sip

NEWSLETTER

society for invertebrate pathology

VOLUME 32, NUMBER 3
December, 1999

32nd ANNUAL MEETING AT THE UNIVERSITY OF CALIFORNIA, IRVINE ATTRACTS OVER 300 PARTICIPANTS

The 32nd Annual Meeting of the Society was held at the University of California, Irvine, from August 22-27, 1999. The primary venue for the meeting was the Beckman Center of the National Academy of Sciences, located at the edge of the UC Irvine campus. Taking advantage of what turned out to be exceptionally good weather, the social events took place at different locations in southern California.

TABLE OF CONTENTS

Deadline for the next Newsletter is January 30, 2000.

Don't Forget to Pay Your Dues for 2000

A **Membership Renewal Envelope** is included with this Newsletter. To ensure that your membership remains current and that you continue receiving the Newsletter, please return your notice with payment immediately. Please read the two questions on the inside flap of the renewal envelope and check the boxes 1) if you wish to receive a hard copy of the Newsletter. (The Newsletter is now available at our website "www.sipweb.org"; check it out!), 2) if you wish your name to be included in an SIP Experts Database, which will also be made available on our website. If the Renewal Membership is missing, or if you have misplaced it, please contact the SIP Executive Secretary. The address can be found on the next page.

Meeting attendance totaled 320 people, including 287 scientists and 33 companions. Forty-four students were in attendance, and most of these presented papers or posters.

Welcome to the campus. The Society was welcomed to the campus by James L. Mc Gaugh, Research Professor and Director of the Institute of Psychobiology. This was a special welcome for us because Professor Mc Gaugh was hired at UC Irvine by Edward Steinhaus, the founding president of the SIP. Aside from his formal welcome, a highlight of the meeting was Professor Mc Gaugh's review of the development of UC Irvine, and the key role that Ed played in bringing the campus to its current prominence. During his presentation, we were very fortunate to have Mrs. Mabry Steinhaus in attendance. Mabry so enjoyed the welcome and plenary session

SIP Office

Please send all correspondence, inquiries, membership applications and changes of address to our Executive Secretary, Margaret (Peg) Rotstein at:

Society for Invertebrate Pathology
4300 NW 23rd Avenue, Suite 78
PO Box 147050
Gainesville, FL 32614-7050
USA

Toll Free Tel: 1-888-486-1505
Toll Free Fax: 1-888-684-4682
Fax: 352-335-0539
E-mail: sip@sipweb.org
Homepage: "http://www.sipweb.org"

Note: Toll Free numbers for Canada & U.S.A. only

that she joined us at the Awards Banquet on Thursday evening.

Scientific program. The scientific program began with an excellent Founders' Lecture presented by Professor Harry Kaya of the University of California, Davis, honoring the contributions of Professor Yoshinori "Joe" Tanada, Professor Emeritus at the University of California, Berkeley. Fortunately, Professor Tanada and his wife were able to attend the meeting.

During the course of the meeting, over 250 papers and posters were presented, with almost equal numbers of each. There were ten symposia, 4 dealing with bacteria, 2 with viruses, 2 with microbial control, and 1 each with fungi and microsporidia. The bulk of the program dealt with bacterial, fungal, and viral pathogens of insects, but there were also a variety of interesting papers and posters on microsporidia, nematodes, and diseases of non-insect invertebrates. In addition to these formal sessions, there were additional less formal presentations and lively discussions at several of the divisional workshops.

This year the registration and abstract booklet were handled by our Executive Secretary, Ms. Margaret

SIP NEWSLETTER
Published by
the Society for Invertebrate Pathology
(SIP Homepage: "http://www.sipweb.org")

Dr. Mark S. Goettel
Newsletter Editor
Lethbridge Research Centre
Agriculture & Agri-Food Canada
P.O. Box 3000, 5403 1st Avenue South,
Lethbridge, AB, CANADA
Tel:403-317-2264; Fax: 403-382-3156
Internet: Goettel@em.agr.ca

Dr. James Becnel
Assistant Newsletter Editor
USDA/ARS Center for Medical, Agricultural and Veterinary Entomology
PO Box 14565,
Gainesville, FL 32604 USA
Tel: 352-374-5961; Fax: 352-374-5922
Internet: jbecnel@gainesville.usda.ufl.edu

Submissions to the following sections are solicited:

Forum: More substantial articles on current issues of concern, limited to approximately five pages.
Letters to the Editor: Issues of concern can be brought to light here.
Microbial Control News: Information on new discoveries, "News Releases", formation of companies etc. pertaining to microbial control.

We also depend on our members to supply us with information for the following sections: **Obituaries, Member News** (Retirements, Awards, Promotions), **Members on the Move** (New addresses), **Positions Available/Wanted, Meeting and Workshop Announcements**, and other **News Items.**

Send all submissions directly to the Editor. Submissions via e-mail or on computer disk (WP, MSWORD or ASCII) make our lives much easier and save on costs. Please include a hard copy of any text sent via computer disk.

Deadline for next Newsletter is January 30, 2000.

"Peg" Rotstein (formerly Johnson), who did an outstanding job, and the Organizing Committee. Special thanks is also due to Vince D'Amico for the artwork on the abstract booklet, tote bag, and 5 K T-Shirts, and to the graduate students and post-doctoral fellows from UC Riverside for there assistance with on-sight registrations. Special recognition goes to Dennis Bideshi, Hyun-Woo Park, Ian Newton, and Kris Justus.

Student awards. Many excellent student papers and posters were presented at the meeting. Special congratulations accompanied by cash awards were given to the following students at the award banquet for their outstanding presentations.

Papers

1st Prize. To **Naomi Lovallo** of Pennsylvania State University for her paper "Subversion and symbiosis: physiological effects of polydnaviruses on the immune response to parasitic wasps" coauthored with Diana L. Cox-Foster.

2nd Prize. To **Anne Grundschober** of the ETH Zurich for her paper "Cultivation, sporulation and infection: the *in vitro* asexual life cycle of the thrips-pathogenic fungus *Neozygites parvispora*" coauthored with Markus Aebi and Urs Tuor.

3rd Prize. To **Florian Freimoser** of the ETH Zurich for his paper "Morphology and growth requirements of the thrips-pathogenic fungus *Entomophthora thripidum* in *in vitro* cultures" coauthored with Anne Grundschober, Markus Aebi, and Urs Tours.

Posters

1st Prize. To **Michael Gill** of Cambridge University for his poster "Targeted gene expression of a putative lepidopteran receptor in *Drosophila melanogaster* utilising the GAL4 enhancer trap technique" coauthored with David J. Ellar.

2nd Prize. To **Daniel Lightwood** of Cambridge University for his poster "An investigation into the potency determinants of the *Bacillus thuringiensis* Cry1Ac endotoxin" coauthored with Paul Jarrett and David J. Ellar.

3rd Prize. To **Juan-Luis Jurat-Fuentes** of the University of Georgia for his poster "Importance of Cry1 endotoxin Domain II loops for binding specificity in *Heliothis virescens*" coauthored with Michael J. Adang.

Student winners at Irvine

The cash awards were $350 for 1st prize, $250 for 2nd prize, and $150 for 3rd prize.

Special thanks is due to Tad Poprawski for chairing the Student Paper and Poster Committee, and to the Committee members, Nguya Maniania, James Becnel and Andy Cherry (who judged the papers), and Jeff Lord, Steven Wraight, and Doreen Winstanely (who judged the posters).

Social events. The meeting began with a reception and mixer with a Mexican Fiesta theme at the Beckman Center on Sunday evening. Other social events included a wine excursion on Wednesday to inland southern California (originally scheduled for outside, but moved inside due to temperatures exceeding 100 °F/40 °C) attended by 130, followed by a visit to the Spanish Mission at San Juan Capistrano, and then the Beach Barbecue.

The 5 K race resulted is some delay in getting the Wednesday social events off on time, but everyone made it to the barbecue on Wednesday evening at the beach in Laguna Niguel. Thirst developed at the race

and the heat of inland California resulted in the consumption of 20 bottles of champagne by the people on the excursion on the way to the beach, which made for a particularly lively barbecue. The Awards Banquet on Thursday evening was held at the Marriott Newport Beach Hotel and Tennis Club. Thanks to Wendy Gelernter, we were able to obtain an excellent band - "Rockola" – from San Diego for the banquet. They played without a break until 1:00 am Friday morning, at which time, with the dance floor still packed, the hotel asked quests still dancing to retire for the night.

5 K Race. The 5 K race took place at the center of the University of California-Irvine campus and had a good turnout with over 40 runners and walkers particpating. The winners and their times were as follows:

Runners

Mature Men (35 years and up)		Times
1st	Neil Crickmore	21:25
2nd	Mario Soberon	22:00
Mature Women (35 years and up)		
1st	Leellen Solter	28:11
2nd	Alejandra Bravo	30:24
Young Men* (under 35 years)		
1st	David Chandler	23:07
2nd	Noritoshi Maehara	28:24
Young Women (35 years and up)		
1st	Susanne Vestergaard	26:33
2nd	Caroline Griffiths	27:03

Walkers

Men - tie between	
Ted Andreadis &	41:03
Jimmy Becnel	41:03
Women	
Peggy Andreadis	38:48

*Note: Tim Andreadis, Ted's son, actually had the fastest time (22:26) in the "Men under 35" category, and received two pounds of jelly beans for his remarkable effort.

SIP thanks Chris Lucarotti, Itamar Glaser, and Jerry Feitelson, who officiated at the race.

5-K race winners

Corporate and UC sponsors

The Society is especially thankful for the financial contributions from corporate sponsors and the University of California which contributed to the success of the meeting. In alphabetical order, these sponsors were the following.

Abbott Laboratories
AgrEvo Corporation
Becker Microbials
Dow AgroSciences
Monsanto Company
Novartis
Pioneer Seeds
Thermo-Trilogy Corporation
The University of California BioSTAR Program

Now it is time to prepare for the year 2000 meeting in Mexico. See you there!

Brian Federici, Organizing Committee Co-Chair

FROM THE PRESIDENT

Those of you who have had the chance to attend the Annual Meeting of our Society in California have surely returned back from Irvine full of new ideas and incentives. The meeting on the campus of the University of California attracted more than 300 participants, who enjoyed many scientific and social highlights. More than 250 papers and posters were presented, about 50 of them by students. In order to accommodate the ten symposia, the workshops and all the contributed papers, sometimes up to three parallel sessions had to be run. The success of this year's Annual Meeting can be largely attributed to Brian Federici and his team, who took care of every detail, and never got tired of solving any problem. On behalf of SIP, I wish to thank Brian, Harry Kaya, and all the other members of the Organizing Committee for their time and labor commitment in organizing an outstanding meeting.

In this issue of the Newsletter you will find the annual reports of the officers of SIP and of the chairs of committees and divisions of SIP. I would like to take this opportunity to thank all these colleagues, who have sacrificed part of their precious time for our Society. Without the efforts of these volunteers SIP could never flourish the way it does.

Whereas the report of the Treasurer assures us that the financial health of the Society is sound, the report of the Membership Committee is a little bit disquieting. Since several years, the number of our members has been steadily decreasing, particularly in the United States and in Western Europe. One of the reasons for this could be that our Society has become less attractive for specialist groups like nematologists, or non-insect invertebrate pathologists. Several members of these minority groups contacted me during the course of the year complaining that they no longer felt represented by SIP, and that our meetings were no longer attractive to them. For this reason, several of them canceled their membership.

In an effort to make SIP attractive again, also for these colleagues, the Council has decided to set aside US$ 1,000 for every operative or potential division, for the organization of symposia at the next Annual Meeting, covering topics from their field of activity. George Gardner has volunteered to try to revitalize the group of marine invertebrate pathologists in SIP, and Harry Kaya and Itamar Glazer have announced to do the same for the nematologists. In the meantime, they have already submitted a petition to the Executive Council for the formation of a Division on Insect Nematology, signed by more than 30 individuals, most of them members of SIP.

In addition to these initiatives we will need the assistance of every member of SIP in order to bring back the high numbers of members we have had in the past. You yourself can assist amongst others in the following ways:

1. Convince your students and colleagues to become members of SIP by showing them the benefits of a membership. Leaflets with information about SIP can be obtained free of charge from our Secretary.
2. Put SIP publications into the library of your institution, in order to make SIP activities better known, also to non-members.
3. Place announcements about meetings and other activities of SIP into journals and newsletters of national, or international organizations you are a member of.

As another measure to also make non-members familiar with our goals and activities, the Council has decided to put the Newsletter on our homepage on the internet. You will have, on the current Membership Renewal Forms, the option to indicate whether you still wish to have a hard copy of the Newsletter. On the same form you can also decide whether your personal data should be put into an Expert Database which will also be available in the web.

During the Sapporo Meeting last year, the Council of SIP gave its approval to the formation of a new Division on Fungi. A Founding Executive, chaired by Stephen Wraight, has been formed, which will prepare the election of officers for the new division. The Division on Fungi will be officially installed at the next Annual Meeting in Mexico. Mycologists who

would like to participate in the organization of the new division should contact Stephen Wraight.

The Web-Site Committee, chaired by David Onstad, will continue its work for another year. Afterwards, it will be decided whether we still need a committee to organize our web-site in the future, or whether an editor, as in the case of the Newsletter, is sufficient.

At our annual meetings, it has now become a tradition to have student awards for the best poster and oral presentation. The fair evaluation of these presentations is not an easy job and needs quite some organization. It has, therefore, been decided to establish a committee appointed with this task. In order to reduce the number of committees in SIP, and since they already did an excellent job for this year's student awards, I have appointed the Endowment Committee, to take over this duty, too. We, therefore, now have a Committee for Endowment and Student Awards, chaired by Tad Poprawski, with present members Nguya Maniania and Stephen Wraight.

Finally, I can announce that at the General Membership Meeting, held during the Annual Meeting at Irvine, the proposed changes to the Bylaws have been ratified by unanimous vote of all members attending that meeting. The amended Bylaws are, therefore, declared adopted and are effective from now on.

Juerg Huber

EDITORIAL

SIP on the Web: will free access affect our membership?

As you can read in the President's Report and Letter and in the Membership Committee Report, our membership is dwindling. Also, from the Treasurer's Report, you can see that, although still sound, our financial situation needs careful scrutiny. We need new members and we need to keep our expenses as low as possible.

In addition to being part of a professional society and all the many benefits that this brings, including reduced registration fees at our annual meetings and colloquia, a very tangible benefit of membership in SIP has been receipt of the SIP Newsletter. However, the SIP Newsletter is also our biggest expense, costing approximately 66% of the membership dues. And we've never solved the problem of untimely delivery to many of our members. Consequently, Council has decided to make the Newsletter available free of charge on the SIP Website. If all goes well, you should be able to peruse this current Newsletter at "www.sipweb.org".

Availability of the Newsletter on the web will ensure that it is widely available in a timely manner. In the current Membership Renewal, you have the option of requesting that you keep receiving a hard copy of the Newsletter. If you do not choose this option, we will presume that you will be happy in viewing or downloading your Newsletter from the web. For those of you who prefer this option, you will receive an e-mail informing you when the latest issue of the Newsletter is loaded onto our website. This will certainly reduce costs of printing and mailing.

A danger to this, of course, is that some people may choose not to renew their membership. I urge you to reconsider. Even though the Newsletter may be available without cost for the time being, there will still be costs associated with producing it. And we will still require a sizeable, vibrant membership to continue functioning as a viable society. Cost savings can be channeled to worthwhile projects such as student awards, symposia. travel grants etc. If memberships continue to dwindle, we will have no other option than to purchase expensive software and password protect the website. But we certainly feel that in addition to our members, the Newsletter should be made available to the occasional web surfer.

Letters to the Editor are welcomed.

Mark S. Goettel

BUSINESS MEETING MINUTES AUGUST 26, 1999, IRVINE, CALIFORNIA

The SIP Business Meeting was convened at 11:06 by President Huber. Approximately 119 members were present. Summaries of the reports are provided below.

In his **President's Report**, Juerg Huber provided an overview of SIP's activities over the last year.

* SIP experienced a year of transition from FASEB to the services of Peg Rotstein (previously Peg Johnson). Peg did an excellent job switching over and helping to organize the annual meeting (during the same busy year getting married). Hiring Peg to help with SIP matters has saved SIP an estimated $6000 this year.

* The change to the Constitution was unanimously accepted by written vote. The changes to the Constitution and By-Laws required a large effort over many years by the committee and we thank them for their hard work.

* Membership declined to some extent from 1996-1999 with a movement to fewer members in the US and Europe although there was a brief increase in members in Australasia, possibly because the meetings were held in Sapporo last year. Scientists studying diseases of marine invertebrates as well as nematodes are not well-represented this year.

To begin reversing this trend, Dr. Huber has suggested making $1000 available for each Division to set up symposia next year. Another $1000 will be available for organization of a symposium on marine invertebrates potentially to include numerous pathogen groups and $1000 will be available for organization of a symposium on nematodes.

* Also regarding membership, please help to encourage students and colleagues to become members. The SIP brochures are available for this purpose.

* Division Chairs will now take part in meetings of the Executive Council in an ex officio capacity for more exchange of ideas. Division Chairs also now take a leading role in helping to develop the program for the annual meeting.

* On a trial basis, we will try providing the Newsletter on the web, with open access to everyone. On the next membership renewal form, you will be asked to indicate whether you still want a hard copy.

* Mark Goettel is planning on stepping down from his position as Newsletter Editor. We are starting to look for someone to replace Mark, who would first act as an assistant to Mark for 1-2 years.

* SIP will develop an Expert Database on the web. At the time of membership renewal, each member will be asked if they want to be included.

* The Website Committee will be in existence for one more year but then it's duties will be merged with those of the Publications Committee.

* The Society began giving student awards some time ago and this has now become a tradition. The Endowment Committee has agreed to begin managing the student awards.

In the **Treasurer's Report**, Ted Andreadis reported that the society is in sound financial health with assets at $150, 601. $108,000 is held in 4 certificates of deposit earning ca. 5%. We earned $9,079 from the Sapporo meeting and $17,130 from memberships but these total $6,000 less than 1998. However, society expenses were decreased by 26% ($13,616) from 1998 under Peg Rotstein's organization.

