U.S. (Dr.Gaugler), the Volcani Center in Israel (Dr. Itamar Glazer), and Christian Albrechts University in Germany (Dr. Ehlers).

According to Dr. Bruce Carlton, Executive Vice President of Research and Development, "Ecogen sees insecticidal nematodes becoming a major factor in the control of an array of insect pests, especially those that spend some part of their life cycle in the soil. We believe nematodes will provide a cost-effective and environmentally sound way to control these insects. With the distinguished research team we have assembled, we believe that Ecogen is on its way to becoming a major force in providing insecticidal nematode products for agricultural and related markets."

Ecogen is presently marketing four nematode species produced at EcogenAustralia. In addition to nematodes, Ecogen has developed and marketed a number of novel *Bt* and pheromone bioinsecticide products, and is also developing biofungicide products.

R. Gaugler, 2055 Cabot Boulevard West, Langhorn, PA 19074-1810, FAX: 215/757-2956

Association of Natural Bio-control Producers (ANBP)

What is the ANBP?

The ANBP was created to provide a forum to address issues facing the natural enemy production industry and to facilitate communication among all of us who wish to keep informed about the industry.

Quality, integrity, education and growth are the watch words of the Association of Natural Bio-control Producers (ANBP), a non-profit corporation made up of natural enemy producers, distributors, applicators, industry supporters, academics and government representatives. Our goals are to strengthen the natural enemy production industry and to promote research and education on the use of natural enemies.

Quality Assurance

The development of a certification program for the natural enemies industry is one of the principal objectives of the ANBP, with the support of NBCI, APHIS and EPA. To this end, the association has completed preliminary quality assurance guidelines and Critical Control Points (CCP) for producers, distributors and applicators (end-users). Currently we are developing standardized sampling techniques to ensure product quality and consistency. Members of ANBP are expected to adhere to a code of ethics which encourages the highest standards of professionalism.

Regulation

The ANBP supports the establishment of regulations of the natural enemy production industry, distinct from regulations of the industries of chemical pesticides and genetically engineered organisms where toxicity and environmental risk are

more significant.

The licensing of producers and of biological control practitioners will improve the efficacy of applications of natural enemies in agriculture. It should, however, be separate from traditional pesticide licensing and training programs.

Education

Through our newsletter and annual meeting, the ANBP seeks to provide information on the availability and use of natural enemies. Providing reliable data on the use of natural enemies in agricultural production is the key to the expansion of biological control.

Research

For many years, the focus of entomological research has been the efficacy of chemical pesticides in pest management. The time has come to direct research funds towards the optimization of the use of natural enemies in agricultural systems. Research is needed to find more effective natural enemies, to develop efficient production systems for commercial insectaries and to determine the practically of natural enemies through large scale field trials.

Members of ANBP are working with government agencies to refine techniques of mass release of natural enemies as part of integrated pest management and to improve delivery systems of natural enemies.

For more information contact: Maclay Burt, 10202 Cowan Heights Drive, Santa Ana, California 92705

Requests and Offers

Citrus Rust Mite

The Biological Control Institute of the Citrus Marketing Board of Israel, is involved in a BC project of the citrus rust mite, *Phyllocoptruta oleivora*. We will appreciate any information or cooperation concerning the introduction of predatory mites, for the control of the pest into Israel.

Dr. Y. Roessler, Bio-Control Inst., CMBI, P.O. Box 80, Bet-Dagan, Israel 50250, Phone 972-3-9683817, Fax: 972-3-9683838.

BOOKS

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Copies of the Proceedings were misplaced by the publisher soon after publication of the volume in 1990. Two-thousand copies have now been located in Italy, and have been moved to the USDA-ARS European Biological Control Laboratory in Montpellier, France. Copies are now available at no cost by contacting: (from countries other than U.S.A.): Dr. Lloyd Knutson, Director, European Biological Control Laboratory, USDA-ARS, B.P. 4168 - Agropolis II, 34092 Montpellier Cedex 5, France. FAX: 33 670 456 20.

CALENDAR

May 1994.

IOBC/EPRS Workshop on the development and implementation of Integrated Pest Management Systems in technical crops. Chernovtsy, Ukraine. Contact: T. Baiku, FAX 40-1 633 5361.

May 2-5, 1994.

Vth International Symposium of Neuropterology Cairo-Egypt. Contact: Dr. S.A. el Arnaouty, c/ o ORSTOM, B.O. 26 Giza code 12211, Cairo, Egypt. Tel./Fax. (202) 703'948.

May 3-6, 1994.

International symposium on crop protection, University of Gent, Belgium. Contact: L. Tirry, Agricultural and Applied Biological Sciences, Coupure links 653, B-9000 Gent (Belgium). Tel. 32 (0) 9 264.61.52; Fax. 32 (0) 9 264 62 39 or 264 62 49.

May 24-28, 1994.

7th European Workshop on "Insect Parasitoids". Contact: T. Hofsvang, Norwegian Plant Protection Institute, Dep. of Entomology and Nematology, Fellesbygget, N-1432 As, Norway. Fax: 47 64 94 92 26

July 13 - August 10, 1994.

