sip

NEWSLETTER

society for invertebrate pathology

VOLUME 33, NUMBER 3
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GUANAJUATO HOSTS OVER 300 PARTICIPANTS

The 33rd Annual Meeting of the Society for Invertebrate Pathology and the 5th International Conference on *Bacillus thuringiensis* was held at the University of Guanajuato, in the colonial city of Guanajuato, Mexico on August 13-18, 2000. There were 317 registered participants, including 69 students from 28 different countries. In addition, 41 companions were also registered.

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Deadline for the next Newsletter is January 15, 2001.

PAY FOR YOUR SIP MEMBERSHIP ONLINE!

Enclosed with this Newsletter you should find a membership renewal form. (Note: Renewal forms are being mailed separately to those choosing not to receive a hard copy of the Newsletter). However, starting this year, SIP is offering a new service to its members. Instead of paying for your membership using the enclosed renewal envelope, you can renew online! The site is secure, your credit card information will be kept on a secure server (SSL). You may also fill out a membership form ONLINE and then mail your check in separately. Look for the link "MEMBERSHIP" on our home page: www.sipweb.org . We hope these choices expedite the membership renewal process and will allow members to join our organization with ease. Whichever option you choose, **please renew your membership before the end of the year!**

Scientific Program. A busy scientific program was covered, starting with the Founder's Lecture, honoring Professor H. Denis Burges and presented by Professor Brian A. Federici. There were 322 contributions, 70 as oral presentations within 10 symposia, 99 oral presentations within 16 contributed paper sessions, 11 presentations within 4 workshops, and 142 posters. All six divisions of the society held business meetings, in addition to the plenary business meeting which was well attended and where the presidency of SIP was passed from Juerg Huber to James Harper.

THE SIP MAIN OFFICE HAS MOVED!

NEW ADDRESS:

Society for Invertebrate Pathology
7413 SIX FORKS RD
BOX 114
RALEIGH, NC 27615-6164 USA

NEW TELEPHONE NUMBERS:

Main SIP number: 919-841-4133

E-Fax and E-Voice number: 801-749-4955

These numbers and addresses remain the same:

Toll free numbers: (Only available in North America**)**

1-888-486-1505 (Voice)
1-888-684-4682 (FAX)

E-mail: sip@sipweb.org

Website: www.sipweb.org

Student Awards. A total of 57 students contributed excellent oral and poster presentations during the student competition. Congratulations and special cash awards were given at the banquet to the following students:

Poster Presentations:

1st place - Jarrod Leland, Dept. of Entomology, Virginia Tech, USA. Presentation: Coating spores of *Metarhizium flavoviride* for UVB-protection and effects on virulence to African desert locust (*Schistocerca gregaria*) Forskal.

2nd place - Johanna Rees, Dept. of Biochemistry, University of Cambridge, UK. Presentation: A study

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The SIP Newsletter is published 3 times per year and is available on our homepage.

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 15, 2001.

of the factors determining susceptibility to Cry delta-endotoxins.

3rd place - James Pearce, Dept. of Biochemistry, University of Cambridge, UK. Presentation: Assigning functional roles for CryIAc domains in its toxicity to *Manduca sexta.*

Oral Presentations:

1st place - Melanie Filotas, Dept. of Entomology, Cornell University, USA. Presentation: Abiotic factors influencing resting spores of the forest tent caterpillar pathogen *Furia crustosa* (Zygomycetes: Entomophthorales).

2nd place - Marielle van Hulten, Laboratory of Virology, Wageningen University, Wageningen, the Netherlands. Presentation: Three major structural proteins of white spot syndrome virus have evolved by gene duplication.

3rd place - Daniella Oltean, Dept. of Entomology, University of Riverside, USA. Presentation: Expression of *Bacillus thuringiensis* CryIAc toxin domain III.

Cash awards were presented as follows: Mx $3,500 for the 1st place, Mx $2,500 for the 2nd place, and Mx $1,500 for the 3rd place. Special thanks to Steven Wraight, who chaired the Student Paper and Poster Committee, as well as to the Committee members: Francis Drummond, Larry Gringorten, Rosalind James, Eleanor Groden, Jeff Lord, Holly Popham, Peter Krell, Patricia Stock, Joel Siegel, Rejane Smith, and John Vandenberg.

Social Events. A series of social events were included in the program and became an important opportunity to relax, experience an authentic Mexican event, and most of all, to have the necessary informal time to chat with friends and colleagues. The first social event was the reception mixer at Parador San Javier, where Mexican appetizers were served, and a mariachi band pleased the audience. Rain arrived just in time to end the event. On Monday evening, participants enjoyed a colorful Mexican ballet at the Auditorium of the University of Guanajuato. A second mixer took place again at Parador on Tuesday, following the business meetings of the Microbial Control and Nematodes Divisions.

Student Award Winners at the Guanajuato Banquet

The 5K race took place in the hills surrounding the hotel area, with very pleasant weather and more than 50% of the track downhill (runners and walkers enjoyed it very much). Special thanks are due to the logistics of local Sport Committee of the Municipal Government, as well as to the safety measures enforced by the local police. A total of 45 runners and 14 walkers were registered. Winners and their times were as follows:

5-K winners at the Banquet

Runners

Men over 35		Time
1st	Stephan DIETRICH	18'38"
2nd	Bill DONOVAN	19'05"
3rd	Michael BROWNBRIDGE	19'56"

Women over 35		Time
1st	Lee SOLTER	22'36"
2nd	Maureen O'CALLAGHAN	22'47"

Men under 35		Time
1st	Gernot HOCH	18'38"
2nd	Todd WEBER	20'17"
3rd	Norberto CHAVARRIA	20'46"

Women under 35		Time
1st	Monica SANTOS	22'47"
2nd	Isabel GOMEZ	28'00"

Walkers

Men	Time
Basil ARIF	39'18"

Women	Time
Doreen WINSTANLEY	32'18"

On Wednesday, after the 5K race, an excursion to the town of San Miguel de Allende took place. Afterwards a barbeque (rather, Mexican Kermess) was enjoyed at the Queen's Gardens of the Ex-Hacienda San Gabriel de Barrera (on the outskirts of Guanajuato). Many different Mexican dishes were served and music was provided by a typical Mexican romantic band and an "estudiantina" (typical XVIII century band). Lastly, the Banquet was held at Parador on Thursday evening, where awards were presented to Dr. Burges as the Founder's Lecture honoree, Dr. Brian Federici as the lecturer, as well as to the student award winners. Also, some trophies were given to the 5K winners. Participants enjoyed a delicatessen meal and the music provided by Kronos band, until 00:30AM. Many continued their enjoyment at several local discotheques.

Sponsors. The SIP is especially thankful for the financial contributions and logistic support from government, institutes and corporate sponsors. These sponsors were as follows:

Guanajuato State Government
University of Guanajuato
CINVESTAV
Valent BioScience
AgroBioMex
Aventis
Dupont
Thermo-Trilogy Corporation
Becker Microbials
AgraQuest

Local Organizing Committee. This meeting would not have been possible without the effort and dedication of: Cristina Del Rincón, Regina Basurto, Javier Luévano, Gabriela Olmedo, Nina Bárcenas, Eleazar Barboza, Alejandra Bravo, Juan Carlos Torres, Angélica González, Víctor Juárez, Guadalupe Vázquez, Mónica Santos, Verónica Obregón, Mario Arteaga, Alejandro Bravo, and others. Special thanks are due to Margaret Rotstein, Executive Secretary of SIP, for her great support in handling the registration and the abstract booklet.

Jorge Ibarra, Chair,
Local Organizing Committee

MESSAGE FROM THE PRESIDENT

Guanajuato Meetings

The 2000 year meetings of the Society for Invertebrate Pathology and the 5th International Conference on *Bacillus thuringiensis* are now history. Those members and guests who attended these meetings in Guanajuato, Mexico last August will forever remember the excellence of the scientific meetings, the wonderful ambiance of the city of Guanajuato, the building (with its many steps!) that houses the University of Guanajuato, the friendly attitude of the local people, and the social activities arranged for us by the organizing committee.

Many members have indicated to me that the scientific content of the meetings was, for them, excellent. I was particularly pleased by the diversity and balance of subject matter presented in our oral and poster sessions across the various areas we deal with under

the umbrella of invertebrate pathology. The increase in Division numbers and their involvement in the programming process is unquestionably contributing to this balance.

I especially want to thank Jorge Ibarra and his large local arrangement team for providing an excellent venue for the meetings. Jorge and the team members were amazingly resourceful in developing the local facilities to meet our needs and to make on-the-spot adjustments whenever needed to fine tune every aspect, whether for the good of the whole assembly or of individuals. I must also thank Peg Rotstein who worked closely and diligently with Jorge's team on registration and many other chores throughout the week.

Society Divisions

Regarding the increasing role of Divisions within the Society, the participation in programming is just one important improvement. By having the chairs of each division serve as non-voting participants at the Council meetings, new conduits exist that allow for more ideas and information to flow between the total membership and the Governing Council. The benefit of this was very evident to me at this year's Governing Council meeting and at the division business meetings that followed and were reported on at the final business meeting on Wednesday morning. Another long-term benefit from the division structure is being derived from the increased opportunities for more members to become involved in Society governance. The number of members now involved in leadership roles in the Society as regular officers or as divisional officers has increased dramatically in the past two years as the number of divisions has grown. I encourage all members to become involved in these opportunities.

SIP Homepage

Very soon, you will be seeing a significant new look on the SIP homepage (www.sipweb.org). Peg Rotstein is working to make this already highly informative page more efficient for you to use. Keep your eye on it. Also, when you log in, please check your own information under "Membership Directory". If you find that your information is outdated or missing, e-mail Peg and give her the corrections and additions needed.

Martignoni Student Paper Award

Elsewhere in this issue, you will see an article on the Mauro E. Martignoni Student Paper Award endowment. This endowment, initiated through a gift to the Society through Mauro Martignoni's Will, will provide annual support from interest earned on it for a student or students to travel to the annual meetings to present their research findings. You are encouraged to support this endowment through personal contributions. There is a separate line on the dues form this year that allows you to designate a donation for this purpose.

2001 SIP Meeting

Many members have expressed concern over the situation in Israel with respect to our planned meeting there next September. The Governing Council has been in close contact with our Local Arrangements Committee through Chair Meir Broza. Given the nature of the hostilities and political turmoil there for the past two months and the uncertainty of the situation over the next 10 months, we and the Israeli Local Arrangements Committee have agreed that consideration of an alternative plan for the meetings is justified.

In order to assure meeting and housing accommodations, it is necessary to reserve them months in advance, so we all felt that delaying the decision longer, hoping that the situation would quickly be resolved, would jeopardize chances of making these arrangements with facilities that can accommodate us at prices we can afford.

Our Meetings Committee is considering several options, and final decisions will be made in the next few weeks. At present, the most likely venues appear to be in Europe, possibly in the United Kingdom or The Netherlands, although other possibilities may exist. We will inform you of these decisions in the next Newsletter, but urge you to check on meeting news and updates on the SIP website. Any changes

that need to be made will be posted there as soon as they are agreed upon by the Governing Council.

Regardless of the site selected, the Israeli Program Committee will continue to function, having already made significant progress toward an excellent program for Israel. They will work with the local organizers at the new site to develop both the scientific and social programs for the meetings. We hope that this can be an Israeli meeting in many ways, and the Council has suggested that we look on it as an Israeli meeting "in exile".

This has been a very difficult process for us, and we are seeking to make the best decisions for the good of the Society. We deeply regret that events have necessitated our having to take these steps, as we have long been anticipating the opportunity to visit Israel and enjoy the hospitality offered by our many members there.

Committees

I am appointing an *ad hoc* committee to make recommendations on our Society's fund raising efforts for our annual meetings. This will be chaired by Wendy Gelernter with Sue MacIntosh, Stefan Jaronski and Juerg Huber serving as members. Most standing committees will stay in place with only a few minor changes. The **Nominating Committee** will remain in place, but Bob Granados will replace Wendy Gelernter as chair for the coming year. Harry Kaya, due to his assuming the Vice-Presidency, has asked to be replaced on the **Founders' Lecture Committee**, and John Vandenberg has agreed to serve in his place.

The Governing Council agreed that the **Database and Website Committee**'s work had been completed very effectively during their tenure and voted to terminate this committee. Effective with the February 2001 issue, the **Newsletter Editorship** will be taken over by Leellen Solter who is currently serving as Assistant Editor. Mark Goettel has asked to retire as Editor at that time due to the press of other duties, but will continue as Assistant Editor. I will say more about Mark's tenure in our next Newsletter. Mark will take over as Chair of the **Meetings Committee**, replacing Just Vlak who has now served most effectively on that committee for six years. Serving with Mark will be Mike Adang and Brian Federici.

Several other committee changes that may be necessitated by changes in member status will be announced in the February Newsletter. To all the members who have served on our standing and *ad hoc* committees, I extend my appreciation and that of all our members for your time, efforts, and good service.

Thanks to Governing Council Members

Finally, I want to express special appreciation to our outgoing officers, President Juerg Huber, Past-President Brian Federici, Secretary Ann Hajek, Treasurer Ted Andreadis, and Trustees Jorge Ibarra and Jennifer Cory. All have done a great job in serving you and guiding the Society during the past two years. I look forward to working with our new officers, Vice-President Harry Kaya, Past-President Juerg Huber, Secretary Doreen Winstansley, Treasurer Mickey McGuire, and Trustees Leellen Solter, David Ellar, Basil Arif and Trevor Jackson. Please contact any of us if you have issues that should be considered by your Governing Council for the good of the Society.