Although we have reduced operating costs, membership still only covers half of the annual expenses and this means that we must depend heavily on the annual meeting. Ted is not recommending a dues increase now, but the prospect looms in the future.

The **Teller's Committee Report**, presented by Harry Kaya, stated that the Treasurer's Report was sound and the Treasurer's Report was then unanimously accepted. A question was raised regarding hiring an independent auditor but no one else thought this necessary especially because an independent

accountant prepares the taxes each year.

The **Secretary's Report** by Ann Hajek reported that many of the miscellaneous duties previously done by the secretary are now being done by the Executive Secretary, Peg Rotstein. For both the Secretary and Executive Secretary, the preferred method for correspondence is e-mail. Copies of the slide atlas for basic invertebrate pathology are still available for purchase.

The **Nominating Committee** has proposed the following members for the 2000 elections:

Vice President	Just Vlak, Harry Kaya
Secretary	Doreen Winstanley, Jean-Louis Schwartz
Treasurer	Suzanne Thiem, Mickey McGuire
Trustees (2 positions)	Juan Ferre
	Trevor Jackson
	Basil Arif
	Paulo Vilarinhos

If anyone wants to nominate an additional person, 10 signatures of members supporting this nomination must be sent to the Secretary by January 1.

Meetings

Irvine: Brian Federici reported that 310-315 people attended this meeting, with 170 regular members, 52 non-members and 40 companions.

Guanajuato, 2000: Meetings will be held August 13-18 and accommodations are presently being arranged.

Israel, 2001: This meeting will be held at Ma'ale Hachamisha, part of a kibbutz in a beautiful location 20 km from Jerusalem, on Sept. 2-7 and is being organized by Dr. Broza. Previously Haifa was considered but was not found acceptable.

Iguassu Falls, 2002: This meeting will be held Aug. 18-23 in this scenic location in a hotel with excellent international-level facilities. This meeting will provide an opportunity for South American researchers to participate in SIP, something that is not usually possible.

2003: probably northeastern USA, second half of August

2004: probably Europe, second half of August

Just Vlak will be developing a questionnaire for input from members regarding the format for the SIP meeting, e.g., are members satisfied with the length of the meeting, the days of the week, should events be changed. This will be used to create recommendations for meeting organizers.

JohnVandenberg held the vote for the changes to the By-Laws and these were passed unanimously. It was noted that the Constitution presently lacks a description of the duties of Trustees. The committee that drafted changes to the Constitution and By-Laws were asked to draft an amendment to the Constitution to address this deficiency.

Divisions

Bacteria: David Ellar announced that he is stepping down as Chair and Alejandra Bravo will be taking this position. As a result of elections during the annual meeting, Chair-Elect will be Jean-Louis Schwartz, Secretary/Treasurer will be Armelle Delecluse and Members at Large will be Ray Akhurst and Ruud De Maagd.

Bacteria Division Workshop was proposed for the next meeting in Mexico. The workshop title is to be: "Addressing Public Concerns about *Bacillus thuringiensis* Genes in Transgenic Plants." The idea is to provide members with an up to date and authoritative briefing. Proposed topics to be covered in this Workshop are: The Importance of Comparative Risk Assessment; Risk of Transgenic Escape; Concerns about Antibiotic Resistance Genes; Consequences for Non Target Insects; Data from Animal Feeding Studies. Suggestions for speakers and additional topics were welcomed. For the cross-division symposium about diseases of non-insecta, a speaker to discuss vibrio pathogenesis will be invited.

Symposia for the next meeting will potentially include 1. the ecology of bacterial pathogens in agricultural and natural systems, and 2. *Bt* resistance. However, the above-mentioned subjects are not fixed and

suggestions are solicited.

Microbial Control: The Division thanks Pat Vail and Chris Lomer for organizing the division symposium and Wendy Gelernter and Dennis Burges for organizing the workshop. This is the second year of a 5 year program to give travel awards to students. Judy Pell acted as chair of a committee donating awards of $500 to Irandokht Zolfaghar and Jennifer Altre.

A new Directory of Microbial Control Products and Services prepared by Paresh Shah and Mark Goettel has been published, and will be available on the web as well as in hard copy. The Division helped to fund development of a video on nematodes by Randy Gaugler, Mike Klein, and others. This video aimed at growers and users is available free of charge, with information on ordering at the SIP web site.

The Chair, John Vandenberg, asked for suggestions regarding the symposium and workshop for 2000. New officers are Chair Lerry Lacey, Chair-Elect Wendy Gelernter, Secretary/Treasurer Jeff Lord, and Members at Large Nguya Maniania (1 year) and Dennis Burges. Past President (John Vandenberg) and the past Secretary-Treasurer, Bonifacio Magalhaes, will now continue ex officio.

Microsporidia: Chair Andreas Linde reported that 15 members attended the meeting. An expo is planned for Guanajuato, based on an introduction to microsporidia, including a video, a poster, and demonstrations. This division is designing a new web page. They will initiate a travel award for students conducting research on microsporidia and guidelines will appear soon on the website.

For the next meeting, this division hopes to develop a joint symposium together with the Fungal Division (and others if interested) on "enigmatic pathogens" that would include pathogens with unresolved taxonomy. Two speakers will be invited to address the question "Microsporidia - are they protozoa or fungi?"

Virology: Chair Peter Krell (Can) announced that Ian Smith (UK) is the Chair-Elect, Johannes Jehle (Germany) is the Secretary/Treasurer and Doreen Winstanley (UK) is one Member at Large. He also noted that Nicholai Van Beek (US) completed a three year term as Member at Large and Yoshifumi Hashimoto (Japan) was elected during the Virus Division meeting at SIP'99 to replace Nicholai as Member at Large. The Chair acknowledged the contributions of Nicholai to the Virus Division and thanked him. Division members would be notified by e-mail and through the Virus Division Web site that nominations for the positions of Chair-Elect, Secretary/Treasurer and one Member at Large will be received by the Secretary/Treasurer with the election to be held at SIP, 2000.

The Division revised its rolling list of future symposia topics and reprioritized the topics. For the SIP, 2000 Meeting, the Virus Division recommended one symposium on Virus Ecology and another on Virus-Host Interactions. In addition there was strong support for a workshop to discuss invertebrate viral taxonomy and phylogeny in order to help influence discussions by the International Committee on the Taxonomy of Viruses.

There was also strong support for SIP-sponsored plenary sessions to encourage wider participation among SIP members. One plenary session topic on Implementation of Biological Control in which the Virus Division could participate was suggested.

A Virus Division website has been developed within the SIP web site and will be expanded to include sources of cell lines and a glossary of invertebrate virology.

Fungi: This new division had its first organizational meeting on Tuesday night with 27 attendees. Stephen Wraight was voted Chair of the newly formed Organizational Committee. $2 will be charged as dues for division membership, beginning this next year.

Nominations are being accepted for a slate of officers to be elected. Mark Goettel reported on a Directory of Specialists involved in the Development of Fungi as Biocontrol Agents. A new website for the division will be created. Subjects for symposia and the workshop for Guanajuato are being solicited.

The meeting was adjourned at 12:30.

Respectfully submitted, Ann E. Hajek, Secretary

DIVISION MINUTES

Microbial Control Division Business Meeting
7.30 p.m., 24th August 1999, Beckman Conference Centre, Irvine CA.

Chairman John Vandenberg called the meeting to order at 7.35. Members attending: 104. A motion to accept the minutes from the previous year was made by Roberto Pereira and seconded by Pete Jones. The vote was unanimous in favour of the motion.

MCD Symposium and Workshop: Chair John Vandenberg recognised and thanked the organisers of this years Microbial Control Division symposium (Pat Vail and Chris Lomer) and workshop (Denis Burges and Wendy Gelernter).

Student Awards: This years student award winners, Irandokht Zolfaghar and Jennifer Altre, were briefly recognised though this was to be done officially at the Banquet. Chair John Vandenberg appointed the 2000 Student Award Committee: Michael Brownbridge Chair, the new members at large. As in the previous two years there will be two $500 awards to travel to the meeting in Guanajuato, Mexico.

Directory of Industries: Chair John Vandenberg recognised and thanked Mark Goettel and Paresh Shah for completing the 'Directory of Microbial Control Products and Services' and ensuring that it was mailed to all members.

Nematode Video: Last year $1000 funding was approved for the production of a training video on the use of insecticidal nematodes. This 30 minute video is now completed and was described by Harry Kaya. Samples were available free of charge to Microbial Control Division members (in US and European format) at the meeting and could be ordered on the web site. Chair John Vandenberg congratulated Mike Klein and Harry Kaya on a very impressive video production.

Irandokht Zolfaghar and Jennifer Altre their student travel awards from the Microbial Control Division

New Book Update: Lawrence Lacey announced the imminent completion of the 'Field Manual for the Application and Evaluation of Entomopathogens' in mid-November for publication by Kluwer early in 2000.

Founders Lectures: A request was made for ideas for Founders lectures to be made to Dudley Pinnock, the Chair of the Founders Lecture Selection Committee.

Society Business: At the Society Business Meeting on 22nd August it was agreed that each Division would receive an award of $1000 to promote and develop programmes for next years meeting in Guanajuato, Mexico. It was suggested by Chair John Vandenberg that this money might be used to support a single speaker or multiple speakers. Wendy Gelernter said that another option was to turn the money back. Mark Goettel felt that the money should be kept or used, particularly as the Microbial Control Division's budget (approx $7000) was being used for student awards and therefore dropping particularly when compared to the overall society budget (approx $126,000). Lawrence Lacey suggested that the money could also be supplemented by the Microbial Control Division for invited speakers. Wendy Gelernter

suggested that we need to decide on the speakers first. Mark Goettel wondered whether the student awards would continue after the initial three years agreed, and if so whether the $1000 would help support this. Roberto Pereira felt that the money was for symposia and/or workshops rather than student awards and should therefore be used for a speaker and that if no speaker was found the money should be given back. Roberto Pereira moved that the money be used to support a speaker or a 'wet lab' type workshop and that if this was not possible that the money should be returned. Wendy Gelernter seconded this and the matter will be discussed further at a later date. Juerg Huber pointed out that, although paying for speakers had not been done in the past, it was the intention of the Council that each Division should use the money given to them and make the most of it. Chair John Vandenberg also pointed out that in addition to the money given to each division a further $1000 was being used to organise a symposium on pathology of aquatic invertebrates.

New Officer Slate for 2000: Chair John Vandenberg appointed the new Chair- Elect (to be elected) as chair of the Nominating Committee for next years nominations for a new member at large.

Elections: In the new Council Bylaws it was passed that each Division would have two members at large with overlapping terms. Chair John Vandenberg therefore suggested that this year one member at large was appointed for two years and the other for one year. Next year Michael Brownbridge's term would finish and a new member at large could be appointed for the subsequent two years. This motion was moved by Ann Hajek, seconded and the vote was unanimous in favour of the motion.

Prior to the voting for each post the candidates introduced themselves or, if they were not present, were introduced by colleagues. Harry Kaya motioned to close the nominations for all the posts and Roberto Pereira seconded this.

Chair Elect:
Nominations: Wendy Gelernter
Wendy Gelernter elected as Chair Elect (unanimous).

Secretary/ Treasurer:
Nominations: Tariq Butt, Jorgen Eilenberg, Rosalind James, Jeff Lord
Jeff Lord elected as Secretary/ Treasurer

Members At Large:
Nominations: Denis Burges, Doug Inglis, Nguya Maniania, Christina Nielson-Leroux, Paresh Shah, Mitsuaki Shimazu, Fernando Vega (Steve Wraight withdrew as he is the Chair of the Organising Committee of the newly formed Fungus Division)
Denis Burges elected as the two year member at large and Nguya Maniania elected as the one year member at large.

Chair John Vandenberg thanked all those willing to serve. After thanking everyone for their support Chair John Vandenberg turned over the meeting to the new Chair, Lawrence Lacey. Both John Vandenberg and Bonifacio Magalhaes (Secretary Treasurer '97-'99) now become *ex officio* on the MCD Executive Committee. Chair Lawrence Lacey thanked John Vandenberg and all those involved in the organisation of symposia and workshops.

No further business. A motion to call the meeting to a close was made and seconded.

Judith Pell, Member at Large
Acting secretary

The New Officers for the Microbial Control Division are:

Lawrence Lacey, chair
Wendy Gelernter, chair-elect
Jeff Lord, secretary
Michael Brownbridge, member at large (1998-2000)
Nguya Maniania, member at large (1999-2000)
Denis Burges, member at large (1999-2001)

Report of the Virus Division Business Meeting

Thirty-eight delegates, including 25 Division members, attended the Virus Division meeting on Monday, August 23, 1999. As of the end of August 1999 the membership stands at 138 and the Division's

funds at US$ 800.

The Virus Division has developed its own Web site which is included on the SIP homepage. At present the Web site consists of an introduction to the ideas, history and activities of the Virus Division, and some Web projects, e.g. links to insect virus-related departmental and personal Web pages. Further projects, such as a mail-server for insect virologists, phone book of insect virologists, database of labs storing insect viruses, insects, insect cell lines, and a dictionary of invertebrate virology and insect pathology were discussed. Password protection of these services was suggested.

Members agreed on the organisation of two Symposia (Viral Ecology and Virus-Host Interactions) and one Workshop (Taxonomy of Insect Viruses) for SIP2000. Initiatives to encourage student activities, by establishing a Virus Division-sponsored award, and to increase the financial balance were discussed.

The procedure for nominating officers was adapted to the new SIP bylaws. Nominations will be accepted from the membership in the form of a petition with at least two signatures, to be received by the Secretary/Treasurer of the Virus Division by April 30 in the year of the election.

Yoshifumi Hashimoto (Japan) was elected as member at large, to replace Nikolai van Beek (USA) who rotated off after three years of excellent service to the Division. The reports of the Chair and Secretary/Treasurer were accepted. (Johannes A. Jehle).

The 1999 Microsporidia Division Minutes

The annual business meeting of the Division on Microsporidia was held at 2 pm on August 24, 1999 at the 32nd Annual Meeting of the Society for Invertebrate Pathology in Irvine, California. Fourteen members were present. Andreas Linde did not read the 1998 minutes because they were published in the Newsletter and it was motioned and seconded that we accept the 1998 minutes. The motion was unanimously accepted.

Old Business: The change of Bylaws of the Society was unanimously approved. In light of this, our division bylaws are the same as the council bylaws, except the vice chair automatically becomes chair. It was agreed that it was not necessary to change our bylaws, with the exception of posting nominees 24 hours before the election.
We reviewed the election of new officers in Sapporo.

The new officers are:
Chair: Andreas Linde
Vice-Chair: James Becnel
Secretary: Margaret (Johnson) Rotstein
Trustees: Ingemar Fries and Louis Malone

The Treasurer's Report was reviewed. We have $1620 in out account and currently have 78 members in our division. James Becnel motioned to accept the report and Ted Andreadis seconded it. The motion was unanimously accepted. Finally, Andreas Linde informed the audience about the 1998 workshop in Sapporo on microsporidian cell biology.

New Business:

EXPO: Andreas Linde mentioned Paul Van Poppelen's idea to generate more interest by setting up an "Expo" at the annual meeting with a table to show the general membership what microsporidia look like. We could set up microscopes, posters and photos.

Ted Andreadis suggested that a poster would be a good idea. Several could be made and brought to different scientific meetings by the Microsporidia division members. The poster should present different aspects of Microsporidia, such as phylogeny, history, and why are they important. James Becnel suggested that we add information on Microsporidia as biological control agents, such as in Fire Ants.

James Becnel suggested that we expand the web site to include more information. Peg Rotstein agreed that we need to develop our web pages. It was discussed that Al Undeen's spore germination video be put on the web site.

Division Award: Ted Andreadis reminded us that the last time the Division spent money was for the translation of a Russian manuscript into English by Jerzy Lipa. The idea about an award was discussed.

Bettina Moser suggested that we highlight an important scientist by presenting a presentation dedicated to this person. Ted Andreadis thought that a student award of at least $ 100 US would be better. Bettina Moser suggested that students studying Microsporidia should submit a proposal, then a committee selects the winner. The student must be a member of the division. All seemed to be in favor of the student award idea. Andreas Linde suggested that the guidelines for the award should be modelled after the Microbial Control Division's procedure.

A Student Travel Award committee was selected. The following people were nominated to the Student Award committee:

- Leah Bauer
- Ted Andreadis
- Charlie Vossbrinck

Lee Solter moved to accept the nominees and Leah Bauer seconded the motion. It was unanimously approved.

Symposium: Ted Andreadis announced that the Council has agreed to give each division $1000 to bring in speakers to the annual meeting. He solicited the attendees to discuss ideas for titles.

Bettina Moser suggested the title, "Diagnostics: What methods are available?" Andreas Linde suggested that this may be better as workshop topic.

Ted Andreadis suggested the title, "Evolution of intermediate hosts: Transmission strategies" with the idea that we need to look at different hosts besides mosquitoes and concentrate on the ecology of pathogens in the field.

Lee Solter suggested the title: "What are the Microsporidia? Fungi, or protozoa?" She suggested bringing in Dr. Cavalier-Smith, or other speakers such as Dr. Keeling. Andreas Linde suggested that we contact these people and ask them if they would be interested in coming. Tim Kurtti suggested the title, "Enigmatic insect pathogens (microsporidia, fungi)" and a joint workshop with other Divisions. This idea was favored and presented to the public at the Society Business Meeting on August 26th.

Andreas Linde suggested further discussion on these topics and asked anyone to email ideas and possible speakers to him (alinde@fh-eberswalde.de).

Another Symposium on non-insect and marine Invertebrates will be held to stimulate interest in this area. Jimmy Becnel will contact Dr. Robin Overstreet and ask him to present a lecture.

Workshop 2000: Dr. Linde brought up the workshop in 2000 in Mexico. Jimmy Becnel as the organizer asked to e-mail ideas for a workshop topic to him at jbecnel@gainesville.usda.ufl.edu.