International Course in Nematology. University of Davis, CA, USA. Contact: Alice Warrick, International Training and Education Center, University Extension, University of California, Davis, CA 95616-8727. Tel: (916) 757-8686; FAX: (916) 757-8676.

July 18-22, 1994.

V Congreso Internacional de Manejo Integrado de Plagas. San José, Costa Rica. Contact: Area de Fitoproteccion, Catie, Turrialba, Costa Rica. FAX: 506 56 0606 or 56 1533.

August 23-26, 1994.

IOBC/EPRS Workshop on biologically active components in integrated Pest Management Systems. Gödöllö, Hungary. Contact: V. Burov, St. Petersburg. FAX: 812 476 52 00.

August 28 - September 2, 1994.

VIth International Colloquium on Invertebrate Pathology and Microbial Control and Second International Conference on *Bacillus thuringiensis* in conjunction with the 27th Annual Meeting of the Society for Invertebrate Pathology. Contact: Pr. M. Bergoin, Laboratoire de Pathologie Comparée, Université Montpellier II, Pl. E. Bataillon, CC 101, 34095 Montpellier Cedex 5. FAX: (33) 67 14 30 31.

August 29 - September 2, 1994.

5th European Congress of Entomology. University of York, UK. Conference Secretariat: IFAB Communications, University of York, York YO1 5DD, UK. FAX: 0904 432 917.

September 5-9, 1994.

Environmental Biotic Factors in Integrated Plant Disease Control. 3rd Conference of the European Foundation for Plant Pathology. Scientific Centre of the Polish Academy of Sciences, Pozna . Contact: Z. Weber, Dept. of Plant Pathology, University of Agriculture, ul. Dabrowskiego

159, 60-594 Pozna , Poland.

September 12-16, 1994.

IOBC/EPRS Workshop on Integrated Pest Management Systems in Forestry. Warsaw, Poland. Contact: G. Malinovsky, Warsaw. FAX: 482 22 49 35

September 18-21, 1994.

10th International Entomophagous Insects Workshop, Whistler, British Columbia, Canada. Contact: Conference Services, Simon Fraser University, Burnaby, B.C. Canada V5A 1S6. Tel. (604) 291'4910

September 21-23, 1994.

The Ecology of Agricultural Pests: Biochemical Approaches. University of Wales College of Cardiff. Contact: Nigel Pompeus, Advanced Professional Development Centre, UWCC, 51 Park Place, Cardiff, CF1 3AT, UK. FAX: 44 0222 874116.

8. - 11. September 1996 Montpellier, France

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

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

Contact person for scientific committee: F. Bigler (address page 1).

October 1994.

IOBC/EPRS Workshop on production and use of entomophagous insects against pests in agriculture. Varna, Bulgaria. Contact: R. Radeva, Sophia. FAX: 3592 51 06 39.

October 2-6, 1994.

International Conference on modern agriculture and the environment, Rehovot, Israel. Contact: Conference Secretariat, "Agriculture and Environment Conference", Peltours-Te'um Congress Organisers, P.O. Box 8388, Jerusalem 91082, Israel. Tel. 972/ 2 617 402; Fax. 972/ 2 637 572.

October 3-7, 1994.

Assessment of the biology and management strategies of *Bemisia tabaci* from an international perspective". The workshop will be held at the Shoresh Hotel and Conference Center, Jerusalem. Contact: D. Gerling, Department of Zoology, Tel Aviv University, Ramat Aviv, 69978, Israel. Tel. 972 3 6408611, Fax. 972 3 6409404, or R. Mayer, USDA ARS Horticultural Research Lab, 2120 Camden Rd., Orlando, FL 32803, USA, Tel. 407 897 7304, FAX. 407 897 7309.

October 4-12, 1994.

Modern Crop Protection Developments and Perspectives. International Post-Graduate Course. International Taining Centre Wageningen Agricultural University. Information: International Training Centre (PHLO), Wageningen Agricultural University, P.O. Box 8130, 6700 EW Wageningen, The Netherlands, Tel. 31-8370-84092/3, Fax: 31-8370-84763.

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/ 365'78'50; Fax. 31-70/ 361'48'46;

December 1995.

Third International Workshop on *Plutella*, Japan. Contact: N.S. Talekar, AVRDC, P.O. Box 42, Shanhua, Taiwan 74199, Taiwan. FAX: 06 583 0009

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. Tel. 39/ 55'500'06'31; Fax. 39/ 55'500'19'12.

New IOBC-Logo?

What do you think about this logo? Please send your comments to F. Bigler.

Membership fees 1994

Did you already pay your IOBC membership fee 1994? If not, do so at your earliest convenience. IOBC depends on your subscriptions for its activities. Please pay promptly.

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 1994 issue of IOBC Newsletter is **September 15, 1994.** Send items to F. Bigler (address on page 1).

Editor:
F. Bigler, Secretary-General IOBC Global