James Harper

EDITORIAL

Will Computers Save Us from the High Cost of Scientific Publications?

In the November, 1998 issue of the SIP Newsletter (Vol 30, No. 3), I published an Editorial entitled "The High Cost of Scientific Publications; Are We Pricing Ourselves out of the Market?" I expressed concern over the increasing cost of scientific publications and suggested that, if the situation did not change, then it would be the responsibility of scientific organizations such as ours to step in. Although there have been many changes since then, principally in the availability and reduced cost of scientific journals available on-line, one thing is for certain, the price of books has even increased further. As aptly stated by Fernando Vega in his book review on page 46,

"pricing of scientific books nowadays does not seem to obey the laws of common sense."

The recent inflation in the cost of scientific publications is of great concern to all of us. In my editorial of 1998, I urged all future authors to ensure that a firm and reasonable price be set with the publisher, before committing oneself to writing a book or book chapter. We have now learnt through experience that this does not necessarily work; publishers set the prices as they please, even when authors have rescinded any financial compensation and the editors supplied a camera-ready copy to reduce costs.

Although the technology has advanced enough to make on-line publishing or production of CDs feasible (or nearly feasible for the time being), there are other problems associated with on-line publications. Steps must be undertaken to ensure that they are officially recognized as true publications. In other words they must be considered equivalent to their printed forms as far as being "permanent records", that are fully citable in scientific publications, and fully credited as far as recognition and promotion of their authors are concerned.

The high cost of publications was discussed at the SIP Council Meeting in Guanajuato and I was asked to address this through an Editorial in the Newsletter which I am now doing. A conclusion of our discussions was that SIP could take a greater role in ensuring that information on Invertebrate Pathology is made available at a reasonable cost. As a beginning, SIP could provide a service by making publications available on its website or on CDs. Wouldn't it have been great to have a Field Manual of Techniques in Invertebrate Pathology available to all on our website, and published as an SIP publication, rather than having this very important and useful publication available to the few libraries and individuals who could afford the $US334 price tag??

I urge all future authors to consider publishing their books and book chapters on-line. In this regard, the authors should first contact the SIP Publications Committee, so that the possibility of making the publication available on the SIP website is explored, or at the very least, a link to the publication be made available on our website. It is certainly encouraging to learn that the newly formed Division of Nematodes is contemplating on linking their website to an electronic book that one of its members is preparing. Letters to the Editor are welcome.

Mark Goettel,
Newsletter Editor

LETTER TO THE EDITOR

I read with sadness the obituary of Dr. Mauro Martignoni contributed by Hank Thompson and others. They wrote an outstanding tribute and I trust that Society members are now duly appreciative of Mauro's many contributions. I treasure my own memories of Mauro and I'd like to add a brief personal tribute here.

Mauro was the insect pathologist on my advisory committee for my Ph.D. degree at Oregon State University. I sought him out in 1977 when I began to search for a laboratory in which to do my dissertation research. He directed me first to the lab of Dr. George Rohrmann, where I did a short internship, and later to the lab of Dr. Bill Stephen, where I did my work on chalkbrood in bees. During my years at OSU, I visited with Mauro at his office perhaps once a semester. Each visit lasted much longer than scheduled because of his willingness to share his knowledge and because of his keen interest in my work. After leaving OSU, we kept in touch with occasional correspondence. Although nearly 20 years have passed since I left OSU, my memories of Mauro are fresh.

Mauro took an uncompromising view of scientific research, resulting in work of outstanding quality. He took care to be sure I never took the easy way out of my research problems. He was an insightful interrogator (much to my chagrin) at my oral examinations. His questions led me down an increasingly nervous and sweaty path until I quite quickly came to the dreaded "I don't know." But then he was always able to lead me back to familiar territory and thus renew my confidence. He was at

once professorial and collegial -- a mentor as well as a comrade.

His personal generosity certainly impressed a naive graduate student like me. After passing each hurdle -- oral exam, seminar, meeting presentation -- I would receive a card or gift of congratulations from him. It was his low-key encouragement and non-judgmental friendship that generated my loyalty to him and cemented my interest in the field of invertebrate pathology.

My only regret is that I wasn't able to spend more time with him. My only hope is that some of his exemplary qualities have rubbed off!

John D. Vandenberg, Ph.D.
Research Entomologist & Lead Scientist
USDA Agricultural Research Service
U. S. Plant, Soil & Nutrition Laboratory
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NEWS ITEMS

Mauro E. Martignoni's Will Provides Student Travel Funds

Through contacts with Jim Harper prior to the 2000 SIP meetings in Guanajuato, Mauro Martignoni's wife, Marie Louise (Lou), indicated that Mauro, a Founding Member and Honorary Member of the Society, intended to leave funds for support of students to travel to the annual meetings of the Society to present their research results. The details from Mauro's will were not available at that time, but Jim announced this intent to the Council and to the membership present at the final business meeting.

Following the Mexico meetings, Lou Martignoni sent Jim checks totaling $5,000. Mauro's will indicated that this was to provide a $500 award per year for 10 years to support one student per year. A report on the award, including the awardee's name, home institution, and presentation title is to be provided to Lou and her sons, Enrico and Matteo, following each meeting. The award is to be called the "Mauro E. Martignoni Student Paper Award".

At the Council Meeting on August 13 in Guanajuato, before knowing exact details of Mauro's will, the SIP Council discussed this pending gift and agreed that an endowment should be set up using the gift as a base to which members could contribute and thus provide student travel support indefinitely from the endowment earnings. We agreed to add a line to the dues to make donations easily possible for members who wished to add to this endowment.

Given the differences in Mauro's will and Council's discussions, Jim contacted Lou and described how we could honor Mauro's contributions to the Society indefinitely rather than for 10 years only. She discussed this with her sons and they agreed that Mauro would have been greatly pleased to have his gift support the professional development of even more students than he had planned.

The Divisions on Bacteria, Microbial Control, Microsporidia and Viruses all pledged donations to this fund during the Council meeting. A member donation of $2,000 has also been pledged. With these pledges as a start, it should be possible to award one or more students beginning next year, with possibilities for support for more in future years as contributions help the endowment principal grow.

The Society owes much to Dr. Mauro Martignoni as a founder and framer of the Society's Constitution. His love for and service to the Society has been evidenced in many ways, this endowment being only the most recent. Members are encouraged to contribute to this endowment fund. Please include your contribution with your membership renewal for 2001.

New Editor-in-Chief Appointed for Biocontrol Science and Technology

Founding Editor-in-Chief of *Biocontrol Science and Technology*, **Professor Chris Payne**, has decided to retire from this position after 10 years. From 1 January 2001, **Dr. Mark Goettel** will take over the position. The editorial team continues to include Dr. Mike Solomon, (Horticulture Research International, East Malling, UK) and Dr. Mark McQuilken (The Scottish Agricultural College, Ayr, UK). Authors

should continue submitting manuscripts that cover topics using insects and mites for biocontrol directly to Dr. Solomon and manuscripts covering plant disease biocontrol directly to Dr. McQuilken. All other manuscripts (including weed biocontrol and the use of insect pathogens as biocontrol agents) should be submitted to the new Editor-in-Chief at:

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BUSINESS MEETING OF THE SOCIETY FOR INVERTEBRATE PATHOLOGY WEDNESDAY, AUGUST 16, 2000, GUANAJUATO, MEXICO

The SIP Business Meeting was convened by the President Dr Juerg Huber in the Auditorium of the Hotel Parador San Javier at 8:00 am. Approximately 56 members were present. Summaries of the reports are provided below.

The President called for one minute's silence in remembrance of Professor Mauro Martignoni, Professor Lois Miller and Dr Peter Sikorowski.

In his **President's Report**, Dr Juerg Huber focused on several issues raised in previous years that have been successfully concluded, since most of the Society's activities now take place in Divisions and Committees of SIP and are covered in their reports.

The President thanked Margaret (Peg) Rotstein, the Executive Secretary, on behalf of SIP for the excellent condition of **management services**. The Web Site has greatly improved and offers much information for members and non-members. The distribution of the Newsletter through the Web has been well received by our members, and most of them have also agreed to put their personal data in an Experts Database in the Web.

The amendments of the **Constitution and Bylaws** of SIP have been fully implemented. Whereas the Constitution had already been accepted by written ballot in the previous period, the changes in the Bylaws were accepted by vote of the members at the General Membership Meeting, during the last Annual Meeting at Irvine.

New Divisions: As a consequence of discussions at the Irvine Meeting and of the amendments of the Bylaws, a petition was submitted to the SIP Council requesting the formation within the Society of a new Division - the **Nematode Division**. By unanimous vote the members of the Council gave their consent to the formation of this division. The other new division of the Society, the **Fungi Division**, has already been approved by the Council and is well underway. Both newly formed divisions had their first business meeting, including the election of officers, at the Annual Meeting. Both had organized symposia for the Guanajuato Meeting.

New Committees: The changes in the Bylaws have also brought some alterations to the organization of the Society. Since boards no longer exist, the Meetings Board has changed its name to the **Meetings Committee**. The Publication Board becomes the **Publication Committee**. This committee consists of Chair (Bob Anderson), President, Vice-President, and Treasurer of the Society, as well as the Newsletter Editor and the Web Site Editor. The latter will replace the Database and Web Site Committee, which will end its work with this term. It was proposed to establish a student awards committee to evaluate the best student poster and oral presentations. However, in order not to increase the number of committees in SIP, the President has appointed the Endowment Committee to take over this duty. It is to be renamed the **Committee for Endowment and Student Awards**, and is presently chaired by Tad Poprawski.

Appointments: The President appointed Bob Granados, Gary Blissard and Juan Garcia as members of the **Tellers Committee** for this year's elections. They had supervised the elections of the new team of

SIP officers for the coming two years. He had nominated Harry Kaya and Wendy Gelernter for the **Auditors Committee**. Mark Goettel, our SIP Newsletter Editor for the last seven years, had kindly agreed to continue for a further one or two years, allowing time to train his successor. The president appointed Leellen Solter as **Assistant Editor** (= future Newsletter Editor) after consultation with Mark. She replaced Jimmy Becnel, who had been Assistant Newsletter Editor for the last five years. The President along with several officers of SIP will pass on their tasks within SIP to the new colleagues elected in the recent ballots. The President thanked all the retiring officers for the work they have done and the time they have devoted to the Society. He remarked that he had very much enjoyed the co-operation with all of them.

The **Secretary's Report** by Ann Hajek who sent her apologizes for not being able to attend the SIP meeting in Guanajuato due to her unforeseen difficulties with her sabbatical leave, was presented by Peg Rotstein. Ann thanked Doreen Winstanley for her willingness to take the minutes at the council meeting and to help organize the business meeting. At the request of the President Ann produced a bound copy of the minutes and reports from the 1999 council meeting together with full copies of the Constitution and Bylaws for the Council members, Division Chairs and the Newsletter Editor. An incomplete list of the committees was included but will be updated. Her second major activity was to organize the 2000 council meeting.

In the **Executive Secretary's Report**, Peg Rotstein recommended that membership renewals should be sent out separately to avoid delays associated with sending out the newsletter, despite the cost in mailing and supplies.

Peg relocated to Raleigh, North Carolina on June 1st 2000, and established a new mailing address and phone numbers for the Society. The toll free numbers remain the same. In order to ease the transition, she has kept the Gainesville mailing address active until September. All mail will be forwarded to the new address until next September.

Peg will be moving the SIP Web site from the Internet service provider in Gainesville to the Web servers of the Center for Integrated Pest Management in Raleigh, NC, thanks to the approval of the director, Ron Stinner. The SIP Web address will remain the same, www.sip@sipweb.org. There will be improvements in the overall look of the Web site, online membership database, and the addition of online membership application and renewal.

Peg continues to have difficulties subscribing members to JIP but has been able to improve her communications with Academic Press and as a result she has resolved many of the subscription problems. She welcomes any suggestions on how best to continue improving the JIP subscription process.

She will no longer handle future annual meeting registrations unless urgently required.

She encouraged members to contact her via E-mail (sip@sipweb.org) with suggestions or complaints. She welcomes such criticism as it helps her to identify problems and correct them.

In the **Treasurer's Report**, prepared by Ted Andreadis and presented by Peg Rotstein, Ted reported that overall the financial health of SIP remains good with total assets of $144,749.00. Of this amount $112,000 is invested in three Certificates of Deposit earning 5.65% to 6.25%. The net annual income from our CD's was $4,000.00. However, our revenue was reduced this year due to decreased slide atlas sales and a smaller profit than the previous year. Net profits from the Irvine Meeting were $1,946.00 through April 30 and $17,871 from membership dues. However, the Society experienced a $5,128.00 loss in net revenue for 2000 compared to the $8,109.00 gain recognized for the fiscal year ending April 30, 1999. The revenue in 1999 did include a one-time $10,513 transfer from FASEB and $4,420 from sales of the slide atlas.