Nominating Committee: For the elections of new officers at the 2000 meeting in Mexico, a nominating committee was selected:

I. David Onstad
II. Leah Bauer
III. A third person needs to chosen.

Jimmy Becnel moved to adjourn the meeting and David Williams second the motion. The motioned was unanimously approved.

Respectfully submitted,
Margaret J. Rotstein, Secretary

ANNUAL REPORTS

President's Report 1999

In my report I will confine myself to issues not covered by the individual reports of the committees and divisions.

During the first year of my presidency several activities, initiated by my predecessors in office, could be brought to an end.

Management Services: The transfer of management services from the commercial organisation FASEB to the newly established Executive Secretary, Margaret

(Peg) Johnson, was successfully completed. This change in management services not only saves us several thousand dollars a year, it also makes our management much more efficient and easier to handle. Peg Johnson is a member of our society and, therefore, takes a personal interest in the management of SIP.

SIP Homepage: The Society is now well presented on the web. It has its own homepage, which can be accessed at www.SIPweb.org. Contrary to the Newsletter, which is distributed only to members, the web site offers SIP the possibility to broadcast its activities also to non-members. I sincerely hope that this will stimulate many scientists working in invertebrate pathology to join the Society.

Amendment of the Constitution and Bylaws: A process which has kept SIP busy for many years could successfully be completed. The changes of the Constitution have been accepted anonymously by written ballot with 127 votes, so that the revised Constitution is now effective. The voting about the changes in the Bylaws will take place at the General Membership Meeting during the Annual Meeting at Irvine. Major changes in the Bylaws and in the Constitution include the following points:

- The chairs of the divisions are ex-officio members of the Council, but without having the right to vote. This very much facilitates and improves the flow of information between the Council and the divisions.
- The formation of regional branches of SIP is no longer foreseen in the Constitution.
- The boards of SIP will be replaced by committees, so that there is no longer the duality of boards and committees in SIP.
- For the formation of a new division it is sufficient that 20 active SIP members submit a petition to the Council. It is no longer necessary to have a minimum of 50 members for a new division.
- Entirely new is the part on the Bylaws for the Divisions. The divisions should no longer develop their own bylaws, but should use the Bylaws for Divisions, as instituted in the Bylaws of SIP.

New Committees: In the Founders' Lecture Committee most of the members were changed. Jim Harper, who has served for many years as Chair of this committee has been replaced by Dudley Pinnock. The other members of the committee are: David Ellar, Harry Kaya and Max Bergoin.

During the Annual Meeting at Sapporo, I established a new Nominating Committee. This committee is chaired by Wendy Gelernter. Additional members are: Robert Granados, Toshi Iizuka, Isabelle Thiery. I have established an Auditing Committee composed of Harry Kaya and Wendy Gelernter for the audit of the Treasurer's accounts. For the preparation of the election of the new officers in the year 2000, I have nominated Bob Granados as Chair of the Tellers Committee.

Juerg Huber, President

Treasurer's Report

The financial statements for the Society for the fiscal year ended April 30, 1999 are enclosed in Exhibits A (asset sheet), B (revenue and expenses), C (board designated funds), and D (accompanying notes). Our Treasury is in very good shape with total assets of $150,601 (Exhibit A). The majority of our assets are currently invested in four certificates of deposit totaling $108,000 and earning approximately 5% (Note 2, Exhibit D). These were transferred at maturity from FASEB to Merrill Lynch accounts at a nominal cost of $368 (Note 3, Exhibit D).

The Society experienced a $8,109 gain in net revenue for 1999 compared to a $3,930 gain recognized for the fiscal year ended April 30, 1998 (Exhibit B). Net profits from the Sapporo Meeting were $8,300 but income from membership dues was only $17,130. This was $6,530 less than in FY 1998 ($23,660) (see Note 1, Exhibit D). Society expenses were reduced by $13,616 (26%) from $51,505 for FY 1998 to $37,889. The majority of these savings can be attributed to a direct reduction in operating costs associated with the change in the Society's management service provider from FASEB to Ms. Margaret Johnson.

The activity of the Board Designated Funds (Divisional and Endowment) is shown in Exhibit C. In addition, I have listed the fund balances in the table below. These figures are the cumulative net incomes for all existing board designated funds from inception through April 30, 1999.

In summary the financial health of the Society remains sound. Although this fiscal year has been one of great change, the transition has gone smoothly and the Society has realized significant savings. Our fund balance of $146,235 is substantial and should be an adequate cushion to support the society for many years to come. However, I want to continue to emphasize that even though we have reduced our operating costs, membership dues still only covers less than half of our annual expenses, and we continue to depend on profit from our annual meetings to meet our expenses. Therefore, while I am not recommending a dues increase at this time, the Society may wish to consider one in the event that annual meetings fail to meet financial expectations.

Respectfully submitted,

Theodore G. Andreadis, Treasurer

4/30/99 Fund Balances

General and Administrative	$128,096
Virology	756
Bacteria	606
Microsporidia	1,605
Microbial Control	7,777
Endowment	7,395
Total (See Exhibit A)	$146,235

Exhibit A

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE STATEMENT OF FINANCIAL POSITION
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 1999 AND 1998

ASSETS	1998	1999
Cash - Nations Bank	$ 8,946.00	$35,415.80
Other Cash Deposits	$10,580.00	$0
Accrued Interest Receivable	$2,336.00	$2,188.00
Funds Receivable	$26,861.00	$4,997.20
Certificates of Deposit	$102,693.00	$108,000.00
TOTAL ASSETS	**$151,416.00**	**$150,601.00**

Exhibit B

REVENUE	General Fund	Board Designated Funds (Schedule 1)	Total 1999	1998
Transfer from FASEB	$ 10,513.00	-	$ 10,513.00	-
Slide Atlas Sales	$ 4,420.00	$ -	$ 4,420.00	$ 2,065.00
Proceedings Sales	$ 336.00	$ -	$ 336.00	$ -
Membership Dues (see Note 1)	$ 16,110.00	$ 1,020.00	$ 17,130.00	$ 23,660.00
Annual Meeting Income	$ 8,300.00		$ 8,300.00	$ 20,861.00
Contributions	$ 418.00	$ -	$ 418.00	$ 1,567.00
Credit Card Handling Fees	$ -	$ -	$ -	$ 44.00
Publication Handling Fees	$ -	$ -	$ -	$ 333.00
Interest	$ 6,077.00	$ 404.00	$ 6,481.00	$ 6,391.00
Miscellaneous Income	$ 400.00	$ -	$ 400.00	$ 514.00
TOTAL REVENUE	**$ 46,574.00**	**$ 1,424.00**	**$ 47,998.00**	**$ 55,435.00**
EXPENSE				
Mailing of dues notices & other	$ 1,205.00	$ -	$ 1,205.00	$ 2,779.00
Program & Abstracts	$ -	$ -	$ -	$ 7,165.00
Newsletter	$ 12,378.00	$ -	$ 12,378.00	$ 10,679.00
Directory	$ 1,100.00	$ 765.00	$ 1,865.00	$ 3,285.00
Travel	$ 1,002.00	$ 1,000.00	$ 2,002.00	$ 1,000.00
Supplies and Duplicating	$ 337.00	$ -	$ 337.00	$ 1,675.00
Supplies for Slide Production	$ 446.00	$ -	$ 446.00	$ 7,283.00
Accounting Services	$ 107.00	$ -	$ 107.00	$ 3,300.00
Secretariat (Peg's Salary, 1999)	$ 7,200.00	$ -	$ 7,200.00	$ 5,100.00
Processing Fees	$ 294.00	$ -	$ 294.00	$ 6,251.00
Telephone	$ 455.00	$ -	$ 455.00	$ 152.00
PO Box	$ 72.00	$ -	$ 72.00	$ -
Contracted Services	$ 1,000.00	$ -	$ 1,000.00	$ -
Brochure Costs	$ 3,974.00	$ -	$ 3,974.00	$ -
Awards	$ 3,453.00	$ -	$ 3,453.00	$ 500.00
Credit Card Charges	$ 2,813.00	$ -	$ 2,813.00	$ 1,372.00
Bank Account Fees	$ 319.00	$ -	$ 319.00	$ -
Video Production	$ -	$ 1,000.00	$ 1,000.00	
CD Transfer	$ 368.00	$ -	$ 368.00	$ -
Miscellaneous	$ 601.00	$ -	$ 601.00	$ 964.00
TOTAL EXPENSE	**$ 37,124.00**	**$ 2,765.00**	**$ 39,889.00**	**$ 51,505.00**
			$ -	
Net Revenue	**$ 9,450.00**	**$ (1,341.00)**	**$ 8,109.00**	$ 3,930.00

Exhibit C

SOCIETY FOR INVERTEBRATE PATHOLOGY

BOARD DESIGNATED FUND REVENUE AND EXPENSE
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 1999

	Virology	Bacteria	Microsporidia	Microbial Control	Endowment	Total
REVENUE						
Membership Dues	$ 232.00	$ 142.00	$ 132.00	$ 514.00	$ 287.00	$ 1,307.00
Contributions	$ -	$ -	$ -	$ -		$ -
Interest Income	$ -	$ -	$ -	$ 187.00	$ 217.00	$ 404.00
Total Revenue	$ 232.00	$ 142.00	$ 132.00	$ 701.00	$ 504.00	$ 1,711.00
EXPENSE						
Travel to Workshop	$ -	$ -	$ -	$ 1,000.00	$ -	$ 1,000.00
Educational Video	$ -	$ -	$ -	$ 1,000.00	$ -	$ 1,000.00
Directory of Industries	$ -	$ -	$ -	$ 765.00	$ -	$ 765.00
Total Expense	$ -	$ -	$ -	$ 2,765.00	$ -	$ 2,765.00
Net Revenue	**$ 232.00**	**$ 142.00**	**$ 132.00**	**$ (2,064.00)**	**$ 504.00**	**$ (1,054.00)**

Exhibit D

SOCIETY FOR INVERTEBRATE PATHOLOGY
NOTES TO THE FINANCIAL STATEMENTS
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 1999

Note 1: Membership Dues	1998	1999
Full Member (693@$30; 505@$30)	$ 20,790.00	$ 15,150.00
Student Member (92@$15; 64@$15)	$ 1,380.00	$ 960.00
Microsporidia (155@$2; 66@$2)	$ 310.00	$ 132.00
Virology (132@$2; 116@$2)	$ 264.00	$ 232.00
Bacteria (111@$2; 71@$2)	$ 222.00	$ 142.00
Microbial Control (346@$2; 257@$2)	$ 692.00	$ 514.00
Miscellaneous Prior Year Amounts	$ 2.00	$ -
	$ 23,660.00	$ 17,130.00

Exhibit D (continued)

SOCIETY FOR INVERTEBRATE PATHOLOGY
NOTES TO THE FINANCIAL STATEMENTS
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 1999

Note 2: Interest and Investments
Investments owned by SIP at April 30, 1999

	CD MBNA America Bank	CD MBNA America Bank	CD Queens County SVGS	CD FMLY Advanta BNB Wilmtn	TOTAL
Society Operations:					
Cost	$24,000.00	$61,000.00		$11,500.00	$96,500.00
Maturity Date	6/23/99	12/23/99		8/26/99	
Interest Rate	4.95%	4.95%		5.30%	
Endowment Fund:	$ -				
Cost	$ -		$6,000.00		$6,000.00
Maturity Date	$ -		12/22/99		
Interest Rate	-		4.85%		
Microbial Control:	$ -				
Cost	$ -			$5,500.00	$5,500.00
Maturity Date	$ -			8/26/99	
Interest Rate	-			5.30%	
Total Certificates	$ 24,000.00	$ 61,000.00	$ 6,000.00	$ 17,000.00	$108,000.00

Note 3: CD Transfer

1998 CD Name	1998	Liquidation Price	Interest	1999	1999 CD Name
CD 0768358035	$ 22,058.00	$ 23,235.86	$1,177.86	$ 24,000.00	MBNA America Bank
CD 0768354404	$ 29,077.00	$ 31,538.28	$2,461.28	$ 61,000.00	MBNA America Bank
CD 0768801231	$ 34,669.61	$ 35,539.36	$ 869.75	$ 6,000.00	Queens County SVGS B
CD 0768804931	$ 16,889.00	$ 17,318.01	$ 429.01	$ 17,000.00	FMLY Advanta NB Wilmtn
TOTAL INVESTMENT	$102,693.61	$107,631.51	$4,937.90	$108,000.00	

Audit of the Treasurer's Report for Fiscal Year 1998-1999

We concur with Treasurer Ted Andreadis that the Society is in fine financial shape and an increase in dues at this time is not warranted. The expenses incurred by the Society are not excessive, and substantial funds are in certificates of deposits earning a higher interest rate than "sitting" in a checking account. Funds are also available to the Divisions (some more than others) to initiate their own projects.

We noted that there has been a significant drop in both regular and student membership during the past year. Although the membership and payment of dues are not under the Treasurer's control, the loss of membership reduces income, especially when the Society continues to print sufficient Newsletters and mail them to nonpaying members. This policy is a good one and hopefully will result in membership renewal. Is there a sustained campaign to sign up delinquent and new members?

We assume that the Society's Bylaws cover issues dealing with bonding of the Treasurer and authorization of access to Society's fund should the Treasurer be

incapacitated.

Other minor points noted in the Treasurer's Report are:

1. The funds reported in the Treasurer's Report and Exhibit A are not in balance. This is due to the "Funds Receivable" in Exhibit A which is in a state of flux for the 1999 meeting.

2. The correct date for the end of the fiscal year for the Exhibits should be April 30 and not April 31.

3. It is not clear whether The Endowment Fund is currently being used to support scientists from Third World Countries. We suggest an update from the Endowment Fund Committee to the Treasurer and Council of scientists being support by this fund.

4. Based on the low fee ($107) listed for Accounting Services, it is not clear whether an accountant was used during the past year. This should be clarified.

5. It is not clear which activities are covered by "Processing Fees".

Respectfully submitted, Harry K. Kaya and Wendy Gelernter, Audit Committee

Executive Secretary Report

Beginning April 30th 1998 I assumed the responsibilities as the executive secretary of the Society for Invertebrate Pathology. The past year has been a time of transition from FASEB and a learning experience about the procedures involved in running the Society.

Below is a list of some of the duties I performed this year:

1) I opened a bank account at Merrill Lynch that is earning interest for the Society
2) Switched the Certificates of Deposits as they matured to Merrill Lynch CD's
3) Worked with FASEB in transferring files and the membership database
4) Created and maintained a membership database for the Society
5) Opened a Merchant Account with Sam's Payment Solutions in order to process credit cards
6) Established a phone line and 2 toll free numbers for the Society.
7) Established a Post Office Box as a permanent mailing address for the Society
8) Mailed 74 slide atlases and 28 proceedings
9) Mailed miscellaneous directories and publications
10) Printed and distributed 3 newsletters packages which included newsletters, meeting programs and abstracts, renewal notices, Microbial Control Directories of Industries, Publications List and ballots. Prepared and formatted publications for the Printer and personally monitored the printing of all publications
11) Mailed miscellaneous receipts and correspondence to members
12) Mailed out membership renewals and processed all renewals and payments
13) Maintained the bank account, made deposits and helped prepare the Treasurer's Report
14) Kept in contact with members mostly with email. Phone calls to the Society are rare.
15) In association with the membership chairman, I sent emails to members who were delinquent in their membership renewals and received over 100 renewals.
16) Maintained the web site

Suggestions for improving SIP:

1) Allow members to renew their journal subscriptions through Academic Press rather than through SIP. The process of renewing subscriptions through SIP is cumbersome and slows down the delivery of journals.
2) Improve overseas delivery if possible. Switch to a new International courier?
3) Purchase a Pitney Bowes postage machine to save on postage and numerous trips to the post office.
4) Put the membership form up on the web site on a secured web site with credit card payments available. I think this would greatly improve the convenience of joining and renewing membership, therefore increasing membership.
5) Put the membership database online so members can update their own addresses and emails and check on the status of their membership.
6) Mail the Membership Renewals in a separate mailing.

In order to save mailing costs, we mailed out the membership renewal forms with the November Newsletter Package. Unfortunately, members either did not notice the renewal form, set it aside, or forgot to send it in. This year I suggest that we send out the renewal letter with a brochure in a separate mailing with a return addressed envelope.

Thanks to the support of Brian Federici, Mark Goettel, Ted Andreadis, Ann Hajek and Juerg Huber for assisting me with taking over these responsibilities and providing guidance in how the Society operates.

I look forward to serving the Society for many years and I know that my services will only improve as I have already learned so much about this Society in the past year.

Respectfully submitted,
Margaret Rotstein

1999 SIP Newsletter Report

Three issues of the Newsletter comprising a total of 180 pages were produced in the 1998-99 year. In addition to 132 pages of Newsletter text, there were 3 supplements comprising 48 pages. The first supplement provided slide atlas and membership application forms. The second supplement consisted of the registration forms for the Irvine meetings. The third supplement was the 1999-2000 SIP Membership Directory. The inclusion of the proposed changes to the Constitution and Bylaws was mainly responsible for the increase in number of pages as compared to past years. Meeting announcements, position advertisements, SIP meeting registration and other information of a timely nature was also posted on the SIP Website.

Text was prepared in Lethbridge and printed in Gainesville. Newsletters were mailed to U.S. members using the U.S. Postal Service and to other countries using Quick International.

We are grateful to all members who contributed material to the Newsletter this year, and encourage any member to send news of interest to the Society. Special thanks to Karen Toohey for her typing and initial layout and to Peg Johnson for final layout, printing, collating and mailing.

Financial Report, August 1998 - July 1999.