Even though the Society has reduced its operating cost, the membership fees still only cover roughly half of the cost of our annual expenses and in the absence of a substantial profit from our annual meeting, we can expect to operate at an annual net loss. Although

the treasurer did not recommend a dues increase at this time he suggested that the Society should consider one if annual meetings fail to meet financial expectations.

Lastly, effective April 1, 2000 Mrs Margaret (Peg) Rotstein has received a 10% increase in salary from $7,200 to $7,920 annually for Management Services in accordance with her contract.

In the **Auditor's Report** presented by Harry Kaya it was stated that the Treasurer's report was sound and the report was then unanimously accepted. It was emphasized that expenses continue to exceed revenue and there is a need to develop a long-term plan to address this problem. One possibility suggested was to decrease printing and mailing costs by encouraging more members to take the newsletter via Internet and possibly using the Web-site to distribute programs and abstracts for future meetings.

In the **Meetings Committee Report** Dr Just Vlak (Chair) reported that there were 320 attendants and 250 papers presented at the 32nd Annual SIP Meeting held at Irvine, California, USA in 1999. He congratulated Dr Jorge Ibarra and his committee for the successful organization of the current meeting in Guanajuato. It was proposed to hold the 2001 meeting in Israel, the first time for an SIP meeting in this country. Other proposed venues are Iguassu Falls, Brazil in 2002 (chair F. Moscardi), Burlington, VT, USA in 2003 (chair Dr John Burand). SIP is looking at the possibility of a European venue for 2004.

Mark Goettel will be the new chair of the **Meetings Committee** after he has completed his duty as newsletter editor, Mike Adang and Brian Federici will also be members of the new committee.

In the **Guanajuato Meeting Report** Jorge Ibarra reported that 333 participants (from 33 countries) registered for the meeting, of these 6 later cancelled. The prepaid registrations included 176 full members, 57 students and 38 non-members, as well 28 companions. A total of 45 participants registered for the 5K race. The academic program consisted of 319 presentations, 183 oral presentations (including 18 student papers) and 136 posters (including 39 student posters). There were 10 symposia with a total of 70 presentations. The social program was supported by Mexican Industry and the Mexican State and included a mixer at Hotel Parador San Javier, a barbecue at the Ex-Hacienda San Gabriel de Barrera and the banquet at Hotel Parador San Javier.

In the **Israel Meeting Report** Dr Meir Broza gave a progress report on the preparations to date for the 34th Annual Meeting to be held at the kibbutz Ma'ale Hachamisha, near Jerusalem from September 2-7, 2001.

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Divisions

Bacteria: The business meeting took place on the day following the SIP business meeting and therefore, Chair Dr. Alejandra Bravo confined her comments mainly to the Guanajuato meeting.

Five Symposia and one workshop were organized for meeting in Guanajuato in 2000 and it is proposed to organize three Symposia for the meeting in Israel in 2001. (Editor's note: the minutes of the Bacteria Division appear on page **)

Microbial Control: Chairman Lerry Lacey reported that 45 members attended the business meeting. Stefan Jaronski was elected as the single member-at-large replacing the two positions held by Nguya Maniania and Michael Brownbridge. This brought the number of members-at-large to two in accordance with the Bylaws. All other officers continue through 2001.

The Microbial Control Division provided $500 and SIP provided $1,000 for two speakers, one from Mexico and one from Peru to participate in the division symposium in Guanajato entitled: "Microbial pesticides: uptake and use in developing countries." There was also a workshop in which representatives from industry could make informal presentations regarding their companies and products.

Two $500 student travel awards were made and mailed to the successful recipients in advance of the meeting.

Chair Lerry Lacey announced the publication of the Lacey and Kaya edited "Field Manual for the

Application and Evaluation of Entomopathogens" (Kluwer Academic) and a new book "*Bacillus thuringiensis*: Biology, Ecology and Safety" by Travis Glare and Maureen O'Callahan. Two copies of the Field Manual and three copies of the Bt book were donated to student drawing winners.

The feasibility of transferring the microbial control slide sets onto CD–ROM as a means of bringing in revenue is to be investigated.

The division will donate income up to $500 to be combined in a general fund with funds willed to SIP for student travel awards by the late Mauro Martignoni and contributions by other divisions. There will be a review of the process after two years.

Microsporidia: Chair Andreas Linde reported that 17 members were present. The division members organized a workshop and co-organized two symposia for the meeting at Guanajauto. Nine oral presentations and five posters are included in the two protozoa/microsporidia sessions. A similar meeting of German-speaking invertebrate pathologists organized by Andreas Linde took place in April 2000 as part of his activities in Europe for the division. A meeting with Russian colleagues will be organized for 2001 in Germany.

All the nominations for the following offices were unanimously approved by the members present: Chair, James Becnel; Vice Chair, Rudolf Wegensteiner; Secretary/Treasurer, Gernot Hoch and Trustees,Takeshi Kawarabata and Joel Siegel.

Virus: Chair Peter Krell reported that 24 members attended the Virus Division meeting. New officers were elected. John Burand (USA) was elected as Chair Elect, to replace Ian Smith (UK), who became new Chair succeeding Peter Krell (Canada). Martin Erlandson (Canada) was elected to replace Johannes Jehle (Germany) as Secretary/Treasurer and Primitivo Caballero (Spain) follows Doreen Winstanley (UK) as Member-at-Large. As of the end of August 2000 the membership stands at 129 persons.

A Virus Division homepage has been set up on the SIP Web site as well as an e-mail service for its members. Several workshops and symposia were organized for the meeting in Guanajuato.

The members agreed on a donation of US$ 200 to the SIP's Martignoni Student Travel Award and in addition to establish a Virus Division Student Travel Grant of US$ 200. It is proposed to develop a Virus Division award to honour a scientist for their significant contribution to invertebrate virology in the previous year. The members agreed to raise the membership dues to US$ 3 per year.

Fungi: Chair Stephen Wraight reported that 29 persons attended the business meeting. The elected officers are as follows: Chair, Stephen Wraight, Chair Elect, Judith Pell, Secretary/Treasurer, Michael Brownbridge, Members-at-Large, Travis Glare (1 year) and Paresh Shah (2 years). Members-at-Large in this Division will be responsible for providing qualified individual(s) to judge student posters and presentations.

The Chair Stephen Wraight will serve as a member of the Organizing Committee for the meeting in Israel in 2001. For this meeting it is proposed to have one plenary session, two symposia (one already organized by Dr David Chandler and one open to suggestion) and two workshops, as well as posters.

The Division of Fungi will have a Web page as part of the SIP Web site. Stefan Jaronski has been appointed as the Web editor, and any news and information for inclusion on the site should be sent to him (sjaronski@sidney.ars.usda.gov).

Nematodes: This new Division had its first organizational meeting with 13 persons present and was called to order by Itamar Glazer.

The following officers have been nominated and unanimously approved: Chair, Itamar Glazer; Chair-elect, Noel Boemare; Secretary/Treasurer, Albrecht Koppenhöfer; and Members-at-large, Byron Adams and Patricia Stock.

The division will add its own Web page to the SIP Web page. Parwinder Grewal agreed to form a Web site committee. Noel Boemare is preparing an

electronic book on *Photorhabdus*/*Xenorhabdus* bacteria that could be connected to the Web page. Members E-mails will be placed on the Web page to facilitate discussions before and after meetings. Plans for the 2001 SIP meeting in Israel include 2 symposia and 2 contributed paper sessions and a presenter from the Nematode Division in the general session.

Harry Kaya announced that the Division of Nematodes is contemplating changing its name to Division of Nematodes and Associated Bacteria.

Juerg Huber passes the gavel to James Harper at the 2000 Business Meeting in Guanajuato

Inauguration of the New President: Outgoing President Juerg Huber welcomed Dr Jim Harper to his new office as President of SIP and transferred the official gavel. He noted that Jim joined the society in 1967 and was a Charter Member of SIP. The new President said that one of his goals for the coming years was to see the creation of more divisions which would give more members an opportunity to serve. He would like to see an increase in the current membership, which is, stable at approximately 700 and saw an opportunity to bring in non-insect invertebrate pathologists, possibly starting with the meeting in Israel. He mentioned the generous donation of the records of Mauro Martignoni to the Society Archives and the new Mauro Martignoni Student Travel Endowment. He concluded by thanking the outgoing President and the Organizing Committee chaired by Jorge Ibarra.

Mark Goettel moved to adjourn the meeting and Dudley Pinnock seconded the motion. The motion was unanimously approved.

The meeting was adjourned at 9:30am.

DIVISION MINUTES

Division of Fungi
16:30 – 17:30 August 15, 2000. 33rd Annual Meeting of the SIP, Guanajuato, Mexico. 29 in attendance.

1. Election of Officers

Chair:	Stephen Wraight
Chair Elect:	Judith Pell
Secretary/Treasurer:	Michael Brownbridge
Member-at-Large:	Travis Glare (1 year)
Member-at-Large:	Paresh Shah (2 years)

2. Student Awards Committee/Endowments Committee

The role of the Awards Committee is to provide members to judge the student posters and oral presentations at SIP meetings. It will be the task of every Division to provide an individual(s) who will be able to adequately judge the presentation(s) falling within his/her broad area of expertise, i.e., fungi. It was suggested and accepted that the Members-at-Large be responsible for the administration of these responsibilities, serving as judges themselves, or ensuring that another member of the Division is appointed to serve in this capacity.

The role of the Endowments Committee has traditionally been to identify and provide financial assistance to persons in non-hard-currency countries so that they can become members of the Society. It was moved and passed that the Chair Elect serve on this Committee.

3. Symposium Organizing Committee

The SIP Local Organizing Committee for the 2001 meeting in Israel is looking for assistance in the organization of fungal symposia. Presently,

opportunities exist for presenters in: i. Plenary session where a fungal contribution is needed; ii. two symposia on fungi, one dealing with the evolution and function of entomopathogenic fungi (organized by David Chandler), and a second which is presently open to suggestions. A symposium is also planned to address developments on transgenic microorganisms and a contribution on fungi is being sought. There will also be two sessions of contributed papers and poster sessions. Workshop time may also be allocated in addition to the time allotted for the symposia.

The Chair of the Fungal Division (Wraight) will serve as a member of the Organizing Committee, providing suggestions for the symposia and workshops. Suggestions for speakers and topics are to be solicited from members, preferably via e-mail. The program needs to be finalized by January. Future announcements and plans will be sent out via e-mail and in the Newsletter.

4. Web Site Development

The Division of Fungi will have a web page as part of the SIP web site. Stefan Jaronski was appointed as the web editor, and any news and information for inclusion on the site should be sent to him (sjaronski@sidney.ars.usda.gov) prior to its being submitted for inclusion on the web page. Stefan will work directly with the other elected officers to determine the content of the site.

5. Fund Raising

Mauro Martignoni bequeathed money to the Society for the establishment of an Endowment Fund to support student travel to SIP meetings. Should the Division contribute to this endowment on a regular basis? The general consensus was, that the amount that the Division could contribute annually would be too small to make a significant impact, given the current financial status. This may change as and when the financial standing of the Division improves (it is only 1 year old).

It was decided that fund-raisers (various options, including raffles, t-shirts, etc.) should be investigated as a means of providing additional finances for the Division. The Division may also seek to 'sponsor' workshops, wet labs, or request meeting space for working groups at future meetings to facilitate cooperation and informational exchange. It should also be a function of the Division to prepare specialized slides, CD's and other publications to generate funds and further the educational aspects of this group. Several ideas were discussed but specific plans put on hold until the Division has built up sufficient funds to cover the costs of such ventures.

6. AOB

None.

Meeting closed at 17:30

Respectfully submitted 9/08/00.
Michael Brownbridge
Secretary/Treasurer

Microsporidia Division Minutes

The annual business meeting of the Division of Microsporidia was held at 5pm on August 15th, 2000 at the 33rd Annual Meeting of the Society for Invertebrate Pathology in Guanajuato, Mexico. Seventeen members were present.

The minutes of the 1999 business meeting were published in the SIP newsletter 32(3) in December of 1999 and thus accessible to all members. Jimmy Becnel motioned to accept the 1999 minutes. The motion was seconded by Doug Street and unanimously accepted.

Old Business
The Secretary/Treasurer's Report was reviewed. We have $ 1,731 (May 2000) in our account and currently 67 members in our division. It was motioned and seconded to accept the report. The motion was unanimously accepted.

Andreas Linde reported that the microsporidia "EXPO" was not realized for the meeting in Mexico. More input from the members will be necessary to

organize this exhibition in 2001 (Israel) or 2002 (Brazil).

As published in the programme of this year's meeting in Guanajuato, the division members organized a workshop and co-organized two symposia. Nine oral presentations and five posters are given in the two protozoa/microsporidia sessions.

The Student Award Committee selected Uwe Haendel, BOKU University, Vienna for the 2000 Student Travel Award.

Andreas Linde reported on his activities in Europe as a part of division activity. He organized a meeting of German-speaking invertebrate pathologists in April 2000 which was attended by 30 people, including 7 experts on microsporidia research. First attempts to include the Russian microsporidiologists in St. Petersburg into our division activities were made. A meeting with our Russian colleagues will be organized for 2001 in Germany.

New Business

Elections: An election of new officers was held. The Nomination Committee presented a slate of candidates, which was posted 24 hours before the business meeting. Nominees were:

Chair: James Becnel
Vice Chair: Rudolf Wegensteiner
Secretary/Treasurer: Gernot Hoch
Trustees: Takeshi Kawarabata and Joel Siegel.

There were no further nominations from the floor. Jimmy Becnel motioned that the members accept the nominees and was seconded by Leah Bauer. The slate of candidates was unanimously approved by the members present.

Miscellaneous: Andreas Linde informed us about a proposal brought forward at the SIP council meeting on Sunday, that all divisions may contribute to a "central" SIP **student travel award**, besides the divisional student travel awards. Several members pointed out that our balance is to small to support two travel awards, thus we would have no more divisional award. After a discussion of this topic a decision was postponed to next year's business meeting to contact the council and the other divisions about their opinions first. Furthermore, the SIP council will ask all divisions to detail an officer, probably a division trustee, for the endowment committee.

Leellen Solter reported about problems with obtaining a blanket permit from USDA for the **repository for the terrestrial microsporidia in liquid nitrogen** at the Illinois Natural History Survey. All members agreed that this collection is the most complete worldwide and is essential for the scientific community. If necessary, the division and the society will write letters of support.

Peg Rotstein solicited contributions to the development of the **website of the division of microsporidia**. Even larger files, like genera descriptions, taxonomic databases, videos, and other information related to microsporidia can be posted on the website. Division members can send information for inclusion on the web site to Peg's address (sip@sipweb.org). Mickey McGuire thanked Jimmy Becnel and Peg Rotstein for their excellent work.

The 2001 Meeting in Israel: Symposium

Meir Broza encouraged members of the division of microsporidia to organize symposia and workshops for next year's meeting in Jerusalem. Suggestions were solicited for topics. Leellen Solter pointed out that the division would be able to use $ 2,000 for invited speakers next year.

Mickey Mcguire suggested a plenary session on insect/microsporidia interactions. Andreas Linde reminded the audience of Leellen Solter's idea of 1999 to sponsor a symposium devoted to the question "Microsporidia – Fungi or Protozoa?" The division of fungi might participate in this symposium. Many agreed that this might be the most favourable topic, but further suggestions from members can be mailed to Jimmy Becnel (JBecnel@gainesville.usda.ufl.edu) or Rudolf Wegensteiner (wegenst@ento.boku.ac.at).

The 2001 Meeting in Israel: Workshop

As the new vice chair, Rudolf Wegensteiner will organize the workshop in Israel. Jimmy Becnel suggested that the sanitation of microsporidia in insect

mass rearing might attract the attention of many invertebrate pathologists. Meir Broza believes that there will be an audience for this topic in Israel.

Jimmy Becnel moved to adjourn the meeting and Joel Siegel second the motion. The motion was unanimously approved.

Respectfully submitted,
Margaret J. Rotstein, Secretary

Virus Division Minutes

Twenty-four members attended the Virus Division meeting on Monday, August 15, 2000. As of the end of August 2000 the membership stands at 129 persons. The reports of the Chair Peter Krell and the secretary/treasurer were accepted. The Virus Division had continued to set-up its homepage on the SIP Web site and also established an e-mail service for its members and organised several workshops and symposia for the Meeting in Guanajuato.

The members agreed on a donation of US$ 200 to the SIP's Martignoni Student Travel Award and to establish a Virus Division Student Travel Grant of US$ 200 based on excellence of submitted abstract and on need of the applicant. The Virus Division Executive Committee was asked to formulate a proposal for developing an Virus Division award to honour a scientist for significant contribution to invertebrate virology in the previous year. The members agreed to raise the membership due to US$ 3 per year.

New officers were elected. John Burand (United States) was elected as Chair/Elect, to replace Ian Smith (United Kingdom), who became new Chair after Peter Krell (Canada) rotated off. Martin Erlandson (Canada) was elected to replace Johannes Jehle (Germany) as secretary/treasurer and Primitivo Caballero (Spain) followed Doreen Winstanley (United Kingdom) as member-at-large. (Johannes Jehle)

Johannes Jehle,
Secretary/Treasurer

Bacteria Division Minutes

The annual business meeting of the Bacteria Division was held at 17:30 PM on August 17, 2000 at the 33rd Annual Meeting of the Society Invertebrate Pathology in Guanajuato, Mexico. 25 members were present.

Executive
According to the new bylaws, some of the officers of the division will continue for one more year:

Chair: Dr. Alejandra Bravo
Vice-Chair: Dr. Jean-Louis Schwartz
Secretary/Treasurer Dr. Armelle Delecluse
Member at large : Dr. Ray Akhurst

Dr. Ruud de Maagd was elected as the one year member at large and therefore has now ended his term. Drs. Roger Frutos and Trevor Jackson were nominated for a two year member at large position. Dr. Jackson declined and Dr. Roger Frutos was elected the new member at large. Next year in Israel Dr. Schwartz take over as Chair and we will elect a new Vice-Chair, a Secretary/Treasurer and one Member at large. Dr. Bravo will contact all division members for nominations one month prior to the next SIP Meeting.

Student Award.
Dr. Trevor Jackson and Dr. Jeroen Van Rie were elected to participate in the Student award committee for 2001. The members agreed to make a donation of 200 US dollar to the SIP student travel award in order to support students travel expenses in 2001.

New name of Nematode Division
We had a discussion with the former Chair and Chair-Elect of the Nematode Division regarding a proposed change to the name of their division from Nematode Division to the Nematode and Associated Bacteria Division. The members of the Bacteria Division were not in favor since studies on *Photorahbdus* and *Xenorhabdus* bacteria have been the subject of past Bacteria Division meetings. We agreed that we could organize and have joint symposia between both divisions and that the Nematode Division will not change its name.

Symposia

During the 33rd SIP meeting we organized five Symposia and one workshop:

Symposium I : Resistance to Bt toxins. Organized by Dr. Juan Ferre and Alejandra Bravo

Symposium II : Ecology and systematics of entomopathogenic bacteria. Organized by Dr. Armelle Delecluse, Dr. Larry Lacey and Dr. Alejandra Bravo.

Symposium III : Insertion of Bt insecticidal toxins into the membrane. Organized by Alejandra Bravo

Symposium IV: Recent advances in the development and use of bacteria for the control of insect of public health importance. Organized by Dr. Mir S. Mulla

Bacteria Workshop I : Addressing public concerns about *Bacillus thuringiensis* genes in transgenic plants. Organized by Dr. Susan Macintosh and Alejandra Bravo

Cross-Division symposium : Diseases of non-insecta. Organized by Dr. Alejandra Bravo

Members agreed on the organization of three Symposia for SIP2001

1.- One symposium will focus on *Bacillus thuringiensis* subsp. *israelensis* and will be held to honor Dr. Margalit for his important contribution as a result of his discovery of this bacterium. A plaque to honor Dr. Margalit will be prepared by Dr. Federici. Dr. Pinnock will help in the organization of this symposium.

2.- Symposium on bacteria systematics. Dr. Trevor Jackson will help in the organization of this symposium.

3.- Symposium on non-traditional Bt toxins and new entomopatogenic toxins produced by other bacteria. We will ask Dr. Jim Baum to help in the organization of this symposium.

Respectfully submitted,
Alejandra Bravo, Chair

Microbial Control Division Business Meeting

Chairman Lerry Lacey called the meeting to order at 8:05 PM on 15 August 2000. Members attending: 45. All officers except Nguya Maniania were present. Chairman Lacey thanked Valent BioSciences, Ecogen, ThermoTrilogy and AgraQuest for sponsorship of the post-meeting mixer and travel stipends for MCD Symposium speakers. A motion to accept the minutes from the previous year was made by Stefan Jaronski and seconded by Wendy Gelernter. The vote was unanimous in favor of the motion. Chairman Lacey read the membership and financial report.

At the end of the fiscal year (April 30, 2000) the MCD had 268 members which is an increase of 11 members over the previous year. As of July 31, 2000, the total number of MCD members increased to 275.

REVENUE	
Membership Dues	$536.00
Interest Income	292.00
Total Revenue	828.00
EXPENSE	
Travel Awards	1,000.00
MCD Directory	1,100.00
Total Expense	2,100.00
	Net Revenue
	(1,272.00)

The total balance of the MCD account (April 30, 2000) is $6,505.00. The MCD holds a certificate of deposit valued at $5,793 earning 5.65% and maturing on 12/27/00.

MCD Symposium and Workshop: Chair Lacey recognized and thanked the symposium organizers. Wendy Gelernter reported on this year's Microbial Control Division symposium and solicited proposals for next year's symposium.

Symposium: The MCD received three proposals for year 2000 symposia, and voted to sponsor a proposal submitted by David Gryzwacz entitled: "Microbial pesticides: uptake and use in developing countries." The MCD provided $500 and SIP provided $1,000 to finance stipends totaling $1500 for two speakers: Hiram Medrano of Institute Tecnologico de Durango (Mexico) and Aziz Lagnaoui of the International Potato Center (Peru).

Workshop: The MCD workshop provided a forum in which representatives from industry made informal presentations regarding their companies and products. The Society contributed $1000 to the symposium and

workshop. The workshop speakers were: Tim Johnson, Ecogen; Mike Dimmock, ThermoTrilogy; Cliff Bradley, Mycotech; Andrew Rath, Valent; Jerry Feitelson, Akkadix; Mayra de la Torre, Bioprocess Challenge; Eduardo Torres Sanchez, Agrobionsa; Desie Jimenez, AgraQuest.

Microbial Control Division student travel award winners, Belinda Luke and Luis Leite with President Harper and Division Chair, Lerry Lacey

Student Awards: Chair Lacey read the report of Student Award Committee Chair, Michael Brownbridge. The MCD received two applications for the student travel awards. Both applications were reviewed by the Committee and deemed worthy of support. The awardees were: Ms. Belinda Luke, CABI Bioscience, UK, for her presentation 'Storage compatibility of *Metarhizium anisopliae* var. *acridum* with other pesticides used for locust and grasshopper control'; and Mr. Luis G. Leite, Utah State University, USA and the University of Sao Paulo, Brazil, for his poster presentation 'Effect of salts, vitamins, sugars and sources of nitrogen on the growing of three Entomophthorales species: *Batkoa* sp., *Furia* sp. and *Neozygites floridana*'. The $500 travel awards were mailed to the recipients in advance of the meeting. Members of the Committee would like all members of the Society to publicize these awards and encourage graduate students working in insect pathology to apply for funding to attend the 2001 meeting. The Society contributed $1000 to the symposium and workshop.

New Books: Denis Burges announced a new book "*Bacillus thuringiensis*: Biology, Ecology and Safety" by Travis Glare and Maureen O'Callahan. Lerry Lacey announced the publication of the Lacey and Kaya edited 'Field Manual for the Application and Evaluation of Entomopathogens' (Kluwer Academic) and recognized the coauthors. Copies of both books, including two extra copies of the Bt book, were donated to student drawing winners.

Employment Opportunities: Desi Jiminez announced an entomologist position at AgraQuest. Andrew Rath mentioned that Valent BioSciences would be seeking a replacement for Bob Smith. Mark Goettel announced that positions are posted on the SIP web site and requested that postings be kept up to date.

Society Business:

Elections: The election of a single member-at-large to fill the two positions held by Nguya Maniana and Michael Brownbridge brought the number of members-at-large to two in accordance with the by laws. All other officers continue through 2001. The four nominees selected by Microbial Control Division officers were: Andy Cherry, Itamar Glazer, Stefan Jaronski, and Chris Lomer. There were no new nominations from the floor. Stefan Jaronski was elected. Chair-elect Wendy Gelernter announced that all other offices were up for election next year and solicited nominations and volunteers.

2001 MCD Symposium and Workshop: Chair Lacey solicited suggestions for the 2001 symposium. John Vandenberg put forth "Microbial Control in Arid Cropping Environments". Lerry explained that workshops are open to a variety of formats and solicited suggestions for both workshops and symposia to be given to MCD officers.

Finances: Chair Lacey brought up the MCD negative cash flow and introduced the idea of putting the microbial control slide set onto CD-ROM for sale. The potential for revenue was made clear by various members. John Vandenburg pointed out that there are three slide sets and suggested that the images might be posted on the SIP web site for gratis downloads. Lerry suggested a compromise of sales for one year

followed by web posting. The web posting idea was tabled. Rosalind James moved that the CD sales idea be investigated by MCD officers, and if found feasible that the slide images be transferred to CDs and sold. The motion carried with one dissenting vote.

Martignoni Fund: Chair Lacey announced that the late Mauro Martignioni had willed an as yet undetermined amount of funds to SIP for student travel awards. The Council had suggested that the divisions donate travel award funds to a Society pool to be combined with the Martignioni funds for such awards. Lerry suggested that MCD contribute $500 to the general funds and continue to provide one MCD award. John Vandenburg so moved, and Stefan Jaronski seconded. Mark Goettel amended the motion to fund one award and donate to the general fund MCD income up to $500 with a review of the process after two years. Joel Siegel seconded the amended motion. The motion passed unanimously.

Endowment Committee: Steve Wraight explained Endowment Committee mechanics. Each division has a representative to the committee selected by the division. Among other duties, the representative is charged with coordinating student paper judging. Chair Lacey solicited volunteers, and Larry Vaughn agreed to serve. Steve explained the difficulty of coordinating judging. Stefan Jaronski and Denis Burges volunteered to help with it.

No further business. Mark Goettel motioned to adjourn; Andrew Rath seconded. The motion carried. Final attendance 81.