Total cost of Newsletter (3 issues): $ 17,529
Cost per member based on 875 members: $20

	Nov Vol 30(3) (60pp)	Feb Vol 30(1) (36pp)	July Vol31(2) (84pp)
Expenses at Lethbridge			
Desktop specialist	$292	$138	$ 122
Stationary & Misc.	233	96	7 5
Lethbridge Total	525	234	197
Expenses at Gainesville			
Printing	$1,745	$1,560	$2,290
Processing	455	200	320
US Mailing	346[1,2]	568[3]	960[4]
International Mailing	3,588[1]	1,441[3]	3,100[4]
Gainesville Total	6,134	3,769	6,670
TOTAL	$6,659	$4,003	$ 6,867

[1] Costs include processing and mailing of Sapporo Abstracts to members not attending the meeting.
[2] US bulk mail was used for this shipment with unsatisfactory results.
[3] Includes cost of shipping the Microbial Control Products Directory to Microbial Control Division Members
[4] Includes cost of mailing Irvine meeting abstracts

Mailing: International mailing has generally improved, although problems still exist. For the November issue, a bulk mailing system for U.S. members was used with considerable savings but unsatisfactory results. For the July issue, first class was used to ensure timely delivery prior to the Irvine meetings.

Printing: With the switch from FASEB to new executive services in Gainesville, we have also changed printers, which has resulted in almost a 50% reduction in printing costs. In addition, since the present printer uses printing from disk, we are able to reprint extra copies at minimal charge. The quality of the photos had decreased markedly for the first issues. The problem

has now been rectified as can be seen from the improved quality of the images in the July issue.

Respectively submitted,

Mark S. Goettel, Newsletter Editor
James J. Becnel, Assistant Newsletter Editor
July, 1999

COMMITTEE REPORTS

1999 Membership Committee Report

Composition of SIP Membership: This has been another year of transition with a decrease of approximately 12% in overall SIP membership during the past 12 months (see table and chart for breakdown by country and region). Currently, there are 709 members worldwide representing approximately 50 countries. Slightly more than 50% of the members are from outside North America (US, Canada and Mexico). Except for Eastern Europe (which was unchanged) there was a decrease in all other regions with a particularly large erosion of the Middle East/African base and the Australasian base.

The membership is composed of 582 regular members, 81 student members, 34 Emeritus members and 12 Honorary members. There are currently 4 Divisions within the SIP and these remain very popular with the membership (see attached table) with many members belonging to several divisions. The largest division is Microbial Control followed by Bacteria, Virology and Microsporidia.

Activities during 1998/99: Received and approved the nomination (certified by the Treasurer) of Dr. James E. Stewart as an Emeritus member of the Society for Invertebrate Pathology on March 5, 1999. Dr. Stewart has been a member since 4/16/69 and is both a Founding and Charter member.

As of June 1, 1999 membership was only slightly above 600. A review of members that had not renewed was a large group of long time members. I asked the executive secretary (Peg Johnson) to e-mail a group of 229 members. The response was excellent and within one week, 94 of the contacted members renewed. Most all had received a notice but, for various reasons, has not renewed.

The SIP web site has the potential to be a valuable method for recruiting new members. A section on membership is part of the site and includes the benefits and advantages of membership, information on the annual meeting and a downloadable application form.

Suggested activities for 1998/99: In order to have members renew their membership in a more timely fashion, it is proposed that members that have not renewed by the end of February be sent an e-mail reminder. This is an inexpensive and effective method to maintain our membership.

Submit articles or information about the society (purpose, benefits and activities) to suitable outlets and promote SIP web site by advertising on related sites and mailing lists.

Expand and refine the membership portion of the SIP web site.

Increase SIP profile (and therefore membership) by becoming involved in contemporary issues in which the Society has played an important role. Consider designating country contacts to help recruit new members.

The Membership Committee: The Membership Committee for 1998/99 consists of Jorge Ibarra, Robert Anderson, Lerry Lacey and James Becnel.

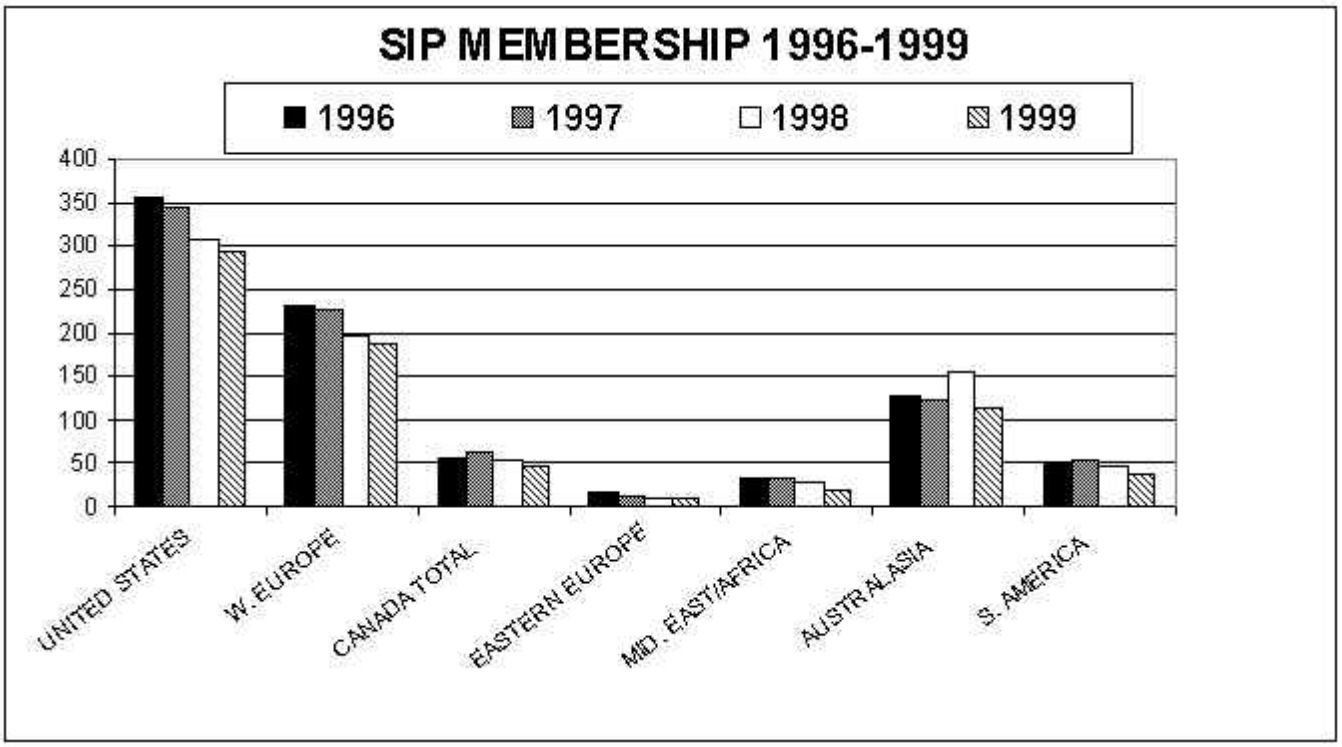
Submitted by James J. Becnel: June 1999

1999 Division Membership

Division	Number of Members
Microsporidia	75
Microbial Control	297
Bacteria	94
Virus	138

Membership in SIP

LOCATION	1994	1995	1996	1997	1998	1999	%change
UNITED STATES	380	382	357	343	308	292	-5%
AUSTRIA	3	4	3	4	3	5	
BELGIUM	6	7	9	8	5	4	
DENMARK	5	4	7	7	6	6	
FINLAND	4	4	3	3	2	2	
FRANCE	43	35	42	37	25	23	
GREECE	1	1	1	1	1	2	
ITALY	8	16	12	12	10	4	
NETHERLANDS	10	10	10	15	13	13	
NORWAY			2	2	2	2	
PORTUGAL	7	9	7	7	6	5	
SPAIN	6	8	19	13	8	9	
SWEDEN	9	7	9	8	7	6	
SWITZERLAND	8	5	4	7	8	8	
UNITED KINGDOM	67	66	83	83	81	84	
GERMANY	11	16	19	17	18	16	
W. EUROPE	190	194	233	224	195	189	-3%
CANADA	49	48	57	63	54	46	-15%
BULGARIA	0	0	0	0	1	1	
CZECHOSLOVAKIA	3	5	3	4	3	3	
MOLDOVA	0	0	0	1	1	1	
POLAND	1	2	3	4	3	2	
FORMER USSR	1	0	3	3	4	3	
RUSSIA	0	1	1	1	0	2	
EASTERN EUROPE	6	15	17	13	11	11	0%
EGYPT	4	7	7	5	3	3	
ISRAEL	11	11	11	12	13	9	
JORDAN	1	2	2	2	2	0	
KENYA	2	1	2	3	3	2	
SOUTH AFRICA	3	4	4	3	3	3	
WEST AFRICA			3	3	2	3	
TURKEY	2	2	3	2	1	0	
MID. EAST/AFRICA	25	30	34	30	27	20	-26%
AUSTRALIA	27	24	29	25	28	23	
CHINA	10	11	11	11	10	8	
INDIA	1	3	3	3	3	3	
JAPAN	46	45	49	51	86	50	
NEW CALEDONIA				1	1	1	
NEW ZEALAND	10	9	10	9	5	7	
PHILLIPINES	3	3	3	3	3	4	
SRI LANKA	1	0	1	1	1	0	
KOREA	0	1	3	3	3	4	
TAIWAN	3	6	14	8	10	8	
THAILAND	4	3	2	4	5	6	
AUSTRALASIA	116	113	127	119	155	114	-26%
ARGENTINA	5	5	7	6	7	6	
BRAZIL	12	15	18	23	22	16	
COLOMBIA	1	1	1	3	1	4	
COSTA RICA	2	0	2	2	1	0	
DOMINICAN REP.	1	1	1	1	1	1	
MEXICO	8	16	17	16	12	9	
PERU			1	1	1	1	
WEST INDIES				1	1	0	
S. AMERICA	30	39	48	53	46	37	-15%
TOTAL ALL	796	821	873	845	796	709	-12%



1999 Report of the Database and Web Site Committee for SIP Executive Council

Committee structure

David Onstad, Chair
Richard Humber
James Becnel
John Vandenberg
Mark Goettel
Peg Johnson, ex officio
Juerg Huber

Committee Actions

The Committee started working on issues in December, 1998. David Onstad invited the two divisions that have not supplied information for the Web page to do so in January 1999.

Votes of January 1999:

The Committee approved the change in Web site proposed by Peg Johnson. We also approved the Bylaws amendment proposed by John Vandenberg.

Votes of February 1999

1. The Committee authorized the following.

The Microbial Control Division is publishing a "Directory of Microbial Control Products and Services" which will be distributed to all Division members with the mailing of the February Newsletter. The Division also would like to post the Directory on the Web. The entire document could be placed on the web site and ask that people use the "FIND" capabilities of their browsers to look for the keywords they are interested in. This usually works well for such a small document and would involve no extra work on Peg's part.

2. The committee agreed with the following set of purposes

Purposes of the Database and Web Site Committee

a.. To promote a single unified presence for the Society on the Internet.
b. To promote electronic access to information regarding SIP programs, special events, membership, committees, and staff.

c. To encourage units within the SIP to create and maintain individual Web pages in support of the SIP Web page.
d. To provide guidance for development of unit Web pages.
e. To review and approve all information to be linked from and presented by the SIP Web Page and publish this information on the Web Pages.
f. To review future electronic communication development for use by the Society.

3. The Committee approved the following proposal and agreed that it should be sent to the Publications Committee.

This is logical procedure because the decision involves two publications: the Web page and the Newsletter. If you vote yes, for sending on the proposal, David will ask Peg and Rich to rewrite the plan more clearly for the Publications Committee with expenses and Peg's time clearly indicated.

Peg suggested a way to disseminate the newsletter electronically to members of SIP.

I understand that publishing it on the web site without password protection would make it available to everyone and, therefore, no longer a privilege of membership. What I suggest is that we make a minor initial investment of $200 to buy Adobe Acrobat software. We can easily convert the newsletter to PDF format using this program. Anyone can view a PDF formatted file on their computer (Mac, PC or other) by downloading the free Adobe Acrobat Reader off of the Internet. This is a common way of getting documents electronically in their original, formatted form.

If members wish to receive an electronic copy of the newsletter, they can signify this on their membership form and I can send it to them via email. They can easily print it out on their local printer or simply read or search it on the computer. Think of all the mailing and printing costs this would save over time!

* to acquire Adobe Acrobat software for purpose of the future processing of any document into an easily disseminated, platform-independent file format, and

* to take advantage of a 1-directional dissemination of electronic versions of the newsletter to those who would like to receive it in such a format. This does take care of any concerns about losing members merely because it might be made available electronically.

4. The Committee agreed to place newsletter leftovers such as photos and tidbits on the Web site. Mark suggested we could put up a page on the web featuring photos of past meetings...there are so many great photos that I am unable to publish because they either are difficult to fit into a collage or because of page restrictions.

Experts Database: In July, 1999, the Committee approved the creation of a database of members' expertise for dissemination through the Society's web site? Details will be worked out at the Irvine Meeting.

Endowment Committee Report

The committee has the following purpose: the interest of the endowment fund is used to provide support for membership in the Society for Invertebrate Pathology for colleagues from developing countries or in special cases where hard currency is difficult to obtain. Usually the interest on the endowment is sufficient to pay for the dues of up to 12 persons per year.

Through personal contacts and postings, the committee has encouraged the scientific community to nominate colleagues for endowed membership. As a result, 12 colleagues were selected for endowed membership in SIP for 1999: two from Mexico and one each from Italy, Romania, Poland, Czech Republic, Brazil, Jordan, Egypt, Malagasy Republic, Russia, and People's Republic of China.

Several of these persons have been endowed for up to five years and there are several worthy recipients at large. The committee encourages all SIP members to nominate colleagues for endowed membership for 2000. Please e-mail your nomination(s) to "tadp@pop.tamu.edu".

Respecfully submitted,

Nguya Maniania
Stephen Wraight
Tad Poprawski, Chair

Report of the Founders' Lecture Committee

The members of the Founders' Lecture Committee are Professor Max Bergoin, Dr. David Ellar, Professor Harry Kaya and Professor Dudley Pinnock (Chair).

The Committee was convened three times during the Sapporo meeting, so that consideration could be given to the selection and recommendation of the 1999 Honoree and Lecturer.

The Committee's unanimous decision was that Professor Joe Tanada be recommended as the 1999 Honoree in recognition of his distinguished contributions to invertebrate pathology through his research, his publications and his teaching.

The Committee, in his absence, unanimously recommended also that Professor Harry Kaya, be the 1999 Lecturer. Harry, a distinguished former student of Professor Tanada and his co-author, has graciously accepted.

Professor James Harper, the retiring Chair of the Founders' Lecture Committee has kindly agreed to organise the commission and delivery of the Honoree and Lecturer certificates to the Irvine meeting.

As is the usual practice, the Committee will convene during the Irvine meeting to consider the recommendation of the Honoree and Lecturer for the 2000 meeting, and the Committee would welcome nominations from members of the Society.

On behalf of the Founders' Lecturer Committee,
Yours faithfully,
Professor Dudley Pinnock, Chair.

Report of the Meetings Board Committee

During this year the Meetings Board Committee (MBC) of the Society for Invertebrate Pathology (SIP) consisted of **Dr. Just Vlak**, Chair Laboratory of Virology, Wageningen University and Research Centre, Wageningen, the Netherlands, **Dr. Yoshifumi Hashimoto**, Member, Department of Applied Biology, Kyoto Institute of Technology, Faculty of Textile Sciences, Kyoto, Japan.

The XXXIth Annual SIP Meeting was held in Sapporo, Hokkaido, Japan, August 23-28, 1998, in conjunction with the IVth International Conference on *Bacillus thuringiensis* and the VIIth International Colloquium in Invertebrate Pathology and Biological Control. Close to 400 registrants attended the meeting, which was located at the Green Hotel Sapporo and enjoyed the hospitality of the city and its surroundings. The MBC is very grateful to Dr. Toshi Iizuka and his team for the organization of an excellent meeting despite adverse developments (hotel change). The meeting ran a small profit.

The MBC Chairman communicated frequently with the Organizing Committee of the XXXIInd Annual SIP Meeting to be held at the University of California at Irvine USA, to monitor progress. The organization of this meeting, co-organized by Dr. Brian Federici and Dr. Harry Kaya and their team, is well on its way; the organizers are expecting to host over 300 participants from around the world. The 2000 SIP Annual Meeting (XXXIIIrd) will be held for the first time in Mexico, organized by Dr. Jorge Ibarra, in Guanajuato. The chairman contacted Dr. Jorge Ibarra to confirm the dates of the year 2000 SIP meeting.

Dr. Broza and his team are well under way in the organization of the 2001 SIP Meeting (XXXIVth), September 2-7. In contrast to what has been proposed (Haifa) the venue is now in the kibbutz Ma'ale Hachamisha, near Jerusalem. The MBC chairman visited the conference site July 27, 1999, and met with the Israeli Organizing Committee. The host of the 2002 SIP meeting (International Colloquium) will be Dr. Flavio Moscardi. The meeting will be held in Iguassu Falls, Brasil., and the date has been set. Offers have been received to hold future meetings in the UK (2004) and South Africa (2005/2006).

The MBC has the intention to maintain and

international spread of future meetings, alternating sites between North America and other parts of the world. The approved, confirmed and tentative sites for SIP meetings through 2002 can bee seen on page 45.

The MBC is awaiting offers for the 2003 meeting, tentatively in the USA. The MBC urges the membership to consider the organization of the 2003 meeting preferable in the Northeastern USA.

Just M. Vlak, Chair

CANDIDATES FOR SIP OFFICES

The following are candidates for offices, as selected by the Nominations Committee. If anyone wants to nominate an additional person, 10 signatures of members supporting this nomination must be sent to the Secretary by January 1. **Ballots will be sent to members in early 2000.**

PRESIDENT

James D. Harper

Education: B. S. 1964 (University of Illinois); M. S. 1965 (University of Illinois); Ph.D. 1969 (Oregon State University).

Experience: Professor and Head, Department of Entomology, North Carolina State University, 1989-present; Professor, Department of Entomology, Auburn University 1986-1989; Professor, Department of Zoology-Entomology, Auburn University, Alabama 1980-1986, Associate Professor 1975-1980, Assistant Professor 1969-1975.