Jeff Lord
Secretary-Treasurer

Division of Nematodes Minute

The meeting was called to order by Itamar Glazer at 17:50 on August 15, 2000. Thirteen persons were present. The following slate of officers was voted and approved unanimously: Chair, Itamar Glazer; Chair-elect, Noel Boemare; Secretary/Treasurer, Albrecht Koppenhöfer; Members-at-large, Byron Adams, Patricia Stock.

The division will add its own webpage to the SIP webpage. Parwinder Grewal agreed to form a website committee. Noel Boemare is preparing an electronic book on *Photorhabdus/Xenorhabdus* bacteria that could be connected to the webpage. Member emails will be placed on the webpage to facilitate discussions before and after meetings.

Plans for the 2001 SIP meeting in Israel include 2 symposia, 2 contributed paper sessions and a presenter from the Nematode Division in the general session.

Itamar Glazer suggested thinking about educational projects that expose entomopathogenic nematodes to the public. To increase interest and participation in the annual meetings of SIP and the Nematode division, information members can obtain from the meetings should be maximized through more symposia and contributed paper sessions, informal meetings during which attendees give short updates about their lab, funding for travel to meetings, a nematode lab/course in conjunction with meeting, and encouraging more companies to actively participate in the meetings.

Albrecht Koppenhöfer
Secretary-Treasurer

ANNUAL REPORTS

President's Report 2000

Most our Society's activities take place in the SIP Divisions and in the Committees. They are reported by the corresponding bodies, and I will, therefore, confine myself to topics not covered by these reports. During the second and last year of my presidency, several issues raised in previous years were successfully brought to an end:

Management Services:

The management services, now in the competent hands of our Executive Secretary, Margaret (Peg) Rotstein, are in excellent shape. Many things, like the retrieval of membership information, which used to be rather difficult in the past, are now very easy. Our web-site has greatly improved and offers a lot of information for members and non-members. The distribution of the Newsletter through the web has been well taken by our members, and most of them

have also agreed to put their personal data in an Experts Database on the web.

Constitution and Bylaws:
The amendments of the constitution and bylaws of SIP have been fully implemented. Whereas the constitution had already been accepted by written ballot in the previous period, the changes in the bylaws were accepted by vote of the members at the General Membership Meeting during the last Annual Meeting at Irvine.

New Divisions:
As a consequence of discussions at the Irvine Meeting and of the amendments of the bylaws, a petition has been submitted to the SIP Council requesting the formation of a Nematode Division within the Society. The request has been signed by 35 individuals showing their interest to become members of such a division, 25 of them being already active members of SIP. According to the amended bylaws, a petition for the formation of a new division has to be signed by at least 20 members of the Society in good standing, and the petitioners must show no less than 20 (formerly 50) members of the Society willing to become divisional members. Both requirements have been fulfilled, and therefore the Secretary has prepared a report upon the said request and has submitted it to the Council. By anonymous vote the members of the Council have given their consent to the formation of the division. The other new division of the Society, the Fungi Division, has already been approved by the Council and is well underway. Both newly formed divisions will have their first business meeting, including the election of officers, during the next Annual Meeting. Both have already organized a symposium for the Guanajuato Meeting.

New Committees:
The changes in the bylaws have also brought some alterations to the organization of the Society. Since boards no longer exist, the Meetings Board has changed its name to Meetings Committee. Similarly, the Publication Board has been substituted by a Publication Committee. Besides Bob Anderson (Chairman), the President, Vice President , and Treasurer of the Society, the committee will contain the Newsletter Editor and the Web Site Editor. The later will replace the Database and Web Site Committee, which will end its work with this term. It has become a tradition at our Annual Meetings to have student awards for the best poster and oral presentations. The fair evaluation of these presentations is not an easy job and it needs quite some organization. It has, therefore, been decided to establish a committee appointed with this task. In order not to increase the number of committees in SIP, I have appointed the Endowment Committee to take over this duty, too. It is renamed into Committee for Endowment and Student Awards, and is presently chaired by Ted Poprawski.

Appointments:
As members of the Tellers Committee for this year's elections, I have appointed Bob Granados, Gary Blissard and Juan Garcia. They have supervised the elections of the new team of SIP officers for the coming two years. For the Auditors Committee I have nominated Harry Kaya and Wendy Gelernter. Mark Goettel, our long-term SIP Newsletter Editor, wanted to pass his job, after seven years of service, on to somebody else. He has agreed to continue for another one or two years, but during this time he would like to already train his successor on the job. After consultation with Mark, I have appointed Leellen Solter as Assistant Editor (= future Newsletter Editor). She will replace Jimmy Becnel, who has been Assistant Newsletter Editor for the last five years.

Along with myself, several officers of SIP will pass their tasks within SIP to new colleagues elected by the recent ballots. I would like to thank all of them for the work they have done and the time they have devoted to our Society. I have very much enjoyed the co-operation with all of them.

Juerg Huber
President

Treasurer's Report

The financial statements for the Society for the fiscal year ended April 30, 2000 are enclosed in Exhibits A (asset sheet), B (revenue and expenses), C (board designated funds), and D (accompanying notes). Our Treasury is in good shape with total assets of $144,749.00 (Exhibit A).

The majority of our assets are currently invested in three certificates of deposit totaling $112,000.00 and earning 5.65% to 6.25% (Note 2, Exhibit D). These were rolled over in lots of $1,000 at maturity (Note 3, Exhibit D). Net annual income from our CD's was $4,000.00.

Society expenses were reduced by $4,117. However, the Society experienced a $5,128.00 loss in net revenue for 2000 compared to a $8,109.00 gain recognized for the fiscal year ended April 30, 1999 (Exhibit B). It is important to note that revenue in 1999 included a one-time $10,513.00 transfer from FASB and $4,420.00 from sales of the slide atlas. Net profits from the Irvine Meeting were $1,946.00 through April 30. Income from membership dues was $17,871.00. This represented an increase of $741.00 from 1999. Over half of this was due to increased student membership (see Note 1, Exhibit D). Costs associated with printing and mailing of the newsletter increased by $1,179.00 and this continues to be our major expense. Increased costs for accounting ($906.00 vs $107.00) and internet ($455.00) services were also realized.

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.

Overall, the financial health of SIP remains good. We continue to reduce our operating costs, however our revenue was reduced this year due to decreased slide atlas sales and a smaller meeting profit than the previous year. By the end of the fiscal year SIP had a net worth of $136,842. Of this amount, $112,000 is invested in Certificates of Deposit and the remaining balance resides in an interest bearing Cash Management Account with Merrill Lynch.

In summary, I continue to emphasize as I have done in the past, that even though we have reduced our operating costs, membership dues still only covers roughly half of our annual expenses, and in the absence of a substantial profit from our annual meeting, we can expect to operate at an annual net loss. Therefore, while I am not recommending a dues increase at this time, the Society should begin to consider one in the event that annual meetings fail to meet financial expectations.

Lastly, effective April 1, 2000 Mrs. Margaret Rotstein has received a 10% increase in salary from $7,200 to $7,920 annually for Management Services in accordance with her contract.

Respectfully submitted,
Theodore G. Andreadis
Treasurer

	4/30/00Fund Balance	4/30/9Fund Balance
General and Administrative	$ 118,710.00	$ 128,096.00
Virology	$ 992.00	$ 756.00
Bacteria	$ 824.00	$ 606.00
Microsporidia	$ 1,731.00	$ 1,605.00
Microbial Control	$ 6,505.00	$ 7,777.00
Fungi	$ 150.00	$ -
Endowment	$ 7,930.00	$ 7,395.00
TOTAL (See Page 1)	$ 136,842.00	$ 146,235.00

Exhibit A

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE STATEMENT OF FINANCIAL POSITION
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 2000 AND 1999

ASSETS	**1999**	**2000**
Cash – Merrill Lynch EMA	$ 35,415.80	$ 24,842.00
Accrued Interest Receivable	$ 2,188.00	$ 2,867.00
Funds Receivable	$ 4,997.20	$ 5,040.00
Certificates of Deposit	$ 108,000.00	$ 112,000.00
TOTAL ASSETS	**$ 150,601.00**	**$ 144,749.00**

Exhibit B

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE STATEMENT OF ACTIVITY
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 2000 AND 1999

2000 Activity

REVENUE	**General Fund**	**Board Designated Funds (Schedule 1)**	**Total 2000**	**1999**
Transfer from FASEB	-	-	-	$ 10,513.00
Slide Atlas Sales	$ 780.00	-	$ 780.00	$ 4,420.00
Proceedings Sales	$ 24.00	-	$ 24.00	$ 336.00
Membership Dues (Note 1)	$ 16,605.00	$ 1266.00	$ 17,871.00	$ 17,130.00
Annual Meeting Income	$ 1,946.00	-	$ 1,946.00	$ 6,300.00
Contributions	$ 333.00	$ 574.00	$ 907.00	$ 418.00
Interest (all accounts)	$ 6,533.00	$ 583.00	$ 7,116.00	$ 6,481.00
Miscellaneous Income	-	-	-	$ 400.00
TOTAL REVENUE	**$ 26,221.00**	**$ 2,423.00**	**$ 28,644.00**	**$ 45,998.00**
EXPENSE		**2000**		**1999**
Mailing of dues notices & other	$ 884.00	-	$ 884.00	$ 1,205.00
Program & Abstracts Printing	$ 3,365.00	-	$ 3,365.00	$
Newsletter -- Printing, Mailing (including meeting abstracts), and Supplies	$ 13,557.00	-	$ 13,557.00	$ 12,378.00
Membership Directory	0	-	0	$ 1,865.00
Travel	$ 1,184.00	$ 1,000.00	$ 2,184.00	$ 2,002.00
Supplies and Duplicating	$ 378.00	-	$ 378.00	$ 337.00
Supplies for Slide Production	0	-	0	$ 446.00
Accounting Services	$ 906.00	-	$ 906.00	$ 107.00
Internet Services	$ 455.00	-	$ 455.00	0
Secretariat (Peg's Salary, 1999)	$ 7,200.00	-	$ 7,200.00	$ 7,200.00
Processing Fees	0	-	0	$ 294.00
Telephone	$ 403.00	-	$ 403.00	$ 455.00
PO Box	$ 72.00	-	$ 72.00	$ 72.00
Contracted Services	0	-	0	$ 1,000.00
Brouchure Costs	0	-	0	$ 3,974.00
Awards	$ 1,275.00	-	$ 1,275.00	$ 1,453.00
Credit Card Charges	$ 2,887.00	-	$ 2,887.00	$ 2,813.00
Bank Account Fees	$ 156.00	-	$ 156.00	$ 319.00
Video Production	0	-	0	$ 1,000.00
CD Transfer	0	-	0	$ 368.00
Miscellaneous	0	-	$ 500.00	$ 601.00
TOTAL EXPENSE	**$ 32,772.00**	**$ 1,000.00**	**$ 33,772.00**	**$ 37,889.00**
Net Revenue Before Fund Transfers	$ (6,551.00)	$ 1,423.00	$ (5,128.00)	
Endowment Fund Transfer	$ 330.00	$ (330.00)	-	-
Net Revenue	**$ (6,221.00)**	**$ 1,093.00**	**$ (5,128.00)**	**$ 8,109.00**

Exhibit C

SOCIETY FOR INVERTEBRATE PATHOLOGY
BOARD DESIGNATED FUND REVENUE AND EXPENSE
FOR PERIODS ENDED MAY 1, THROUGH APRIL 30, 2000

	2000 Board Designated Funds						
	Virology	**Bacteria**	**Microsporidia**	**Microbial Control**	**Fungi**	**Endowment**	**Total**
REVENUE							
Membership Dues	$236.00	$218.00	$ 126.00	$ 536.00	$ 150.00	$ -	$1,266.00
Contributions	$ -	$ -	$ -	$ -	$ -	$ 574.00	$ 574.00
Interest Income	$ -	$ -	$ -	$ 292.00	$ -	$ 291.00	$ 583.00
Total Revenue	$236.00	$218.00	$ 126.00	$ 828.00	$ 150.00	$ 865.00	$2,423.00
EXPENSE							
Endowed Members	$ -	$ -	$ -	$ -	$ -	$ 330.00	$ 330.00
Travel Awards	$ -	$ -	$ -	$ 1,000.00	$ -	$ -	$1,000.00
MCD Directory	$ -	$ -	$ -	$ 1,100.00	$ -	$ -	$1,100.00
Total Expense	$ -	$ -	$ -	$ 2,100.00	$ -	$ 330.00	$2,430.00
Net Revenue	$236.00	$218.00	$ 126.00	$(1,272.00)	$ 150.00	$ 535.00	$ (7.00)

Exhibit D

Note 1: Membership Dues (previous; current)	**1999**	**2000**
Full Member (505@$30; 509@30)	$ 15,150.00	$ 15,270.00
Student Member (64@$15; 89@15)	$ 960.00	$ 1,335.00
Microsporidia (66@$2; 63@$2)	$ 132.00	$ 126.00
Virology (116@$2; 118@$2)	$ 232.00	$ 236.00
Bacteria (71@$2; 109@$2)	$ 142.00	$ 218.00
Microbial Control (257@$2; 268@$2)	$ 514.00	$ 536.00
		$ 150.00
Fungi (75@$2)	$ -	
	$ 17,130.00	$ 17,871.00

Note 2: Interest and Investments

Investments owned by SIP at April 30, 3000

	CD IBJ WHITEHALL BK & T	CD CD CAPITAL ONE BANK	CD FMLY Advanta NB Wilmtn	TOTAL
Society Operations:				
Cost	$24,000.00	$63,709.00	$12,208.00	$99,917.00
Maturity Date	06/30/00	12/27/00	12/27/00	
Interest Rate	5.35%	6.25%	5.65%	
Endowment Fund:				
Cost		6,291.00		$ 6,291.00
Maturity Date		12/27/00		
Interest Date		6.25%		
Microbial Control:				
Cost			$5,792.00	$5,792.00
Maturity Date			12/27/00	
Interest Date			5.65%	
Total Certificates	$ 24,000.00	$ 70,000.00	$ 18,000.00	$112,000.00

Note 3: CD Transfer

1999 CD Name	1999	Interest	2000	2000 CD Name
MBNA America Bank	$ 24,000.00	$ 592.37	$ 24,000.00	CD IBJ WHITEHALL BK & T
MBNA America Bank	$ 61,000.00	$ 3019.50	$ 70,000.00	MBNA America Bank
Queens County SVGS B	$ 6,000.00	$ 290.20	$ 18,000.00	CD OLD NATL BK
FMLY Advanta NB Wilmtn	$ 17,000.00	$ 901.00		
TOTAL INVESTMENT	**$108,000.00**	**$ 4,803.07**	**$112,000.00**	

Audit of the Treasurer's Report for Fiscal Year 1999-2000

The Society is in fine financial shape, but we noted that there was a decrease in balance in the General and Administrative fund of $9,386 from1999 ($128,096) to 2000 ($118,710). The amount of "ready cash" in the Merrill Lynch account also showed a substantial decrease of $10,573.80 from 1999 ($35,415.80) to 2000 ($24,842.00). Total expense for 2000 was $33,772 and income revenue was $28,644 which represents a deficit of $5,128. Revenue was significantly reduced in 2000 ($28,644) compared with 1999 ($45,998). In 1999, transfer of funds from FASEB occurred and higher income from the Annual Meeting and Slide Atlas Sales was realized (see Exhibit B of the Treasurer's Report).

The positive news is that expenses are less for 2000 compared with 1999. But the higher expenses for 1999 were for the brochure ($3,974), membership directory ($1,865), contracted services ($1,000), and Video Production ($1,000) which probably represent one time or infrequent costs. (The Video Production is not a General Expense and should be recorded as an expense to the Microbial Control Division. There were a few other one-time expenses that were not included.) If we subtract this total ($7,839) from the total expenses for 1999 ($37,889), the expense for recurring items for 1999 is $30,050. Taking this into

account, the expenses for 2000 were slightly higher than for 1999, most of which were incurred in association with the Newsletter ($1179 higher in 2000 compared with 1999). Membership remains fairly constant; student membership is up from 64 to 89.

The CD accounts for the General and Administrative Fund total $99,917. The Endowment Fund has $6,291 and the Microbial Control Division has $5,792 in their respective CD accounts. The CD totals $112,000. The CD of the Endowment Fund is currently earning at least $390 per year. This amount is supporting 10 full members. This level of membership support appears appropriate.

Except for the Video Production expense that should be re-directed to the Microbial Division, the Audit Committee finds the Treasurer's Report in order. The Treasurer's Report is accepted upon Amendment.

The Council should consider these points.
1. What is the right amount (range) of cash to have on hand?
2. What is a comfortable level of General and Administrative Fund for the Society for the next five years? for the next ten years?
3. Expenses continue to exceed revenue. The development of a long-range plan to address this problem is needed, especially if there is a substantial, unexpected expense that occurs. Consideration should be given to find ways to save costs. How many members download the Newsletter from the website? Can the membership Directory be placed on the website? Can the Program and Abstract be made available through the website? Use of the website by members will reduce the cost of printing hard copies of these documents and save mailing costs. However, does the extensive use of the website increase workload time (and cost) for the webmaster? Create a need for a dedicated server?
4. Do the Divisions have their own audit system?

Respectfully submitted,
Harry K. Kaya and Wendy Gelernter

Executive Secretary Report

Since the last report, I have had a very active year. After the annual meeting in Irvine, I sent out the November newsletter, along with annual membership renewals. Because of delays in sending out the newsletter, the membership envelopes went out very late. In the future, I recommend that we resume sending membership renewals separately. Despite the increased cost in mailing and supplies, delays in newsletter production would not hinder membership renewal.

On June 1st, I relocated to Raleigh, North Carolina and established a new mailing address and phone numbers for the Society. The toll free numbers remain the same. In order to ease the transition, I have kept the Gainesville mailing address active until September. All mail will be forward to the new address until next September.

Now that I have a new job as a web site developer and database programmer, SIP will be able to benefit from some of my new skills and facilities. Of most importance, I will be moving the SIP web site from the Internet service provider in Gainesville to the web servers of the Center for Integrated Pest Management in Raleigh, NC, thanks to the approval of the director, Ron Stinner. Our web address will remain the same, www.sipweb.org. You will see improvements in the overall look of the web site, online membership database, and the addition of online membership application and renewal.

I continue to have difficulties subscribing members to JIP. Phone calls to Academic Press are not returned and e-mails are lost or not answered. Some members who have not received their journal subscriptions are very irate about this, and often there is little I can do to expedite the process. Once I send a request to AP, I have no way of knowing if the journals were mailed unless the member contacts me with a complaint. Usually it takes a few e-mails or calls to AP and I still have no way of knowing whether or not the journal went out. In recent months, after some complaints on my part, I have been able to improve my communications with AP and have resolved many of the subscription problems. I would welcome any

suggestions on how best to continue improving the JIP subscription process.

As in the previous year, I agreed to handle registrations for the annual meeting. I believe that the additional work has caused some problems in fulfilling my duties as Executive Secretary. Because of this fact, unless I am urgently needed, I will not handle future meeting registrations.

As always, I encourage members to contact me via e-mail (sip@sipweb.org) with suggestions or complaints. I welcome such criticism as it helps me to identify problems and correct them.

Respectfully submitted,
Margaret J. Rotstein
Executive Secretary, SIP

SIP Newsletter Report

Three issues of the Newsletter comprising a total of 112 pages were produced in the 1999-2000 year. In addition to104 pages of Newsletter text, there was 1 supplement comprising 8 pages. The supplement consisted of the registration forms for the Guanajuato meetings. 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/Raleigh. Newsletters were mailed to U.S. members using the U.S. Postal Service and to other countries using Quick International.

Starting with the February, 2000 issue, the Newsletter is now available on the Society's website as downloadable Adobe files. A question was included in the 2000 Membership Renewal forms with the December, 1999 Newsletter, which asked if members wished to receive a hard copy of the Newsletter. Approximately 30% of members have chosen not to receive hard copies of the Newsletter, thereby considerably saving the Society on mailing costs.

Leellen Solter was appointed as the new Newsletter Assistant Editor, effective 1 January, 2000.

An error occurred in the numbering of the Newsletters. The December 1999 Newsletter was incorrectly labelled as Volume 32 (3) instead of 31(3). This lead to the misnumbering of the February and June 2000 Newsletters as 33(1) and (2) instead of 32(1) and (2). The Newsletter Editors regret this error and seek Council's advice on how to proceed with the numbering of future volumes.

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 Rotstein for final layout, printing, collating and mailing.

Financial Report, August 1999 - July 2000

	Dec Vol 32(3) (52pp)	Feb Vol 33(1) (32pp)	June Vol33(2) (28pp)
Expenses at Lethbridge			
Desktop specialist	$154	$ 93	$ 61
Stationary & Misc.	133	77	104
Lethbridge Total	287	170	165
Expenses at Gainesville			
Printing	$1,284	$ 880	$ 914
Processing	524	200	200
US Mailing	612[1]	277[2]	835[3]
International Mailing	3,153[1]	713[2]	2,867[3]
Gainesville Total	5,573	2,070	4,816
TOTAL	$5,860	$2,070	$ 4,981

[1] Includes mailing of membership renewals
[2] Includes mailing of ballots
[3] Includes mailing of Guanajuato Program and Abstracts

Respectfully submitted,
Mark S. Goettel, Newsletter Editor
Leellen Solter, Assistant Newsletter Editor

COMMITTEE REPORTS

Nominating Committee Report

In 1998, President Huber appointed Bob Granados, Toshi Iizuka, Isabelle Thiery and Wendy Gelernter to the Nominations Committee. At President Huber's request, the nomination process was completed earlier than usual -- by the start of the 1999 Irvine meetings -- in order to give the committee and potential candidates as much time as possible to consider their decisions. This schedule also permitted us to solicit input via the SIP newsletter, thus allowing members who couldn't attend the meeting the chance to participate in the nomination process. The use of e mail made this earlier schedule feasible (in the past, the nomination process was delayed until the annual meeting because it was otherwise impossible for an internationally-based committees and nominees to communicate effectively). We strongly suggest that future nominating committees follow this new schedule as well.

In the process of selecting nominees, we uncovered an unwritten SIP nomination guideline that has been adopted by some nominating committees in the past. In the interests of fairness, it was argued, someone from outside of North America should not be asked to run against a North American, especially for the office of Vice-President/President. The reasoning was that SIP members, who are primarily from North America, would be more likely to know their North American colleagues, thus giving North Americans an unfair advantage – simply on the basis of geography. Our committee had some lively discussions on this topic, and we finally agreed that, given increased international travel, the increased number of SIP meetings outside of North America, as well as changing personal attitudes, that this practice has outlived its usefulness. By selecting those nominees who we felt were best qualified, regardless of geography, our slate of candidates reflected this decision. While fairness should continue to be an important consideration in the selection of SIP nominees, we recommend that the restrictive practice of selecting either two North American Vice Presidential candidates or two non-American Vice Presidential candidates be discontinued in the future because it no longer serves the interests of fairness, as was originally intended.

Wendy Gelernter,
Nominations Committee Chair

Web Site and Database Committee

The SIP Newsletter was published on the Web in late 1999 and during 2000. We have heard no complaints about this.

During the membership renewal process, 92% of the members agreed to allow their personal information on the Internet Web based directory for the Society. The Membership Directory is now on the Web.

Although at the 1999 meeting the Council approved the preparation of an expertise database to be part of the Membership Directory, we were unable to implement this during this past year. Originally we believed that members would enter their own data using a password. Now it has been decided to collect the information at the time of membership renewal and have an SIP employee enter the data. The following information about expertise will be gathered from the membership on the next renewal form or on an extra form.

For each of the following list those subjects on which you are expert. For the taxa you can be as broad or specific as you would like.

1. Pathogen group: virus, bacteria, protozoa, fungi, nematodes, other
2. Pathogen taxa within group
3. Invertebrate taxa
4. Scientific subject

(We suggest you use molecular biology, physiology, epizootiology, microbial control, immunology, production, formulation, and safety, but other terms can be used)

(For this field maybe we should define some terms for database users and contributors)

5. Geographic area of your work

David Onstad, Chairman

Membership Committee Report

Composition of SIP Membership: The decline in membership has leveled off this year (see table and chart for breakdown by country and region). Overall, there was a 1% decrease in membership and a net loss of 5 members. Currently, there are 703 members worldwide representing approximately 50 countries (as of July 30, 2000). Approximately 50% of the members are from North America (US, Canada and Mexico). The largest percent increases in membership were in the Middle East/African base (up 35%) and Central and South America (up 18%).

There are currently 5 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 Virology, Bacteria, Fungi and Microsporidia.

Activities during 1999/2000:

Two membership renewal forms were sent out this year along with a mass e-mailing on July 5, 2000. The mass email resulted in approximately 35 additional renewals.

Most members who have canceled their memberships, reported that they either no longer work in the area of invertebrate pathology, or have retired.

In the past year, we have approved 2 members for emeritus membership; Drs. Leo P.S. van der Geest and Sardar Sohi

The new Fungus division has 91 new members and we will add a new Nematode division this year.

Suggested activities for 2000/2001:

Online membership renewal: Peg informs us that during the next year, we will be able to accept membership renewals online. This should increase membership due to the ease of Internet use and reduced mailing costs for members.

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.

The Membership Committee: The Membership Committee for 1999/2000 consists of Jorge Ibarra, Robert Anderson, Lerry Lacey and James Becnel.