Membership: Charter Member 1967, Society for Invertebrate Pathology: Auditing Committee 1980; Treasurer 1980-82; Chair, Nominating Committee 1982-84 and 1990-1992; Chair, Organizational Committee for Microbial Control Division 1979-81; Chair, Microbial Control Division 1981-83, member 1981-present; Editorial Board, Journal of Invertebrate Pathology 1980-82; Chair, Publications Committee, 1985-1989; Student Contest Judging Team 1988, Chair 1994. Chair, Program Committee (Asheville) 1993; Local Arrangements Committee (Asheville) 1993; Founder's Lecture Committee, 1994-present, Chair 1995-present. Entomological Society of America: Secretary Section C 1985-86, Chair-elect 1986-87, Chair 1987-88; Program Committee 1986-88; Publications Committee 1990-1993. Southeastern Branch ESA: Student Awards Committee 4 years (Chair 1 year); Publicity Committee 1984; Program Committee 1986-90; Chair, Local Arrangements Committee 1982, 1997. Florida Entomological Society, Georgia Entomological Society, North Carolina Entomological Society, International Organization of Biological Control; Sigma Xi; Gamma Sigma Delta, XI Sigma PI.

Interests: General insect pathology with emphasis on microbial control of forest, vegetable, and row crop defoliators. Epizootiology of entomopathogens with emphasis on fungi and viruses in row crop systems.

VICE PRESIDENT

Harry K. Kaya

Education: B. S. Entomology 1962 (U. of Hawaii); M. S. Insect Ecology 1966 (U. of Hawaii); Ph.D. Insect Pathology 1970 (U. of California, Berkeley).

Experience: Professor and Chair, Department of Nematology, University of California, Davis, 1994-present; Professor, Department of Nematology and Department of Entomology, University of California, Davis, 1984- present; Associate Professor 1979-1983; Assistant Professor 1976-1978; Assistant/Associate Entomologist, Connecticut Agricultural Experiment Station 1971 to 1976.

Memberships and Professional Activities: Member, Society for Invertebrate Pathology since 1970: Member, Microbial Control Division 1981-present; Member, Journal Committee1982; Chair, Local Arrangements Committee (Davis) 1984; Chair, New Initiatives Committee 1984-1986; Editorial Board, Journal of Invertebrate Pathology, 1985-1987; Member, Local Arrangements Committee (La Jolla) 1988; Treasurer 1992-1996; Member, Basic Invertebrate Pathology Slide Atlas Committee 1997; Member, Founders' Lecture Committee 1998-present; Chair, Auditing Committee, 1999; Founder's Lecturer Honoring Professor Tanada 1999. Entomological Society of America (ESA): Secretary, Subsection Ce 1984, Chair-elect 1985, Chair 1986; Judge Student Papers Section C 1990; ESA Pacific Branch: Member, Membership Committee, 1983-1987; Member, Auditing Committee 1985, 1987; Recipient of C. W. Woodworth Award 1998. Society of Nematologists: Member, Education Committee, 1980-1983, Member, Membership Committee 1985-1986, Chair 1987; Member, Local Arrangements Committee (Davis) 1989 and (Monterey) 1999; Associate Editor, Journal Of Nematology 1984-1985, Editorial Board 1987-1989; Member, Committee for Insect Nematology 1992-1993.

Member, IOBC. Member, Hawaiian Entomological Society. Editor, Biological Control. USDA Competitive Grant Panel 1986, 1994. Member, Southeastern Regional Project S-265 since 1979-present, Secretary 1984-85, Chair-elect 1985-86, Chair 1986-88. Lecturer for Latin America Course on Microbial Control (Mexico) 1993 and (Argentina) 1996. Co-0rganizer First (1989) and Second (1995) Symposium on Entomopathogenic Nematodes.

Interests: General insect pathology with emphasis on entomopathogenic nematodes. Research areas include soil ecology, nematode behavior, microbial control of soil pests, and effect of stressors on increasing invertebrates to pathogens.

VICE PRESIDENT

Just M. Vlak

Just M. Vlak received his MSc in Biology (with honors) from the University of Utrecht in 1971 majoring in Biophysical Chemistry and Experimental Embryology.

In 1976 he finished his PhD at the same university studying adenovirus DNA replication. In the same year he assumed the position as assistant professor at Wageningen University to start up invertebrate virus research at the Laboratory of Virology and to introduce animal virology and insect pathology in the teaching program. His sabbatical year in 1980 with Dr Max Summers at the Department of Entomology at Texas A & M University, College Station, further shaped his scientific career. At present he teaches 'Insect Virology', 'Biotechnology and Crop Protection' and 'Immunotechnology' and chairs the Biology program of Wageningen University. He served as a member of the University Council (1994-1997). In 1982 he was promoted to associate professor, in 1986 to senior lecturer and in 1996 to full professor (distinguished chair). He holds an honorary professorship from the Chinese Academy of Sciences.

He served on many national and international committees including the International Committee on Taxonomy of Viruses as Executive Officer (1984-1988) and is a member of the American Society for Microbiology, the British Society for General Microbiology and, of course, the Society for Invertebrate Pathology, since 1979. He has been editor (1987-1994) and editorial board member (1986-1987; 1995-2000) of the Journal of General Virology and associate-editor of the Journal of Invertebrate Pathology (1993-1996), a position renewed in 2000. At present he is also an editorial board member of Archives of Virology.

His research over the last two decades revolved around the biology, pathology and molecular genetics of baculoviruses and its applications in biotechnology and microbial control. Major emphasis was placed on the structure and function of baculovirus genes, the ecological behavior and biosafety of (recombinant) baculoviruses in greenhouses, the cytopathology of baculovirus infections and on baculovirus genomics and phylogeny. He initiated the development of Spod-X^{R} as a commercially successful bioinsecticide for the control of beet army worm and has recently completed the sequencing of the *Spodoptera* baculovirus genome. Furthermore, he worked on the identification of the *Bacillus thuringiensis* toxin receptor and became recently interested in viruses of aquatic organisms, in particular shrimp. He published about 140 papers in peer reviewed journals and edited three books related to invertebrate pathology.

Just Vlak is a long-time member (since 1978) of the Society for Invertebrate Pathology and contributed over 55 papers to annual meetings and international colloquia. He has also contributed directly to the operation of the Society, serving in various capacities. In 1986 he chaired the organizing committee of the IVth International Colloquium on Invertebrate Pathology and Microbial Control held in Veldhoven, the Netherlands. He has been a member of the 'Meetings Board Committee' since 1987 and chaired this committee since 1994. He served on the Nominating Committee in 1995.

As vice-president he will encourage the completion of the divisional structure and further promote the international character of the Society. He will also strive to enhance the international recognition, representation and visibility of invertebrate pathology and microbial control in the biological sciences. Finally, he will facilitate the transition of the Society into the third millennium, in particular raising the interest of young scientists in invertebrate pathology by providing high quality science and an amicable social infrastructure through our Society.

TREASURER

Michael R. McGuire

Education: B. A. (Biology) 1977, Kansas Wesleyan; M. S. (Ecology, Ethology and Evolution) 1979, U. of Illinois; Ph. D. (Entomology) 1985, U. of Illinois.

Experience: Research Assistant, Illinois Natural History Survey, Champaign, IL 1979-1985; Research Microbiologist, USDA-ARS, Bozeman, MT 1985-1987. Research Entomologist, USDA-ARS, Bozeman, MT 1987-1988; Research Entomologist USDA-ARS, Peoria, IL 1988-1994; Supervisory Research Entomologist and Research Leader, USDA-ARS, Bioactive Agents Research Unit, Peoria, IL 1995-present. Affiliate appointment, Illinois Natural History Survey 1989-present; Cooperator appointment, University of Illinois, Dept. of Natural Resources and Environmental Sciences 1989-present, Visiting Professor, Universidad Autonoma de Nuevo Leon, 1996-present.

Membership and Professional Activities: Society for Invertebrate Pathology 1983-present; chair-elect, chair, past chair, Division of Microbial Control 1990-1995; member new initiatives committee, 1995-1997; co-editor Microbial Control Slide Atlas; member Division of Microsporidia. Entomological Society of America 1982-present; chair-elect, chair, past chair subsection Ce (Microbial Control Division) 1992-1995; member nominating committee and symposium selection committee, Section C 1994. S-265 Regional Technical Committee (Development and Integration of Entomopathogens into Pest Management Systems) 1988-present; chair bacteria subcommittee 1991-1997. Elected Sigma Xi and Phi Kappa Phi. American Association for the Advancement of Science 1997-present. Reviewer for IR-4 and SBIR grant proposals 1996-present. External advisor for three Ph.D. students, UANL, Monterrey, Mexico.

Interests: Microbial control of insect pests. Development of environmentally stable formulations for insect pathogenic bacteria, viruses, and fungi. Formulation of insect attractants. General insect pathology.

TREASURER

Suzanne M. Thiem

Education: B.S. (Elementary Education) 1972, Virginia Commonwealth University; M.S. (Biology) 1983, Virginia Commonwealth University; Ph.D. (Biochemistry) 1989, University of Idaho.

Experience: Postdoctoral Research Associate, University of Georgia, 1989; Postdoctoral Research Associate, Michigan State University, 1989-1991; Assistant Professor of Entomology and Microbiology, Michigan State University 1991-1997; Associate Professor of Entomology and Microbiology, Michigan State University 1997-present.

Memberships: Society for Invertebrate Pathology, 1991-present, Vice-chair, Virology Division 1995-96, Chair, Virology Division 1996-98; American Association for the Advancement of Science, 1983-present; American Society for Microbiology, 1985-present; American Society for Virology, 1991-present; Entomological Society of America, 1991-present; Sigma Xi, 1997-present, Membership Committee 1999-present.

Interests: Insect virology, host/pathogen interactions, the molecular and cellular bases of virus host range and pathogenesis.

SECRETARY

Jean-Louis Schwartz

Education: PhD in Biophysics, U. of Ottawa.

Research: Postdoctoral training in Animal Physiology, Universite de Poitiers, France. Senior Scientist, Environmental Genetics, Biotechnology Research Institute, National Research Council of Canada, Montreal. Adjunct professor, Universite de Montreal, Montreal, Quebec and Universite de Sherbrooke, Sherbrooke, Quebec. Member, Groupe de recherche en transport membranaire, Universite de Montreal, Montreal, Quebec.

Memberships: Biophysical Society, Society for Invertebrate Pathology

Interests: Mammalian and invertebrate physiology: neural and endocrine systems, particularly electrophysiology. Membrane transport. Structure-function relations in proteins. Mode of action of bacterial toxins, in particular *Bacillus thuringiensis*. Biologically-based techniques and strategies for pest management.

SECRETARY

Doreen Winstanley

Education: B.Sc. Applied Biology 1968, University of Salford: Ph.D. (Biochemistry) 1971, University of Manchester.

Experience: Research Assistant, 1971-73, Brandeis University, Massachusetts: Lecturer/teacher 1973-1987, West Sussex, UK: Higher Scientific Officer, Senior Scientific Officer, Principal Investigator and Insect Virology Group Leader Horticulture Research International, UK, 1987-present.

Membership: Society of Invertebrate Pathology (1986 -); "Member at Large", Virus Division 1998-); American Society of Virology; Society of General Microbiology (1986-)

Interests: Baculoviruses, in particular Granuloviruses, comparison of genomes, and pathologies of slow and fast killing GVs. *In vitro* propagation of GVs, production of recombinant GVs with improved efficacy against *C. pomonella*. *In vivo* studies using recombinant CpGV with reporter genes.

TRUSTEE

Basil M. Arif

Education: B.Sc. (Hon. Microbiology and Immunology) 1967, The Queen's University of Belfast, N. Ireland; M.Sc. (Microbiology) 1969, Queen's University, Kingston, Ontario; Ph.D. (Virology) 1972, Queen's University, Kingston, Ontario, Canada.

Experience: Lecturer in Microbiology, Lake Superior State University, Michigan, 1979-1980. Visiting Professor in Chemistry, Laurentian University, Ontario, 1979-1980. Visiting Scientist, Institute of Genetics, University of Cologne, Germany, 1982-1983. Visiting Scientist, Biotechnology Research Institute, Montreal, Canada, 1989. Adjunct Professor, Institute Armand-Frappier, University of Quebec, Laval, Quebec, 1990-present. Visiting Scientist at the Dept. of Virology, Wageningen Agricultural University, Holland, 1994-1995. Associate Graduate Faculty member, Dept. of Microbiology, University of Guelph, Ontario, 1999. Research Scientist at the Great Lakes Forest Research Centre, 1973-present.

Membership: Society for Invertebrate Pathology. Member of the Virus Division, American Society of Virology.

Interest: Biology and molecular biology of baculoviruses and entomopoxviruses. Virus-host interactions particularly in the midgut. Currently interested in viral host range and specificity.

TRUSTEE

Juan Ferré

Education: B.Sc. (1978) in Chemistry/Biochemistry by the University of Valencia, Spain; Ph.D. (1984) in Chemistry by the University of Valencia.

Experience: Associate Professor of Genetics, Fac. of Biological Sciences, University of Valencia (1981-1986); Professor (with tenure) of Genetics, Department of Genetics, University of Valencia (1986-present) and Head of Department (April 1999-present); Ph.D. fellow, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, U.S.A. (1982-83); Postdoctoral Research Fellow, Department of Reproductive Genetics, Magee Womens Hospital, Pittsburgh, Pennsylvania, U.S.A. (1985-86); Consultant Professor, Department of Medical Genetics, West Penn Hospital, Pittsburgh (3 months in 1987 and 2 months in 1988); Visiting Professor, Plant Genetic Systems, Gent, Belgium (3 months in 1989-90); Visiting Professor, Department of Entomology, University of Hawaii at Manoa, U.S.A. (1 month in 1993).

Membership: Member of the Spanish Society of Biochemistry (1985-present), Spanish Society of Genetics (1985-present), International Society of Pteridinology (1988-present), Spanish Society of Biotechnology (1989-present), and International Society for Invertebrate Pathology (1992-present); Editorial Board Member of the journal Pteridines (1993-present); Associate Editor of the Journal of Invertebrate Pathology (September 1999-present).

Interests: Biochemical and genetic bases of insect resistance to *Bacillus thuringiensis* (Bt). Molecular markers for Bt resistance genes. Research on novel Bt strains and insecticidal protein genes for the development of Bt-based insecticides to control agricultural insect pests.

TRUSTEE

Trevor A. Jackson

Education: B.Sc. (Horticulture) 1972, Lincoln University, New Zealand; M.Sc. (Applied Entomology) 1976, Imperial College, U.K.; Ph.D. (Entomology) 1982, Lincoln University, New Zealand

Experience; Teaching Fellow, Entomology Department, Lincoln University, New Zealand (1977 - 1980); Scientist, MAF Technology, Lincoln, New Zealand (1980-1990); Programme Leader - Microbial Control of Insect Pests, MAF Technology/ AgResearch, New Zealand (1990-1998); Programme Leader – Biocontrol and Management of Forage Pests and Diseases, AgResearch, New Zealand (1998-present).

Membership: Society for Invertebrate Pathology (1990- present); New Zealand Plant Protection Society (1982- present); Institute of Agricultural Science New Zealand (1990- present); Editorial Advisory Board, Biological Control Science and Technology (1994- present); Consejo Editorial Internacional, Folia Entomológica Mexicana (1992- present).

Interests: Microbial control of soil dwelling insect pests with emphasis on the Scarabaeidae. Discovery and development of microbes as practical biocontrol agents, e.g. Development of *Serratia entomophila* into the product Invade. Ecology and pathogenesis of non-sporeforming bacteria. Incorporating pathogens into pest management in tropical and temperate ecosystems.

TRUSTEE

lPaulo de Tarso Vilarinhos

Education: B.Sc. (Veterinary) 1979 Universidade Rural do Rio de Janeiro; M.S. (Entomology) 1991 University of Florida.

Experience: Chair of Vector Control in the Health Institute of the Federal Distritct (HIFD) 1979-1989; Research Scientist CENARGEN-EMBRAPA 1989-1992; Chair of the Zoonosis Control Unit, HIFD 1995-1998; Professor of Parasitology, Department of Patology, Universidade de Brasília 1999; Chair of Dengue and Yellow Fever Control at Fundação Nacional de Saúde 1999.

Membership: Society for Invertebrate Pathology, Society of Vector Ecology.

Interests: Microbial control of mosquitoes. Development and field use of bacterial and other mosquito pathogens for vector control populations.

MICROBIAL CONTROL NEWS

Butterfly Brouhaha

A highly publicized study performed by Losey *et al.* at Cornell University showed that Bt corn pollen had a negative impact on viability of monarch butterfly larvae (1). Though the authors of the scientific correspondence published in the journal Nature (5/20/99) reported only preliminary findings obtained from one assay, the report has touched a nerve and increased the volume on a widespread and somewhat rancorous debate among scientists, farmers, environmentalists, the agbiotech industry, anti-technology advocates, and nature lovers.

The din is not surprising considering the beautiful monarch butterfly, well known for its twice yearly migration across the North American continent, is an unofficial symbol of conservation in the US and has been dubbed the "Bambi of the insect world." Monarch numbers have been declining for decades; consequently, the recent Nature report served to further heighten fear that genetic engineering in general and Bt corn, specifically, pose a potential threat to monarchs as well as biodiversity in general.

The authors of the study asserted that three-day-old monarch butterfly larvae reared in a laboratory for four days on milkweed leaves dusted with pollen from Bt corn had a 44% mortality rate. No caterpillars died that ate leaves dusted with regular (non-Bt) corn pollen or control leaves. Feeding behavior of the larvae was also affected--the mean number of leaves consumed per larvae was lower on leaves dusted with Bt and untransformed corn pollen compared to controls.

Contrary to ominous headlines such as "Butterfly Research Proves GMO Threat to Biodiversity" that suggest the monarch species is in peril, the Nature report primarily confirms what is already known. The potential for toxic effects of Bt corn on moth and butterfly larvae has been reported in the literature since at least 1986. "Both the Environmental Protection Agency and the US Department of Agriculture have been provided data on the potential for impacts on nontarget species from Bt pollen for years," according to Val Giddings, BIO Vice President of Food and Agriculture (2).