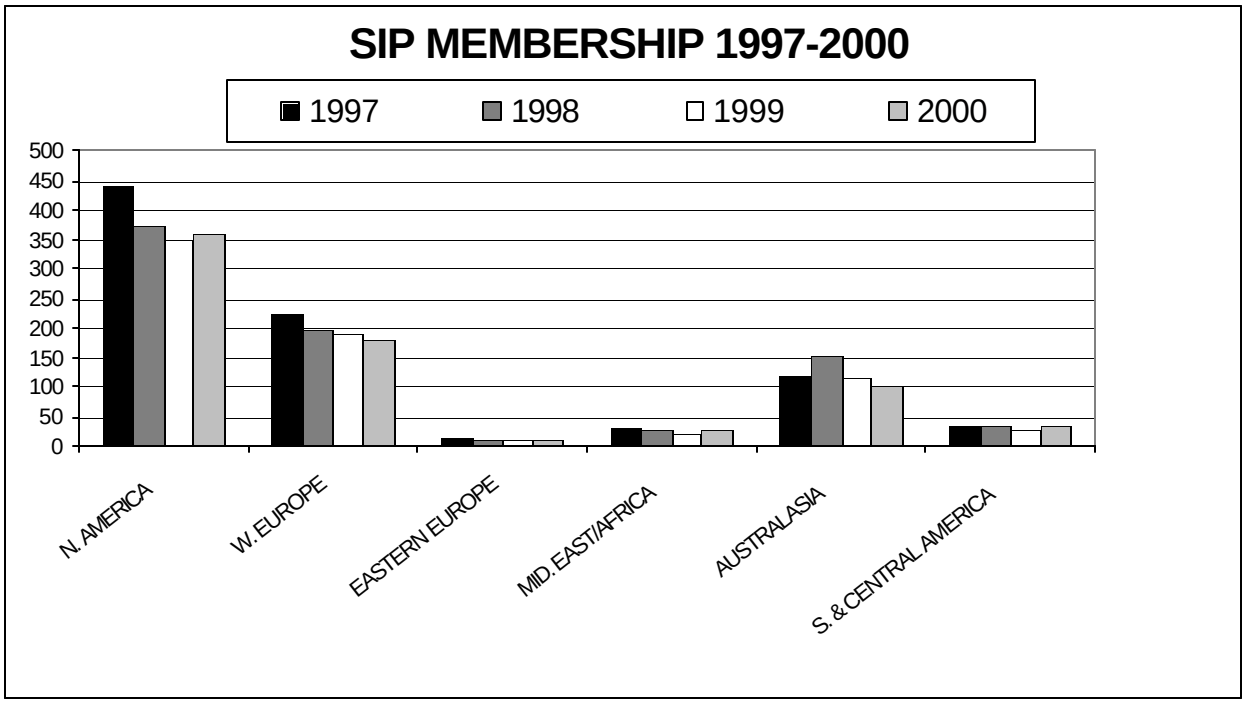
DIVISION MEMBERSHIP

Division	Number of Members
Microsporidia	67
Microbial Control	275
Bacteria	123
Virus	129
Fungus	91

Submitted by James J. Becnel,
August 2000

A listing of SIP Membership by geographic region follows on the next page.

LOCATION	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*%change*
CANADA	48	57	63	54	46	50	
MEXICO	16	17	16	12	9	31	
UNITED STATES	382	357	343	308	292	273	
N. AMERICA	446	431	422	374	347	354	2%
AUSTRIA	4	3	4	3	5	6	
BELGIUM	7	9	8	5	4	3	
DENMARK	4	7	7	6	6	3	
FINLAND	4	3	3	2	2	2	
FRANCE	35	42	37	25	23	26	
GREECE	1	1	1	1	2	1	
ITALY	16	12	12	10	4	4	
NETHERLANDS	10	10	15	13	13	13	
NORWAY		2	2	2	2	2	
PORTUGAL	9	7	7	6	5	4	
SPAIN	8	19	13	8	9	9	
SWEDEN	7	9	8	7	6	5	
SWITZERLAND	5	4	7	8	8	7	
UNITED KINGDOM	66	83	83	81	84	76	
GERMANY	16	19	17	18	16	17	
W. EUROPE	194	233	224	195	189	178	-6%
BULGARIA	-	-	-	1	1	1	
CZECH REPUBLIC	5	3	4	3	3	2	
MOLDOVA	-	-	1	1	1	1	
POLAND	2	3	4	3	2	3	
ROMANIA & LATVIA	-	3	3	4	3	2	
RUSSIA	1	1	1	-	2	2	
EASTERN EUROPE	15	17	13	11	11	10	-9%
EGYPT	7	7	5	3	3	3	
IRAN	-	-	-	-	-	2	
ISRAEL	11	11	12	13	9	9	
JORDAN	2	2	2	2	-	-	
KENYA	1	2	3	3	2	3	
MADAGASCAR	-	-	-	-	-	1	
SOUTH AFRICA	4	4	3	3	3	4	
WEST AFRICA		3	3	2	3	4	
TURKEY	2	3	2	1	-	1	
MID. EAST/AFRICA	30	34	30	27	20	27	35%
AUSTRALIA	24	29	25	28	23	23	
PR OF CHINA	11	11	11	10	8	6	
INDIA	3	3	3	3	3	4	
JAPAN	45	49	51	86	50	49	
NEW ZEALAND	9	10	9	5	7	7	
PHILLIPINES	3	3	3	3	4	2	
KOREA	1	3	3	3	4	3	
TAIWAN	6	14	8	10	8	4	
THAILAND	3	2	4	5	6	3	
AUSTRALASIA	113	127	117	153	113	101	-11%
ARGENTINA	5	7	6	7	6	5	
BRAZIL	15	18	23	22	16	16	
COLOMBIA	1	1	3	1	4	6	
COSTA RICA	-	2	2	1	-	3	
DOMINICAN REP.	1	1	1	1	1	1	
PERU	-	1	1	1	1	1	
VENEZUELA	-	-	-	-	-	1	
CENTRAL & S. AMERICA	39	48	36	33	28	33	18%
TOTAL	**837**	**890**	**842**	**793**	**708**	**703**	**-1%**



Endowment and Student Awards 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.

Eight endowees were deleted from the 1999 list of endowees either because they have been endowed for five or more years or because we verified that they can afford to pay their dues.

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 2000: two from the Benin Republic and one each from Italy, Romania, Egypt, Russia, Malagasy Democratic republic, the Philippines, Iran, Poland, Mexico, and Nigeria.

The committee encourages all SIP members to nominate colleagues for endowed membership for 2001. Please e-mail your nomination(s) to <tpoprawski@weslaco.ars.usda.gov>.

It came to our attention that 10 out of the13 1999 endowees are not listed in the 1999-2000 membership directory.

We are also concerned with an over-emphasis on fungus researchers. Perhaps we have a problem in that all the members of the Endowment Committee are mycopathologists. We thus recommend that the Endowment Committee either add a member or replace one or more of us with someone from a different pathogen circle.

Respecfully submitted,
Nguya Maniania
Stephen Wraight
Tad Poprawski, Chair

Tellers Committee Report

The Tellers Committee comprised of active SIP members included Gary Blissard (United States), Juan Garcia (Argentina, on leave in the U.S.), and Bob Granados (United States and Committee Chairperson). Secretary, Ann Hajek, provided the sealed ballots and the committee members counted the ballots for the Society for Invertebrate Pathology, year 2000 elections. A total of 174 ballots were received but due to some incorrect voting procedures the totals for each office were not the same. The most common errors were either forgetting to vote for a candidate or voting for two candidates instead of only one person as indicated on the ballot. The total valid counts for each of the SIP offices were submitted to Ann Hajek for the SIP records and the winners for each office are indicated below in bold:

OFFICE	NOMINEE
President	**James Harper**
Vice President	**Harry Kaya**
	Just Vlak
Treasurer	**Michael McGuire**
	Suzanne Thiem
Secretary	**Doreen Winstanley**
	Jean-Louis Schwartz
Trustees	**Basil Arif**
	Trevor Jackson
	Juan Ferre
	Paulo Vilarinhos

All of the candidates received good support from the SIP membership and they deserve our thanks for their willingness to run for office.

Respectfully submitted,
Bob Granados
Committee Chairperson

Meetings Board Committee Report

During this year the Meetings Board Committee consisted of **Dr Just M. Vlak**, Chair, Laboratory of Virology, Wageningen University and Research Centre, Wageningen, the Netherlands, **Dr Michael J. Adang**, Member, Department of Entomology, University of Georgia, Athens, USA, and **Dr Yoshifumi Hashimoto**, Member, Department of Applied Biology, Kyoto Institute of Technology, Faculty of Textile Sciences, Kyoto, Japan.

The XXXIIth Annual Meeting was held in Irvine, California, USA, August 22-27, 1999. Close to 320 persons attended the meeting, which was located at the Beckman Centre of the National Academy of Sciences, at the UC Irvine campus. The Committee is very grateful to Dr Brian Federici and Dr Harry Kaya and their team for the organization of an excellent meeting both scientifically and socially. Over 250 papers were presented. All participants enjoyed the hospitality and good weather of Southern California. The meeting has a positive financial balance.

The Chairman communicated frequently with the Organizing Committee of the XXXIIIrd Annual Meeting to be held in Guanajuato, Mexico, in conjunction with the Vth International Conference on *Bacillus thuringiensis* in order to monitor progress. The organization of this meeting, carried out by Dr Jorge Ibarra and his team, is well on its way; the organizers are expecting to host over 300 participants from around the world. About 180 oral presentations and 150 posters are submitted. The 2001 Annual Meeting (XXXIVth) will be held for the first time in Israel, and will be organized by Dr Meir Broza and his committee, in the kibbutz Ma'ale Hachamisha, near Jerusalem, September 2-7. In 1999 the Executive Council has also approved the 2002 SIP meeting (International Colloquium) in Iguassu Falls, Brasil, August 18-23 and organized by Dr Flavio Moscardi. The offer from Dr John Burand and his team to host the 2003 Annual Meeting (XXXVIth) in Burlington, Vermont, USA, is now final and awaiting formal approval by the SIP Executive Council. The Committee is negotiating to have the 2004 Annual Meeting in conjunction with the International Conference on *Bacillus thuringiensis* in the United Kingdom.

The Committee has the intention to maintain an international spread of future meetings, alternating venues between Northern America and other parts of the world. The Committee is awaiting offers for the

2005 Annual Meeting and beyond. The approved, confirmed and tentative sites for SIP Meetings through 2004 are as follows:

2000 # Guanajuato, Mexico, August 13-18, J.E. Ibarra

2001, Ma'ale Hachamisha, Israel, Sept. 2-7, M. Broza **(Editor's note: see important message from the President on page * regarding 2001 meeting site**)

2002 *, # Iguassu Falls, Brasil, August 18-23, F. Moscardi

2003, Burlington, USA, late August, J. Burand

2004 # Europe (UK?), late August, Tentative

*International Colloquium, # International Conference on *Bacillus thuringiensis*

After having had the current format of annual meetings for many years, the Committee is discussing whether some changes should be made to meet the present and future demands of the membership. The options include aspects such as limiting the meeting to four days including the weekend, reformatting the sessions and reducing the social program.

Upon approval by the SIP Executive Council the current chair will retire after many years of service and the office be taken over by **Dr Mark Goettel**, Lethbridge Research Center, Agriculture and Agri-Food Canada, Lethbridge, Canada. Since this is my last annual report, I would like to thank my committee members, the SIP Executive Council, the SIP Office and all the organizers of the annual meetings for their support and their good fellowship over the years.

Just M. Vlak, Chair

Founders' Lecturer Committee Report

The Founders' Lecturer Committee was convened at the 1999 SIP Annual meeting in Irvine. Dr Max Bergoin was not able to attend, and was contacted by e-mail.

The Committee confirmed unanimously the nominations for the year 2000 Founders' Lecture Honoree, Dr Denis Burges, and Lecturer, Dr. Brian Federici.

The Committee Chair subsequently contacted Dr. Burges and Dr. Federici to advise them of the decision, and both were delighted to accept.

Arrangements then were made for the drafting of biographical articles on Dr. Burges and Dr. Federici for the SIP Newsletter.

On the Committee's behalf, Dr. Jim Harper kindly arranged with Dr. John Briggs for the production of the Certificates to be awarded to Dr. Burges and Dr. Federici, and for the subsequent transport of these to the Guanajuato meeting. In this regard, it is the personal view of the undersigned that a suitable award should be made to Dr. Briggs in recognition of his past and continued service to our Society.

The Founders' Lecturer Committee will reconvene during the present Guanajuato meeting. One of the suggestions tabled for the 2001 meeting (only) is for a Special Seminar to be held in the place of the Founders' Lecture. This would be a departure from tradition and probably beyond the remit of the Committee. I will explain the rationale for this suggestion as presented to me, and seek the Council's direction on this issue prior to placing it before the Committee.

Respectfully submitted on behalf of the Founders' Lecturer Committee,

Professor Dudley Pinnock, Chair

PROPOSED CHANGE TO THE SIP CONSTITUTION

Addition to Article IV. Section 2. (this would mean that Sections 2,3 and 4, within Article IV, would be renumbered to Sections 3,4 and 5.

"The Trustees participate in all decision-making by the Council. They provide an additional conduit for SOCIETY members to provide information and express needs to the COUNCIL, as well as provide continuity to the Council by virtue of overlapping four-year terms."

The proposed change to the SIP Constitution will be adopted only if at least two-thirds of the valid ballots returned are marked yes. Please vote when renewing your membership using either the membership renewal envelope enclosed with this newsletter or on-line (see page 1). **Mark your ballots and return them before 1 February, 2001**

MEMBERS ON THE MOVE

Dr. Michael McGuire has moved to Shafter, California where he is the Research Leader for the Western Integrated Cropping Systems Research Unit for USDA-ARS. The unit focuses on research issues involving cotton and Dr.McGuire will be examining microbial control agents for insects such as *Lygus* and aphids. His new contact information is:

USDA-ARS-WICSRU
Shafter Research and Extension Center
17053 Shafter Avenue
Shafter, CA 93263
Tel: 661-746-8001
Fax: 661-746-1619
E-mail: mrmcguire@ucdavis.edu

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

Chemical Pesticide Markets, Health Risks and Residues
J. Harris, Biopesticides Programme, CABI Bioscience, Ascot, UK
Biopesticides Series, No. 1
July 2000, 64 pages, paperback
ISBN 085199 476 8
£17.95 (US$35.00)

During recent decades there has been a steady increase in the use of chemical pesticides in both developed and developing countries. This has caused widespread concern about their impact on human health and on the environment. This is particularly the case in less developed countries which may lack appropriate resources to minimise risks and rectify problems.