However, despite the monarch larvae's susceptibility to Bt toxin in the laboratory, the literature is devoid of studies confirming significant mortality of larvae on milkweed near Bt cornfields in natural settings. And based on what is known about monarch migration, egg laying, and feeding patterns, experts predict little impact on monarch larvae beyond the edges of Bt corn fields for several reasons:

Location. Monarchs prefer to fly in open meadows, prairies, and wetlands and choose to lay their eggs on small milkweed plants found in fencerows, ditches, and pastures. It is unlikely, therefore, that monarch eggs would be laid on milkweed in the middle of a field of tall corn--assuming any milkweed could be found there. Milkweed is considered a noxious weed that farmers routinely eradicate from their fields with broad-spectrum herbicides. Also, most corn pollen stays within the cornfield; any pollen drift to nearby milkweed is limited because corn pollen is relatively heavy, the majority falling within eight rows. According to industry reports, ongoing monitoring of Bt cornfields reveals little pollen falling on adjacent milkweed leaves (3).

Timing. Corn produces pollen over a period of five to ten days. Based on known monarch migratory behavior, the majority of larvae are not present when corn is shedding pollen. The combination of these two factors--location of milkweed largely outside the range of pollen drift, and the limited overlap of corn pollen dispersal and monarch larval feeding periods--increases the likelihood that most monarch larvae are never exposed to corn pollen in nature at all.

Preference. Monarch larvae in the Nature study ate significantly less when pollen, both Bt and untransformed, was placed on the leaf surface. Thus it appears likely that monarch larvae in the wild would avoid pollen-tainted milkweed leaves, if given a chance. Likewise, the presence of pollen on milkweed leaves may also discourage adult butterflies from laying eggs on these plants.

Dose The Cornell scientists manually dusted corn pollen onto lightly misted milkweed leaves to "visually match densities on milkweed leaves collected from corn fields." Though the actual "dose" of Bt pollen was not measured in this trial, the amount of pollen found on milkweed leaves located several meters away in ditchrows adjacent to corn fields would likely be much less, thereby diluting the dose-response effect on larvae dining there.

Ironically, the backlash against growing Bt corn might in turn prove detrimental not only to the monarch, but to other components of the ecosystem as well. If protesters succeed in their quest to reduce or ban the planting of genetically modified corn, the recent trend toward reduced use of chemical insecticide sprays for the European corn borer (ECB) could be reversed. Since the introduction of Bt-protected corn, farmers reported fewer insecticide treatments for target pests were required, which should be beneficial for many species of insect, including the monarch (4).

Interestingly, some farmers have unintentionally limited Bt pollen drift and increased insect biodiversity by planting non-Bt refugia around boundaries of Bt-crop fields. Planted in this manner, refugia offer several benefits. In addition to providing a source of susceptible mates for insects resistant to Bt corn, refugia supply prey for beneficial insects and a buffer zone that limits Bt pollen dispersal outside the field. Also, farmers may one day have the option of planting varieties of Bt corn, currently being developed, that target Bt gene expression to the corn stalk, thereby eliminating risks associated with the presence of Bt protein in pollen.

Sources

1. Losey JE, Rayor LS, and Carter ME. 1999. Transgenic pollen harms monarch larvae. Nature 399:214.

2. Mikesell L. May 19, 1999. BIO responds to Nature report on threat to Monarch butterflies. The Biotechnology Industry Organization.
http://www.bio.org/whatis/editor_welcome.html

3. Mikesell L. June 10. 1999. Academic researchers and industryagree reports on Bt crop impact on monarch butterflies overblown. The Biotechnology Industry Organization. http://www.bio.org/food&ag/bt0610.htm

4. Rice M. 1999. Monarchs and Bt corn: Questions and answers.http://www.ipm.iastate.edu/ipm/icm/1999/6-14-1999/monarchbt.html

Ruth Irwin
Information Systems for Biotechnology
rirwin@nbiap.biochem.vt.edu

Reprinted from ISB NEWS REPORT July 1999

A New Inheritance Pattern for Bt Resistance

The European corn borer (*Ostrinia nubilalis*) is a major corn pest in the US. Estimated corn crop losses in North America caused by this pest exceed $1 billion annually. The European corn borer (ECB) is susceptible to Bt toxin, a natural insecticide produced by the soil bacterium *Bacillus thuringiensis*, and corn genetically engineered to express the Bt toxin is resistant to ECB devastation. However, there is much concern that due to selective pressure, the ECB might develop resistance to the insecticide expressed by Bt corn.

Currently, it is suggested that farmers grow transgenic Bt crops adjacent to refuge areas containing a non-Bt variety of the same crop. The refuge area is intended to supply a source of susceptible mates for any resistant insects that survive exposure to high doses of the Bt toxin. This approach, called the high-dose/refuge strategy, is designed to limit the development of insect resistance to Bt and is based on the assumption that insect resistance is a recessive trait.

However, research by Randall Higgins and collaborators (1) shows that resistance of ECB to Bt toxin is not recessive as previously thought, but appears to display the inheritance pattern of an incompletely dominant autosomal gene. Consequently, the high-dose/refuge strategy may be insufficient to limit the development of resistance to Bt by the corn borer.

Higgins grew two laboratory colonies of ECB under controlled conditions--a control colony of Bt susceptible insects and a second strain that displayed resistance to Dipel ES, a commercial formulation of Bt. The resistant strain is 70 times more resistant to Dipel ES than the susceptible colony. The eighth and ninth generations from each colony were tested for the study.

Four types of crosses were used to test the transmission of the resistance gene: 1) reciprocal parental crosses between resistant and susceptible colonies; 2) F1 X F1 crosses; 3) back crosses of F1 with susceptible borers; and 4) successive back crosses between heterozygous susceptible borers.

The data indicated that resistance to Dipel ES in ECB is limited to a single gene, which agrees with similar studies in other insects. However, in this study, resistance appeared to be inherited as an incompletely dominant autosomal gene, whereas other studies report that the resistance trait is recessive.

When comparing the various studies of insect resistance patterns to Bt toxin, it is helpful to note the species tested, the form of Bt used, and method of Bt delivery. All of these factors can affect the results. Often, resistance to one form of Bt does not imply resistance to other forms. Hence, switching from one type of Bt-corn to another may be an effective way to limit resistance development in the European corn borer. Counter to this argument is the possibility that some insects may develop resistance to multiple forms of Bt, a pattern seen in bacterial resistance to antibiotics.

These studies suggest that existing refugia strategies designed to limit the development of insect resistance to Bt may not be effective. If insects from the field are shown to develop similar dominant gene resistance, alternative strategies for the use of Bt-crops would need to be developed.

Sources

Huang F, Buschman LL, Higgns RA, and McGaughey WH. 1999. Inheritance of resistance to *Bacillus thuringiensis* toxin (Dipel ES) in the European corn borer. Science 284: 965-967.

John T. Lohr
Assistant Director, Education & Outreach
Utah State University
johnlohr@cscfs1.usu.edu

Reprinted from ISB NEWS REPORT July 1999

Science Paper on Bt Resistance in Corn Borers Challenged

In a recent issue of the ISB News Report (July 1999, see above), John Lohr described a paper in Science by Huang *et al.* ("Inheritance of Resistance to *Bacillus thuringiensis* toxins in the European corn borer") (1) that raised questions about the resistance management strategy for Bt-transgenic maize. The following was submitted in response to the Huang *et al.* paper.

Although we share the general concerns about pest resistance to transgenic crops (2, 3, 4), careful reconsideration of the report by Huang *et al.* is warranted. The results presented are not directly relevant to potential European corn borer resistance to Bt-producing transgenic maize primarily because the Bt product tested, Dipel ES, differs substantially from Bt maize. Dipel ES contains Bt spores and at least three Bt toxins (Cry1Aa, Cry2A, and Cry2B) that are not present in Bt maize. Thus, the strain studied by Huang *et al.* could be resistant to these components of Dipel ES, rather than to the toxins in Bt maize.

Huang *et al.* mentions in footnote 7 of their Science paper that neonates from their strain, which had 65-fold resistance to Dipel ES, caused more damage than susceptible insects when placed on certain Bt maize hybrids (1). However, damage by neonates is not a reliable indicator of survival on transgenic plants. Results with Colorado potato beetle show that neonates with >400-fold resistance to Bt toxin Cry3A did not survive on Bt potato plants that produce Cry3A (5). Therefore, in some cases, pests may need extremely high levels of resistance to overcome the high concentrations of toxin in Bt plants. Achieving such high levels of resistance may sometimes entail use of resistance genes and mechanisms that differ from those conferring lower levels of resistance.

The critical point about the inheritance of resistance and its implications for resistance management is whether heterozygotic insects die on transgenic plants. Huang *et al.* provide no evidence that either larvae from their Dipel ES-resistant strain or heterozygous larvae can survive to maturity on Bt maize, which means that no conclusions can be drawn about inheritance of

resistance to Bt maize.

Survival to maturity has been reported for resistant strains of diamondback moth on Bt broccoli and Bt canola (2, 6), and for resistant strains of tobacco budworm and pink bollworm on Bt cotton (4,8), but we know of no results showing survival to maturity of European corn borer on Bt maize. The failure to find such resistance in European corn borer despite extensive efforts (7) bodes well for managing resistance of this pest to Bt maize. Further, in the strains of the three species of pests that can survive to maturity on Bt plants, resistance to the Bt plants is recessive (2, 4, 8).

Sources

1. Huang F, *et al.* 1999. Inheritance of resistance to *Bacillus thuringiensis* toxin (Dipel ES) in the European corn borer. Science 284:965-67.

2. Metz TD, *et al.* 1995. Transgenic broccoli expressing a *Bacillus thuringiensis* insecticidal crystal protein: Implications for pest resistance management strategies. Molecular Breeding 1:309-317.

3. Roush RT. 1997. Bt-transgenic crops: Just another pretty insecticide or a chance for a new start in resistance management? Pesticide Science 51:328-334.

4. Liu Y-B, *et al.* 1999. Development time and resistance to Bt crops. Nature 400:519.

5. Wierenga DL, Norris DL, and Whalon ME. 1996. Stage-specific mortality of Colorado potato beetle (Coleoptera: Chrysomelidae) feeding on transgenic potatoes. Journal of Economic Entomology 89:1047-1052.

6. Ramachandran S, *et al.* 1998. Survival, development, and oviposition of resistant diamondback moth (Lepidoptera: Plutellidae) on transgenic canola producing a *Bacillus thuringiensis* toxin. Journal of Economic Entomology. 91:1239-1244;Tang J, *et al.* 1999. Survival, weight gain, and oviposition of resistant and susceptible *Plutella xylostella* (Lepidoptera: Plutellidae) on broccoli expressing Cry1Ac toxin of *Bacillus thuringiensis*. Journal of Economic Entomology 92:47-55.

7. Andow DA, *et al.* 1998. Using an F2 screen to search for resistance alleles to *Bacillus thuringiensis* toxin in European corn borer (Lepidoptera: Crambidae). Journal Economic Entomology 91:579-584.

8. Gould F, *et al.* 1997. Initial frequency of alleles for resistance to *Bacillus thuringiensis* toxins in field populations of *Heliothis virescens.* Proceedings of the National Academy of Science USA 94:3519-3523.

Bruce E. Tabashnik , Department of Entomology University of Arizona, brucet@ag.arizona.edu

Richard T. Roush. Waite Institute, University of Adelaide, rroush@waite.adelaide.edu.au

Elizabeth D. Earle, Department of Plant Breeding Cornell University, ede3@cornell.edu

Anthony M. Shelton , Department of Entomology Cornell University, ams5@cornell.edu

Reprinted from ISB NEWS REPORT September 1999

Biotechnica, A Biological Control Consortium

Biotechnica consultants is a group of highly specialised experts organised to provide the best available technology and advice to agriculture and forestry with special emphasis on biological control and integrated management of weeds, insects, pests and plant diseases. Their consultants are those who either have taken early retirement or are still engaged in active service in well renowned labs or University departments.

They possess a combination of unique skills. Their specialised services include:

1. Biological controls of weeds, insect pests and plant pathogens.
2. Controls of diseases of plants including forest trees, agricultural crops and weeds.
3. Identification of plants, micro-fungi and insects.
4. Advice on other aspects of forestry and agriculture including pest management.
5. Advice on invasive species and their effects on agriculture and bio-diversity.

The whole approach is by combining biological control with:

1. Mechanical control

2. Crop rotation
3. Minimal use of low doses of chemical pesticides.

For further information, contact:

Dr. H.K. Seth
8 Avon Road, Bishopbriggs
Glasgow, G64 1RF, United Kingdom
Tel: +44-141-563-1026; Fax. +44-141-563-3497
E-mail: 101332.2200@compuserve.com

OBITUARIES

LOIS K. MILLER

Lois K. Miller, Distinguished Research Professor of Entomology and Genetics at the University of Georgia died Nov. 9, 1999 from cancer. She was 54 years old.

Lois was dedicated to the world of insect baculoviruses. In her words she "strived to do the very best research on baculoviruses possible". Her twenty years of research on the molecular biology of the baculovirus *Autographa californica* nuclear polyhedrosis virus led to insights in virus-host interactions and the development of improved biopesticides. For her contributions to baculovirology, the Society for Invertebrate Pathology selected Lois to present the 1994 Founders Lecture.

Lois and her colleagues had two major achievements in improving baculoviruses as pesticides. They discovered that baculoviruses have a gene called egt and that deleting egt resulted in a virus that reduces food consumption by the infected insect and more rapid death. They also pioneered a technology that employs genes encoding paralytic proteins to stop insect feeding.

A remarkable aspect of Lois' research was her ability to recognize unexpected and important results. She discovered two types of baculovirus genes which are responsible for inhibiting programmed cell death (or 'apoptosis') which is induced during baculovirus infection. These genes, P35 and the IAPs, act at central points in the apoptotic pathways of vertebrate as well as invertebrate cells. These genes are now widely used to explore the process of cell death in eukaryotes. Her work in understanding the nature and function of baculovirus genes has had significant impact in diverse areas of basic and applied biology.

A native of Lebanon, Pa., Miller received her bachelor's degree in chemistry from Uppsala College in East Orange, N.J. in 1967 and her doctoral degree in biochemistry from the University of Wisconsin-Madison in 1972. After serving postdoctoral fellowships with the American Cancer Society at the California Institute of Technology and the National Institutes of Health at the Imperial Cancer Research Fund, she took a position at the University of Idaho where she initiated her research program on baculoviruses in 1976.

Lois came to the University of Georgia in 1986 as a professor of entomology and genetics. She was named a Research Professor at UGA in 1992. In 1996, she was selected by the American Society of Microbiology to receive the prestigious Chiron Biotechnology Research Award. She was elected a fellow of the American Academy of Microbiology and a fellow of the American Association for the Advancement of Science. She was elected to the National Academy of Sciences in 1997.

Lois is survived by her husband Karl, and daughter Erin. The international invertebrate pathology community has lost one of its leading figures. Her passing leaves a tremendous void in our community. Those of us fortunate to have worked in her research

laboratory are especially thankful we had Lois as an inspiring and courageous mentor and a caring friend. Her loss is deeply felt.

Mike Adang
Department of Entomology, University of Georgia

Memorial for Susumu Maeda

On June 9, 1999, a mulberry tree and plaque were dedicated to the memory of deceased SIP member Susumu Maeda. The plaque is inscribed *"He Revolutionized the Study of Insect-baculovirus Interactions"*. Prior to his unexpected death on March 26, 1998, Dr. Maeda was a member of the UC Davis Department of Entomology faculty and also Director of the Laboratory of Molecular Entomology and Baculovirology at the RIKEN Institute in Japan.

Dr. Maeda's research focused on basic and applied studies of insect viruses and their hosts, in particular baculoviruses and silkworms.

Entomology Department Chair Professor Michael Parrella, Dr. Maeda's widow Hiroko Maeda, and students and staff of the Entomology Department. Photo by M. A. Montague.

MEMBERS ON THE MOVE

After 22 years with Horticulture Research International (HRI) and its predecessors (e.g. the Glasshouse Crops Research Institute), one of the Society's former Presidents, **Chris Payne**, has decided to move on to an academic post at The University of Reading, where he becomes Professor of Horticulture and Landscape effective from 1 October 1999.

For the last nine years, Chris has been Chief Executive of HRI, a post that has been largely administrative and has allowed little or no time for research. Prior to this, he participated extensively in research on insect viruses, particularly cypoviruses and granuloviruses. He was last observed at an SIP meeting at Banff in 1997, when he enjoyed himself so much (scientifically and socially!) that he became determined to find time for more science and more SIP meetings.

The new post at Reading should provide that opportunity. Chris hopes to appoint a post-doc shortly after his arrival at Reading in one of the research areas that he hopes to progress in the new job; these areas are likely to include cypoviruses ("if anyone will fund it"), baculoviruses of pests of Brassica crops, and the potential impact of GM brassicas on non-target arthropod species.

From 1 October, Chris can be contacted at his new address:

Department of Horticulture and Landscape
Plant Science Laboratories, The University of Reading
Whiteknights PO Box 221, Reading RG6 6AS, UK.

Tel: 00 44 (0)118 931 8071;
Fax: 00 44 (0)118 975 0630
E-mail (work) c.payne@reading.ac.uk
E-mail (home) chris@chapelst.demon.co.uk

Albrecht Koppenhöfer has started a new position on August 1, 1999 as Turfgrass Entomologist and Assistant Extension Specialist at Rutgers University in New Brunswick, New Jersey. He received his Ph.D. at the University of Giessen, Germany working on biological and integrated control of the banana weevil in Kenya. In the following 6 years, he worked with Harry Kaya and Bruce Jaffee (University of California, Davis) as a

visiting scientist and postdoc on ecology and application of entomopathogenic nematodes and other insect pathogens. His research focus at Rutgers will be the biological and integrated control of turfgrass pests. Albrecht's new address:

Rutgers State University, Pest Management Office
Blake Hall, 93 Lipman Dr.
New Brunswick, NJ 08901-8524
Ph: (732) 932-9802;; Fax: (732) 932-7229
E-mail: koppenhofer@aesop.rutgers.edu

Fernando E. Vega has moved from USDA's European Biological Control Laboratory in Montpellier, France, to USDA's Insect Biocontrol Laboratory (IBL) in Beltsville, Maryland. During his tenure at EBCL, Fernando conducted foreign explorations for pathogens of the diamondback moth, codling moth and coffee berry borer, as well as laboratory research on the production and formulation of entomopathogenic fungi. At IBL, Fernando will be focusing on the development of biocontrol methods against the coffee berry borer, a serious pest of coffee throughout the world. His new address is:

Insect Biocontrol Laboratory, USDA, ARS
Bldg. 011A, Rm. 214, BARC-West,
Beltsville, Maryland 20705-2350, USA
Tel:(301) 504-5101; Fax: (301) 504-5104
E-mail: fvega@asrr.arsusda.gov
Web: http://www.barc.usda.gov/psi/ibl/iblhome.htm

Moving?

Please prepare a paragraph including information about past and present postings, new address, telephone, fax and e-mail address and send to your Newsletter Editor for inclusion in the Members on the Move section in the next issue of the Newsletter. Editor's address can be found on page 2.

Also, please inform the SIP Office of your new address. The address of our new SIP Office can be found on page 2.

PUBLICATIONS

Nontarget Effects of hBiological Control
Edited by Peter A. Follett and Jian J. Duan
1999, 336 pp. Hardbound,
ISBN 0-7923-7725-7
US$ 140, NLG 325, GBD 96.75

Nontarget effects of biological control is the first book of its kind. The environmental safety of biological control has come under scrutiny due to several areas of concerns: the irreversibility of alien introductions, the prevalence of host switching to innocuous native or beneficial species, dispersal of the biocontrol agent to new habitats away from croplands, and the lack of research on the efficacy and impact of biocontrol attempts.

The debate has been strongly polarised between conservationists and biological control practitioners. Nontarget effects of biological proposes that retrospective analyses of systems in place in which nontarget effects are now documented or suspected provide the necessary information for planning and evaluating future releases to reduce risk. The book presents case histories of past biological control introductions from island and continental ecosystems.

Kluwer Academic Publishers
Tel: (781) 871-6600; Fax: (781) 681-9045
E-mail: Kluwer@wkap.com

Maintenance of Human, Animal, And Plant Pathogen Vectors. 1999.
Editors: Karl Maramorosh and Farida Mahmood, **328 pp, ISBN: 1-57808-049-5**

This volume is an excellent compendium of chapters related to the laboratory handling of vectors that transmit pathogens. No similar handbook has been available until now. Standard and specialized methods used by medical, veterinary, entomology and plant pathology experts are described and illustrated. Pitfalls and difficulties encountered during laboratory maintenance of insects, ticks, nematodes and fungi, safety measures to prevent contamination and escape

have been stressed. The 16 chapters, written by 23 specialists from America, Asia and Europe, cover the handling of mosquitoes, ticks, black flies, culicoides, triatomine bugs, body lice, aphids, whiteflies, leafhoppers, piesmids, thrips, nematodes, fungal vectors, sterile techniques and cell culture of vectors.

The artificial borders between the diverse fields of interest have been bridged to acquaint researchers with the work and methods of investigators in distinct, and yet related domains. The contributors of this manual are leading experts in their fields. This book will be valuable to microbiologists, medical and veterinary researchers, entomologists, virologists, parasitologists, plant pathologists, geneticists, biocontrol specialists, as well as graduate students in biomedical, veterinary and agricultural research.

Science Publishers
P.O. Box 699
Enfield, NH 03748, USA

Insect Mycology
Pu Zhelong & Li Zengzhi (editors)
1992, Anhui Publ. House of Sci. & Technol., Hefei, Anhui, China.
715 pp., 50 yuan (RMB)

This editted volume on insect mycology covers the breadth of the cross-disciplinary field of insect mycology, the field spanning the diversity of relationships between insects and fungi, and is truly unique in its comprehensive nature. It is the collaborative effort of 15 authors from universities and institutes in 9 Chinese provinces and was published in 1992. The main text is in Chinese but an extensive table of contents is provided in English along with English subject, fungal, and insect host indices. A fourth index is a checklist of the 245 species of entomopathogenic fungi in 48 genera in China, including latin names, Chinese names (many of which are new), hosts and locations.

The book begins with 7 color plates, each with from 6-11 photographs. It is organized by major sections on basic biology and epizootiology, classification, application for control and methods of study. Within the first section of the book, morphology, biology, physiology, mycotoxins, pathology, epizootiology and fungal genetics are covered. The following classification section is abundantly illustrated with excellent line drawings and covers the breadth of insect pathogenic fungi. The application section includes treatments on IPM, agriculture, forestry, medical, safety and mass production. The final methodology section includes information on fungal collection and storage, isolation, electron microscopy, biochemical techniques, protoplast fusion and bioassay.

Among the references cited, 239 are Chinese while 383 are from sources using the western alphabet, demonstrating that this work provides an unparalleled integration of western and eastern knowledge of insect mycology. This book will be extremely useful to mycologists, insect pathologists and biological control practitioners who can read Chinese and is very reasonably priced. English readers can look forward to a translation by Dr. Li in the future.

Ann E. Hajek
Department of Entomology, Cornell University
Ithaca, NY 14853-0901

Journal of Invertebrate Pathology Available

The following duplicate issues of JIP are available for the price of postage.

v.1 - v.16 (1959-1970) bound in green
v. 17 - v.40 (1971-1982) unbound
v. 55 - v.58 (#1-3) (1990-1991) unbound

In addition, the following are missing and we would be most grateful for a donation if anyone has extra issues:

v. 42 (1), v.47 (2), v.49(3) and v.50(3).

Please contact the Newsletter Editor for more information.

POSITIONS AVAILABLE

Posdoctoral Position

Postdoc position available in Department of Biology, Utah State University, Logan, Utah. Position will investigage the effects of UV/B on the survival of *Metarhizium anisopliae*. Candidate must have strong training in molecular biology, preferably in fungi; an interest in connecting gene expression with biological phenomenon; ability to work independently and as team member; ability to prepare results for presentation at meetings and for publication.

Position available 1 November 1999. Submit CV, three letters of reference to:

Dr. Donald W. Roberts
Department of Biology, Utah State University,
5305 Old Main Hill, Logan, UT 84322-5305
Tel: (435) 797-0049; Fax: (435) 797-1575
E-mail: dwroberts@biology.usu.edu.

Post-doctoral Research Molecular Biologist

The United States Department of Agriculture, Agricultural Research Service, Insect Biocontrol Laboratory in Beltsville, Maryland is seeking applications for a Research Molecular Biologist. As a post-doctoral research scientist, the incumbent will study the ability of a unique insect virus, a polydnavirus, to integrate DNA into insect cells in vitro. This will include molecular characterization of the polydnaviral genome, study of the virus segments that integrate in insect cells in vitro, and analysis of activity of genes coded within integrating genome segments through a variety of molecular methods. This research will form the groundwork for development of a polydnavirus-based vector construct for transformation of insect cells.

Candidates must have a Ph.D. in molecular biology, virology, microbiology or related areas, and possess skill in a variety of molecular biological techniques. This is a 2-year, full-time position, available immediately. There are some citizenship restrictions. Salary is $40,714 to $63,436 commensurate with experience. Contact:

Dawn Gundersen-Rindal
Insect Biocontrol Lab
BARC-West, Bldg. 011A, Rm 214
Beltsville, MD 20705-2350
Tel: 301-504-6692 ; Fax 301-504-5104
E-mail: dgunders@asrr.arsusda.gov.

USDA is an equal opportunity provider and employer.

USDA Postdoctoral Position in Microbial Control

The United States Department of Agriculture, Agricultural Research Service is recruiting for a postdoctoral Research Associate to work on developing microbials as biological control agents of varroa. The successful candidate should have experience with entomopathogenic fungi; experience with mites, varroa, honeybees, or molecular genetics of fungi is desirable. Incumbent will design and conduct experiments to identify pathogens of varroa, develop application technologies, and test for non-target effects on bees. To qualify, the candidate should have received a Ph.D. (preferably entomology or microbiology) within the last 4 years, but candidates with more postdoctoral experience can be considered. Position is for 2 yrs, ranks GS11/12 ($39,960-47,891 annual). Please submit a letter of application, CV, college transcripts, and the names, addresses and phone numbers of 3 references to

Dr. R. R. James
USDA-ARS-SARC
Beneficial Insects Research Unit
2413 E. Hwy. 83, Weslaco, TX 78596-8344
Tel: (956) 969-4856
rjames@rsru2.tamu.edu

USDA is an equal opportunity provider and employer.

Insect Molecular Virology Post-doc

Project. An NSF-funded postdoctoral position is available to study an unusual group of insect viruses, the polydnaviruses. The project will involve characterization of the viral genome at the molecular level and exploring the relationships between the organization of the viral genome and the functions of individual viral genes. The project will involve

standard DNA technologies (Southerns, Northerns, cloning and sequencing) as well as tissue culture skills to perform *in vitro* assays and produce recombinant proteins from insect cells. The successful candidate will also have the opportunity to participate in other projects in the lab that involve expression of polydnavirus genes in baculovirus systems, protein purification to purify active proteins and molecular techniques to isolate the active viral genes.

Candidate. The ideal candidate would have experience in molecular biology and tissue culture although candidates with experience in one of these two areas and evidence of strong productivity will be considered. I am particularly interested in individuals with broad training who readily understand and perform new techniques and are able to trouble-shoot when problems arise with a given procedure.

Job description. This position will be available in the spring of 2000. Funding is anticipated for two years at approximately $25,000 US/yr with supply and travel funds.

Environment. The University of Kentucky has a large and diversified biological faculty and strongly supports both basic and applied research. A University wide Molecular Virology Group provides a particularly strong interactive research environment. My laboratory is well equipped with both molecular and tissue culture facilities. Two graduate students, 2 full time molecular biology technicians and a postdoctoral associate are currently in the lab. I anticipate that the successful postdoctoral associate will become an integral part and leader in the lab and develop a broad set of current molecular techniques in this research. The University of Kentucky is located in Lexington, a city of ~250,000 in the heart of the Kentucky Bluegrass area. Outstanding outdoor recreational areas are nearby and readily accessible.

To Apply. Contact me by return e-mail or send curriculum vitae with names, addresses and phone numbers of 3 references to:

Bruce A. Webb
Dept. Entomology, University of Kentucky
Lexington, KY 40506
Tel: 606-257-7415;
Fax: 606-323-1120
E-mail: bawebb@pop.uky.edu.

Senior Scientist

Entomos, LLC has an opening for a senior scientist working on our new bacterial technology for biocontrol of plant parasitic nematodes. A Ph.D. in microbiology is preferred, as is experience in bacterial physiology or process development with spore forming bacteria. Entomos has recently received substantial venture capital backing and is in the process of expansion. We offer a competitive salary, generous benefits and an employee stock plan. Please send a resume and list of three professional references to:

James H. White, President
Entomos, LLC
4445 SW 35th Terrace, Suite 310
Gainesville, FL 32608, USA
Tel: 352-371-6490; Fax: 352-371-4181
E-mail to: predator@biotech.ufl.org.

POSITIONS WANTED

Position wanted in Microbial Control and IPM

An energetic, hard-working Ph.D. student (expected graduation: December 1999) wants to pursue his career in the field of integrated pest management (IPM) with emphasis on insect pathogens in related research institutes, universities, or government agencies. Being well trained in both Insect Pathology and Entomology, he has worked on the biological control of pine caterpillars, *Dendrolimus* spp. (Lepidoptera: Lasiocampidae) and gypsy moth, *Lymantria dispar* (Lepidoptera: Lymantriidae) for more than 7 years. His current work on the biological control of tarnished plant bug, *Lygus lineolaris* (Hemiptera: Miridae) using entomopathogenic fungi has resulted in the selection of several promising fungal isolates for the control of this pest in the future.

He has the ability to work independently in various projects. He also enjoys interacting with other scientists under a multidiscipline environment. It is his passion for exploring unknowns that keeps him interested in this

area of research and his willingness to learn from experienced people continuously helps him to fulfil his life goals. If you would like to have him work for you, please contact

Houping Liu
Entomology Research Laboratory
The University of Vermont
Box 53400, Burlington, VT 05405-3400, USA
Tel: 802-656-5441; Fax: 802-658-7710
E-mail: hliu@zoo.uvm.edu

Microbial Control and Integrated Pest Management

A hardworking researcher who recently earned a Ph.D. degree in Entomology wants to pursue his career in the field of integrated pest management (IPM) with emphasis on microbial control, and use of transgenic plants for pest management, in related research institutes or departments. He has experience of more than 7 years working with management and control of insect pests of various crops, and efficacy testing of chemical and non-chemical pesticides.
His Ph.D. work on effect of *Bacillus thuringiensis* and transgenic cotton on lepidopterous larval pests of cotton has provided useful results for management of these insects. He has very good communication skills and has presented his research work at several international scientific meetings. With a good academic background and a passion for hardwork, he has the ability to work out tough assignments. If you would like to have him work for you, please contact him:

Muhammad Ashfaq,
106-7905 Querbes Av.
Montreal, QC, H3N 2C2 Canada
Tel: (514)279-4134
E-mail: muhammadashfaq@hotmail.com

Position in Microbial Control Using Fungi

An entomopathologist is looking for a suitable position: I have about 7 years of experience working with fungal pathogens for pest control. I have recently finished my post-doc assignment with the International Institute of Tropical Agriculture, Benin working on the microbial control of mites on cassava using *Neozygites floridana* and *Hirsutella thompsonii.* Prior to this, I had worked on evaluating the potential of *Pandora neoaphidis* for tobacco aphid control for my Ph.D. from Virginia Tech.

I would like to expand my expertise to other groups of pathogens if an opportunity arises. I live in Canada right now and you can contact me at surendra_d@hotmail.com.

Surendra Dara

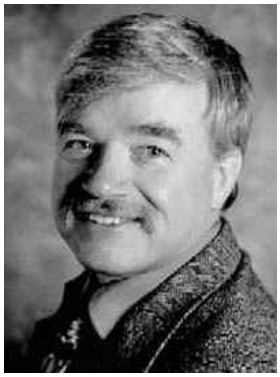
MEMBERS IN THE NEWS

Bob Granados has been selected as a Fellow of the Entomological Society of America. This award is presented annually to Society members who have made important contributions to entomology and to the ESA, and represents one of the highest honors bestowed by the Society. This prestigious award will be presented during the Plenary Session of the ESA Annual Meeting, which is being held during Dec.12 - 15, 1999, in Atlanta, Georgia.

Bob Granados

Bob, who holds the Charles E. Palm Distinguished Chair at Boyce Thompson Institute, is being recognized for his pioneering work in the development of new insect cell lines for expression of recombinant proteins and pharmaceuticals, and his research on the molecular basis of baculovirus pathogenesis.

Dr. Randy Gaugler is the 1999 recipient of the Entomological Society of America Award for Excellence in Integrated Pest Management. The society is honoring Gaugler for his long-term research focus on the development of environmentally benign alternatives to chemical pesticides. Gaugler was also just elected to the rank of Fellow of the American Association for the Advancement of Science (AAAS). He was selected for "outstanding scholarship at the interface of entomology and nematology." He previously had been elected a Fellow of the Society of Nematologists.



Randy Gaugler

The Charles A. and Anne Morrow Lindbergh Foundation announced that **Dr. Parwinder Grewal,** Assistant Professor at Ohio State University, Wooster, Ohio, has been awarded a 1999 Lindbergh Grant for his research project entitled, "Multimedia Aids and Training Programs for Using Insecticidal Nematodes as an Alternative to Pesticides in Agriculture."

Despite growing public concern about the use of insecticides in agriculture, and the environmental hazards insecticide cause, biological alternatives comprise less than 1.5% of the $8 billion global insecticide market. Dr. Grewal plans to educate extension specialists, county agents, and crop consultants in using insecticidal nematodes effectively for three key commodities; ornamentals (such as flowering trees and shrubs), small fruits (berries and grapes), and turfgrass, with the idea that they will then educate farmers in proper storage and application methods. By developing a multi-media training program, including video, fact sheets, slide sets, methos manual, computer disk, and a website backed by an electronic expert panel, he can provide extension personnel and crop consultants with the tools to assist farmers in using nematodes to achieve optimal results. Implementation of the environmentally-sound grower practices will reduce the use of toxic pesticides, enhance health and safety of humans, livestock, pets, and wildlife; improve environmental quality; foster the resurgence and establishment of the natural pest control agents; leading to the preservation of natural resources and sustain ability.

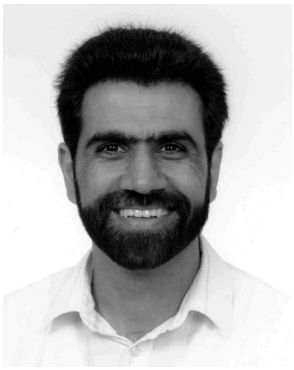
Grewal was among 13 others who received 10 Lindbergh grants, and were chosen from over 200 applicants from around the world. Grants are made in amounts up to $10,580, a symbolic amount representing the cost of building Charles Lindbergh's plane in 1927, the "Spirit of St. Louis." To date, nearly $2 million has been awarded to more than 200 researchers. Four other applicants were selected to receive Certificates of Merit, a designation for those projects that are considered worthy of special recognition, but receive no funding.

Lindbergh grant applicants undergo a rigorous five-step review focussed on evaluations by two independent review groups, including a 100-member Technical Review Panel. This panel is comprised of knowledgeable and respected individuals drawn from the various fields in which Lindbergh grants are made. 'Because of the standards employed by the Foundation's grants program, it has earned international credibility which enables many Lindbergh grant recipients to secure additional funding to continue their important work," said Halliard.

The Charles A. and Anne Morrow Lindbergh Foundation is a non-profit organization based in Anoka, Minnesota, whose mission is to further Charles and Anne Morrow Lindbergh's vision of a balance between technological advancement and environmental preservation. In addition to the grants program, the Foundation also presents an annual honorary Lindbergh Award for outstanding contributions over many years to Charles and Anne's shared vision of balance. The Foundation also sponsors educational and motivational programs that promote the concept of balance, such as symposiums and publications.

The annual deadline for Lindbergh Grant applications is in mid-June. Those who are interested in receiving an application for funding inn 2001 should contact:

The Charles A. and Anne Morrow Lindbergh Foundation, 2150 Third Avenue North
Suite 310, Anoka, MN 55303-2200, USA
Tel: (612) 576-1596
web: www.isd.net/lindbergh



Parwinder Grewal

FUTURE MEETINGS AND WORKSHOPS

The Microbial Control Division solicits ideas and proposals for their symposium for the annual meeting in Guanajuato, Mexico, August 13-18, 2000.

Please send a titles and descriptions of symposia, and list of speakers if possible to Lerry Lacey, (llacey@yarl.gov) or Wendy Gelernter (gelernt@pace-ptri.com).

VIIIth International Colloquium on Invertebrate Pathology and Microbial Control and VIth International Conference on *Bacillus thuringiensis*, Foz do Iguassu, Brazil, August 18-23, 2002

With about 250,000 inhabitants, Foz do Iguassu is located on south-eastern Parana State at 183 metres above sea-level. The climate is sub-tropical and the average temperature is 27 degrees centigrade. It is possible to see rivers and lakes, as part of the ecological paradise and of course, the wonderful Iguassu Falls. For shopping purposes, there is an opportunity to stop for a visit at two duty free town, Ciudad del Este (Paraguay) and Puerto Iguazu (Argentina).

More information will be provided in the SIP Newsletter in due course.

Flavio Moscardi, Chairman

For more information, please, contact:

PJ Eventos Feiras & Congressos
Rua: José Risseto, 1023 Santa Felicidade
Curitiba-Paraná-Brasil, 82 015010
Tel: +55 41 372 1177; Fax: +55 41 3721415
E-mail: pjeventos@pjeventos.com.br
Home page: www.pjeventos.com.br/inv.pathology

Future SIP Meetings Schedule

2000: Guanajuato, August 13-18. Organised by Jorge Ibarra. Details in the next Newsletter.

2001: Israel, This meeting will be held at Ma'ale Hachamisha, part of a kibbutz in a beautiful location 20 km from Jerusalem, on Sept. 2-7 and is being organized by Dr. Broza.

2002: Iguassu Falls, This meeting will be held Aug. 18-23 in this scenic location in a hotel with excellent international-level facilities.

2003: probably northeastern USA, second half of August

2004: probably Europe, second half of August

The 7th Symposium of Biological Control, Poços de Caldas, MG, Brazil, June 3rd - 7th, 2001

The 7th Symposium of Biological Control (SICONBIOL) will be held in Poços de Caldas, MG, Brazil, from June 3rd to 7th, 2001. This event is organized by the Departamento de Entomologia/UFLA and Centro Nacional de Pesquisa do Milho e Sorgo/EMBRAPA, with the support of the Sociedade Entomológica do Brasil. PJ Eventos is the Execitive Secretariat of the symposium.

This event will be the first meeting on biological control in the 21st century in Brazil and will be an important forum for discussion of accomplished results and proposal for new technologies. Environmental quality and safety, and perspectives of increasing use of biological control will be some of the points that will be discussed in different conferences and sessions. Industries, researchers, professors and students working on biological

control of agricultural, medical, veterinarian and urban pests will participate of a pleasant enjoyable working environment in this Brazilian city during this period.

Further information can be obtained at: http://www2.ufla.br/ siconbio

The deadline for submission of abstracts is March 16, 2001. For questions on scientific matters about conferences and abstracts, authors can contact the Scientific Committee at: siconbio@ufla.br

Indiana University Offers Recombinant DNA Laboratory Courses, June 18-21, 2000

During the summer of 2000, Indiana University's Department of Biology, in cooperation with the I.U. Division of Continuing Studies, will offer two week-long laboratory courses focussing on the techniques and procedures used in recombinant DNA research and their application. Participants also have the opportunity to work with a DNA sample of their own research organism, if they choose. Both courses will be taught on the Indiana University campus in Bloomington.

Recombinant DNA Technology: The first course, "Recombinant DNA Technology", will introduce participants to procedures involved in recombinant DNA work and to the molecular aspects of genetic engineering. Most of the procedures that are taught to biology graduate students in the recombinant DNA section of a a graduate techniques course at Indiana University will be covered. Participants can make arrangements to isolate gnomic DNA from thier own research organisms during the course.

"Recombinant DNA Technology" is designed for those with a basic understanding of the structure of DNA and elemental genetics and with a minimal understanding of enzymes and biochemistry.

Introduction to RFLP and Fingerprinting Analysis, RAPD Anaylsis, and DNA Sequencing: This course will provide participants with the opportunity to learn about the materials and techniques used in recombinant DNA research. Participants may bring a DNA sample to sequence during the course.

The course is designed for people with a basic understanding of the structure of DNA and a minimal understanding of enzymes and biochemistry. Previous experience with PCR analysis, RFLP analysis, and DNA sequencing is not necessary.

The instructor for both courses if Dr. Stefan J. Surzycki, associate professor of biology at Indiana University, and author of *Basic Techniques in Molecular Biology*, Springer Lab Manual Series, to be published January 2000.

The registration fee for each course is $890. The fee for those enrolling in both courses is $1,600. The fees include all instruction, laboratory supplies use of equipment, and lab manuals. Registration deadline is May 12.

Jane Clay
Bloonmington Division of Continuing Studies
Indiana University, Owen Hall 204
Bloomington, IN 47405
Tel: (812) 855-6329; E-Mail: JClay@Indiana.edu
Web: http://www.indiana.edu/ scs/iub/DNA.html

PAST MEETINGS AND WORKSHOPS

Evaluating Indirect Ecological Effects of Biological Control. An International Symposium of the Global Iobc, Montpellier, France, 17-20 October, 1999.

Over 16 SIP Members attended this symposium which brought together over 160 participants from 28 countries to address concerns over the environmental safety of natural enemy introductions (i.e. classical biological control). The real and potential indirect ecological effects of biological control and the development of meaningful risk assessments to address these were the key components of the symposium.

The Symposium was kicked off on Sunday evening with a welcome cocktail at the Holiday Inn Metropole in the heart of Montpellier's lovely historic town center. Despite suffering a direct lightening strike, which temporarily knocked out the power and caused havoc with the audio-visual equipment, the Symposium was officially opened at the Agropolis auditorium, more or less on time,

on Monday morning, by the President of Agropolis, M. de Nuce de Lamothe. Participants were then welcomed by the President of C.I.L.B.A, Alan Kirk.
The President of IOBC, Jeff Waage presented the opening address where he outlined the difficulties that biological control was facing, in the light of new concerns regarding biodiversity and environmental integrity. Biocontrol practitioners will increasingly face challenges regarding potential risks of their planned introductions. He noted that sound, ecologically-based methodologies for predicting and assessing impacts of agents of targets and non-targets are very much needed.

The rest of the day was devoted to presentations by invited keynote speakers who dealt with a wide-range of subjects from community interactions and the contribution of ecological modeling to ecological aspects of using micro-organisms to control plant diseases. The grand finale of the day was a computer generated presentation by "Del" (Ernest Delfosse) which could have been easily entitled "Expanding the realms of power point: how to push the limits with color, movement and sound." Unfortunately the program crashed halfway through the presentation! Tuesday and Wednesday mornings were dedicated to 22 contributed presentations and over 30 poster presentations.

Although much rain was experienced throughout the Symposium, miraculously the clouds parted on Tuesday evening and participants enjoyed a splendid evening at the Chateau de Flaugergues, a 17th century "folie" owned by Count Henri de Colbert, which is still in the hands of the original family. After sampling many of the fine wines produced at the Chateau, the delegates were provided with a tour of the Chateau. Dominique Coutinot, as well as most of the other delegates, were very impressed to find in the Chateau's library the complete 27 volumes of the writings "Histoire naturelle 1774-1789" of the famous French naturalist, Georges Leclerc de Buffon. After the tour, delegates were treated to an excellent dinner which was served in what was formerly the Chateau stables.

A workshop, led by Keith Hopper and Robin Huettel was organized on Wednesday. Participants were broken up into about a dozen groups. A chairperson was selected for each group and strict guidelines were provided on how to proceed. For instance, one of the responsibilities of the chairperson was to "protect individuals and their ideas from attack." Each group had to brainstorm, consolidate ideas and then prioritize. In the first round, each group had to come up with, and prioritize pertinent questions.

Once all of the groups priorities were collated, each group was then given a specific question to address. Questions ranged from "How do we choose the species to consider for non-target effects?" to "How do we identify and achieve an ecologically valuable community after introduction of biological control agents?" Chairs of each group then summarized their results at a plenary session.

In the closing address, the chief Administrator for the USDA-ARS, Mr. Floyd Horn summarized that "the symposium consisted of over 160 delegates from 28 countries meeting together for 3 days to formulate questions that they then proceeded to answer the way they wanted to."

The Abstracts of the Symposium have been published as IOBC wprs Bulletin 22 (2), 1999 and can be obtained from the IOBC General Secretariat, INRA - Centre de Recherches de Dijon, Laboratoire de Recherches sur la Flore Pathogene dans le Sol, 17, rue Sully - BV 1540, F-21034, Dijon Cedex, France. In addition, a book, edited by Eric Wajnberg, John Scott and Paul Quimby, addressing the subject and summarizing the workshop results will be published in the near future by CABI International.

Mark Goettel

Carlos Lange, Heikki Hokkanen, Ann Hajek, Jorgen Eilenberg, Lene Thomsen, Al Cameron, Mary Barbercheck, Deise Capalbo, Kevin Hackett, Bettina Moser, Ole Skovmand, Mark Goettel (pouring the wine), Jenny Cory, Guy Mercadier, Matt Thomas, Judy Myers

NEWS ITEMS

Arthropod Pathogen Germplasm Centre at ICIPE

The International Centre of Insect Physiology and Ecology (ICIPE) based in Nairobi, Kenya, conducts mission-oriented research on sustainable strategies for the management of arthropod plant pests and disease vectors. As part of its on-going research activities, ICIPE has recently established a Germplasm Centre to act as a repository of arthropod pathogens (fungi, bacteria and protozoa) for use against a wide range of target pests, including locusts and grasshoppers. These pathogens will be made available upon request to investigators in other institutions. The activities of the Centre include isolation, culture, identification, and preservation. Samples from Africa and elsewhere are welcome for inclusion in the collection. Depositors will be asked to supply the following information:

* Scientific name of the microorganism (if known)
* Host source of isolation: order, family, genus, species (if known)
* Date of collection and date of isolation
* Collection location (town/province/state/country/climate)
* Depositor's reference number (if available)
* Name of isolator
* Address, telephone number and address of collector, isolator, or depositor

The project is funded by USAID's Africa Bureau and is managed and implemented by Virginia Polytechnic Institute and State University (USA) with seven other consortium partners in Africa [Desert Locust Control Organization for Eastern Africa (DLCO-EA), Direction de la Protection des Végétaux (DPV/Senegal), Locustox (Senegal), International Centre of Insect Physiology and Ecology (ICIPE, Kenya), USA (ACDI/VOCA), and Europe (European Biological Control Laboratory (USDA/EBCL, France) and the Institut National de la Recherche Agronomique (INRA, France).

Jean Nguya K. Maniania/Elisabeth Ouna,
E-mail: nmaniania@icipe.org/eouna@icipe.org
International Centre of Insect Physiology and Ecology (ICIPE), P. O. Box 30772
Nairobi, KENYA
Tel: 254-2-861680-4, 802501;
Fax: 254-2-860110/803360
E-mail: icipe@icipe.org
http://www.icipe.org/germplasm/htm

ON THE WEB

Updated! "References Dealing with Formulations of Fungal Entomopathogens"

The list of references in the SIP web site (http://www.sipweb.org), compiled by F. E. Vega, has been updated and now consists of more than 175 references.

SIP Newsletter on the Web at "www.sipweb.org"

EDITOR'S NOTES

My apologies for the tardiness of this issue. I was just snowed under with many deadlines and by the time I found time to put the Newsletter together, I realized that some important articles were still missing.

As you have read in the President's report, I have decided that after 7 years as Newsletter Editor, it is time to pass the job onto another! There are already several volunteers who have stepped forward and our President will be appointing the new Assistant Editor early in the New Year. After a period of apprenticing, I will pass the Editorship to the Assistant.

Many thanks to all who contributed to this issue. Special thanks to Betty Davidson, Toshi Iizuka, Peter Krell, Don Roberts,and Lee Solter, for providing photos of the Irvine Meetings.

I take this opportunity to wish everyone a very Merry Christmas and all the best in the New Year.

The Editor

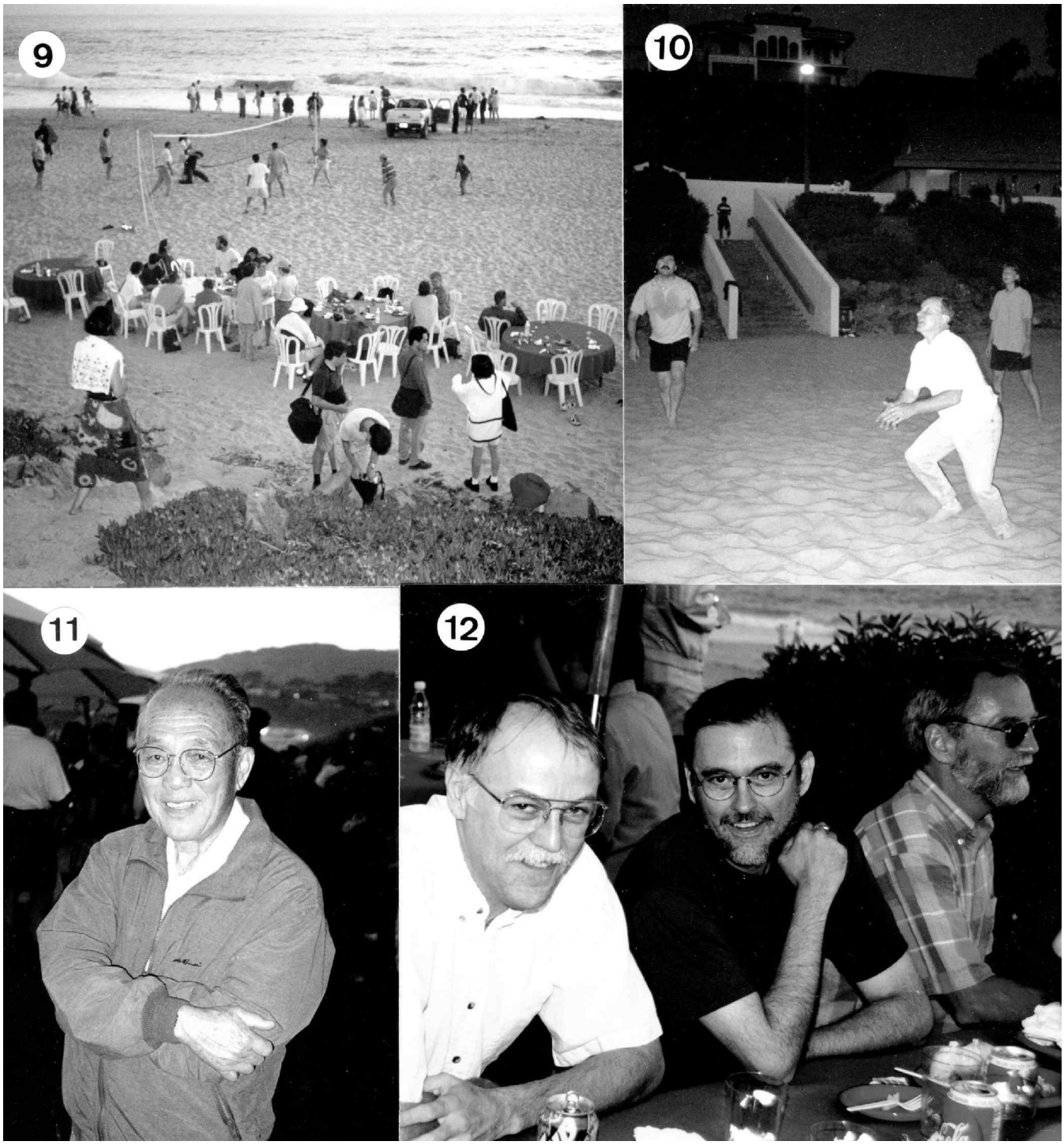
Deadline for the next Newsletter is 30 January, 2000

1. Dudley Pinnock, presents award to the 1999 Founders Honoree, Dr. Yoshinori, "Joe" Tanada and 2) to the 1999 Founders Lecturer, Harry Kaya; 3. Mark Goettel, Flavio Moscardi, Daniel Sosa-Gomez and Toshi Iizuka; 4. Yoshi Hashimoto and family.

Photos from Irvine

5. Start of 5-K race; 6. And they're off!; 7. Lunch and wine tasting; 8. Brian Federici pouring Champagne on the bus; what a host!!

Photos from Irvine



9. Beach BBQ at Laguna Beach; 10. Vladamir Gouli prepares to tackle the ball as Jorge Ibarra watches on; 11. Joe Tanada; 12. Stephen Wraight, Stefan Jaronski and Jeff Lord

Photos from Irvine

13; Members of the Organizing Committee and helpers; 14. Vince D'Amico. "For my next act, I swallow the mike"; 15. The WAU Laboratory Group; Just Vlak, Primitivo Caballero, Elaine Arif, Johannes Jehle, Basil Arif, Peter Krell and Delia Muñoz-Labiano; 16. Jen Altre and Takuji Noma having a great time on the dance floor.

Photos from Irvine