The purpose of this short book is to provide a review of:

* Chemical pesticide market, including global figures, exports from developed countries, and markets in Latin America, Asia and Africa
* Information on the scale of manufacture, import, export and use of chemical pesticides
* Examples of direct risks to human welfare in terms of acute poisonings caused by occupation exposure and pesticide residues in food
* Examples of problems with the storage of obsolete stock of pesticides in developing countries.

The focus is on acute problems in developing countries, particularly in Latin America, Asia and Africa, but some information is also provided about developed countries.

This is the first volume in a new"Biopesticides Series" developed by the Biopesticides Programme at CABI Bioscience.

Priorities in Biopesticide Research and Development in Developing Countries
J. Harris and D. Dent, Biopesticides Programme, CABI Bioscience, Ascot, UK
Biopesticides Series, No. 2
July 2000, 80 pages, paperback
ISBN 085199 479 2
£17.95 (US$35.00)

Biological pesticides based on pathogenic microorganisms specific to a target pest offer an ecologically-sound and effective solution to pest problems. They pose less threat to the environment and to human health than do chemical pesticides. However, despite the enormous potential for biopesticides, their development, commercialisation and use has been slow.

The information reported in this book is based on a survey of more than 100 biopesticide research workers in developing countries. The results demonstrate that the main difficulties and constraints facing researchers relate to a lack of expertise in the crucial later stages of development. Biopesticide research is receiving mostly low investment, mainly from the public sector, and requires more multidisciplinary expertise. It is concluded that targeted assistance on a multinational and multidisciplinary basis is required in developing countries in order to remove the constraints.

Contents:

* Introduction
* Questionnaire design and target researchers
* Results of the survey
  - Delivery and response
  - Type of employment of respondents
  - Research Interests
  - Constraints to Biopesticide Research and Development
  - Barriers to Commercialisation
  - Differences between specialisms
  - Differences between regions
* Discussion
* Conclusion
* Appendices

Biopesticides could potentially offer more 'green' ways of controlling crop pests, but to date there are new biopesticides actually in use. This book discusses the reasons for this.

Both books outlined above are available from:

CABI Publishing
CAB International,
Wallingford Oxon OX10 8DE, UK
Tel: +44 (0) 1491 832111; Fax: +44 (0) 1491 829292
E-Mail: orders@cabi.org
or
10 East 40th Street,
Suite 3203,
New York, NY 10016, USA
Tel: +1 212 481 7018; Fax: +1 212 686 7993
E-Mail: cabi-nao@cabi.org

Entomopathogenic Bacteria: from Laboratory to Field Application

by Jean-François Charles, Armelle Delécluse, Christina Nielsen-LeRoux

Entomopathogenic bacteria (*Bacillus thuringiensis* and *B. sphaericus*) are increasingly used as biopesticides to control larval insect populations which are either agricultural or forestry pests and to reduce those which as adults are vectors of severe human diseases. This new book, the first since 1993 to address all aspects of entomopathogenic bacteria, provides undergraduate and graduate students as well as research scientists with a complete, modern view of this important group of bacteria.

The authors, chosen for their sustained contributions to the field, cover both fundamental and applied research in this area. The main topics include bacterial ecology and taxonomy, toxin diversity, activity and mode of action, regulation and environment of the genes, safety and ecotoxicology, production and field application of the bacteria, and outbreaks of resistant populations. It ends with the most recent data obtained on transgenic biotechnology and addresses environmental impact issues.

For more information, table of contents and list of contributors, see Kluwer Academic Publishers' Web Site at
http://kapis.www.wkap.nl/kaphtml.htm/HOMEPAGE

August 2000, 524 pp.
Hardbound, SIBN 0-7923-6523-2
Price : $196.00

Bacillus thuringiensis
Biology, Ecology and Safety
T.R. Glare and M. O'Callaghan, Biocontrol and Biodiversity, AgResearch, New Zealand
ISBN 0471 49630 8, 432 pp, Hbk
£95.00

The bacterium, *Bacillus thuringiensis* (B.t.), is used worldwide as an effective biological control agent for many species of insect pest, either by crop spraying or genetic engineering of crop plants. It is a topical

subject of interest to a wide range of disciplines as questions have recently been raised due to health concerns over inhalation of the bacterial spores, and fears of gene-swapping (there is little genetic difference between *B. cereus* which is used on crops and *B. anthracis* which causes anthrax).

This text provides a definitive source of information on the environmental, non-target and human safety of these products. It is a well-balanced and comprehensive reference work of great value to the field.

- Highly reputable authors and Foreword by Dr. Denis Burges (Former President of the Society for Invertebrate Pathology)
- Highly topical and an area generating a lot of interest
- Meets the need for a well-balanced, comprehensive reference work in this area

Contents:
Introduction
Characterisation
Natural Occurrence and Role in the Environment
Production and Formulation
Toxicity to Insects
Effects on Non-target Microbes and Invertebrate
Effects on Vertebrates
Persistence and activity in the environment
Insect and Environmental Factors Affecting Toxicity
Transmission and dispersal
Effects in Combination with Other Insecticidal Agents
Gene transfer
Transgenic Use of Bt Toxin Genes
Resistance
Conclusions: Safety and Risks

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Overseas: +44 1243 843294; Fax: +44 (0) 1243 777460
E-mail: Ims@wiley.co.uk
Clare Wells, Baffins Lane, Chichester, Sussex, P019 1UD

Biological Control of Insect Pests (Goel, S.C. Ed.)
Published by Uttar Pradesh Zoological Society, Muzaffarnaagar-25101 (India)
ISBN 81-900101-4-X, Hard bound, 18 x25 cm, pp 221
$US30 (abroad, postfree), 1994

Contents Include:
Insect Baculoviruses as biocontrol agents (S. Chaudhari & G. Jayachandran)
Biotechnology & Insect pathogens in IPM (K. Narayanan)
Entomophilic nematodes in Biocontrol of crops (H. David *et al*.)
Population of mermithid parasitoid on bug (S.C. Dhiman & U. Ghayyur)
Entomophathgenic fungi in mosquito management (S.S. Sandhu & M. Sharma)
Pathogens in tobacco caterpillars control (P.D.K. Jayanathi *et al.*)
Nematode in controlling pyralid Rice moth (S. Mazumdar & S. Chakravorty)
Entomophilic nematode in biocontrol (S. C. Dhiman)

The Uttar Pradesh Zoological Society
97-B Sriramkrupa,
P.O. Bo No. 296,
New Mandi, Muzaffarnagar -251001, India
Tel: 0131-409053
Fax: 91-131-402510

POSITIONS AVAILABLE

Research Entomologist / Microbiologist

The USDA, REE, Agricultural Research Service (ARS), Northern Plains Area, Bee Biology & Systematics Laboratory is accepting applications for a permanent, full-time **Research Entomologist / Microbiologist** to provide expertise that will contribute directly to the USDA Alternatives to Methyl Bromide Initiative and the USDA Small Farms Initiative. Specific research objectives are to: 1) Develop novel approaches for the management of chalkbrood (*Ascosphaera* spp.) in commercial scale populations of the alfalfa leafcutting bee, blue orchard bee, other bee

pollinator species; 2) Develop chemical and/or biological and cultural (e.g., sanitation) control methods for commercial scale bee pollinator species; 3) Research the etiology of bee diseases by using culture media and diagnostic kits for isolation, identification, and enumeration of specific microorganisms. US citizenship and a Ph.D. or equivalent is desired. Salary commensurate with experience ($50,139 - $91,589). For information on the research program and/or position contact:

Dr. W. P. Kemp at **435-797-2525** or via e-mail at wkemp@biology.usu.edu. A copy of the vacancy announcement will be available on the ARS website: **www.ars.usda.gov/afm/hrd/resjobs**. For information on application procedures contact **John Watterson** at **435-797-3071**. Applications in response to this advertisement should be marked **ARS-X0W-0342**, and should be mailed to USDA, ARS, HRD, WOB, 5601 Sunnyside Avenue, Beltsville, MD 20705-5106.

Applications must be postmarked by the closing date of 31 December 2000. USDA is an equal opportunity provider and employer.

Research Entomologist/microbiologist, USDA, Agricultural Research Service, Southern Insect Management Research, Stoneville, Mississippi, to conduct research aimed at improving management of insect pests with microbial pathogens through development of new techniques for evaluation of effects of entomopathogens on major crop insects; development of new methods or formulations that will improve the efficacy of microbial control agents; and improvements in mass propagation of microbial pathogens on tissue culture and live hosts. Qualified candidates must have directly related graduate degree and/or research experience with knowledge of microbiology, entomology, and insect pathology, and skill in large scale in vitro pathogen production. U.S. citizenship required. ARS offers a comprehensive benefits package and negotiable recruitment incentives, including relocation assistance. For further information about the position contact:

Dr. D.D. Hardee at 662-686-5231, or dhardee@ag.gov. For application information contact Sue Gore, at 662-686-5239.
USDA/ARS is an equal opportunity provider and employer.

A **Graduate Research Assistantship** is available starting January 1, 2001 (or sooner) to conduct risk assessment analyses of a recombinant baculovirus insecticide expressing a protease. Experiments will address potential effects of the baculovirus-expressed protease on behavior, development, survival and fecundity of predatory insects (the green lacewing *Chrysoperla carnea* and the twelve-spotted lady beetle *Coleomegilla maculata*), and on a parasitoid (*Micoplitis croceipes*). The ability of the predators and the parasitoid to disseminate the recombinant baculovirus will also be assessed. Interested students should submit a letter of application and CV to:

Dr. Bryony C. Bonning,
Department of Entomology,
Iowa State University,
418 Science II,
Ames, IA 50011-3222 USA.
Fax: (515) 294 5957; E-mail: bbonning@iastate.edu
Iowa State University is an Affirmative Action/Equal Opportunity Employer.

Marine Invertebrate Pathobiologist

Position available in pathobiology laboratory dealing with marine invertebrates. Experience in all aspects of cell and tissue culture techniques a must. Experience in protein purification techniques highly desirable. B.S. in biological sciences or related field with 1-2 years experience or M.S. degree in biology or related field. To apply submit a letter of application, resume and the names of three references to:

Dr. Jerome La Peyre,
Department of Veterinary Science,
111 Dalrymple Building,
Louisiana State University,
Baton Rouge, LA, 70803, USA

POSITIONS WANTED

Integrated Pest Management

An energetic, hard-working Ph.D. (Graduation in 2000) wants to pursue his career in the field of integrated pest management (IPM) with emphasis on *Bacillus thuringiensis* in related research institutes and universities. Being well trained in Entomology and biochemistry, he has worked on the possible mechanisms of resistance to *Bacillus thuringiensis* and its specific Cry toxins and effect of resistance on fitness cost and rate of increase of populations. He has published his work in well renowned international journals such as *Applied and Environmental Microbiology* and *Pest Management Science*

PhD awarded for research on *Resistance Mechanism to Bacillus thuringiensis and its specific Cry toxins* and also hold MSc (Hons) in Insect Pest Management. Experience includes work on binding studies to investigate possible resistance mechanisms, recombinant mutant of Cry toxins studies, investigations on mode of inheritance to *Bt* Canola, field trials, insect rearing and population studies.

With a good academic background and a passion for hard work, he has the ability to work out challenging assignments. He has very good writing, presentation, IT, communication and management skills and had presented his research work at conferences.

If you would like to have him work for you, please contact:

Ali H Sayyed,
Department of Biology,
Imperial College at Silwood Park,
Ascot, Berkshire SL5 7PY UK
E-mail: h.sayyed@ic.ac.uk or
ali_sayyed@hotmail.com

Microbial Control and IPM

An energetic, hard-working Ph.D. (Graduation in 1998) 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. Has taken charge of finishing several research projects including two projects from international foundation for science (IFS) in Sweden and WHO respectively. Has published several highly quality research papers in international scientific meetings and international journals such as Crop Protection and Journal of Invertebrate Pathology. He was organizer of the 7th International Working Conference on Stored-product Protection (IWCSPP) from 1998-1999 and edited the proceedings of 7th International Working Conference on Stored-product Protection (7th IWCSPP) as member of the editorial board of the proceedings.

His Ph.D. thesis is entitled "Study on *Bacillus thuringiensis* resources and its genetic diversity in warehouses". Expert in purification and detection of DNA and protein; genotype identification and analysis; southern-blotting hybridization; transformation; PCR, PFGE, RAPDs and RFLP analysis; cDNA library construction and screening; Site-specific mutagenesis; affinity measurement of toxins and gene cloning etc. research techniques for molecular biology. Fermentation and large scale in vitro pathogen production; bioassay; serology techniques; development of formulations; and, microbial classification etc research techniques for insecticidal microbiology. Has taught and studied Entomology since 1986.

Research experience:
(1) Isolation of Bt strains and resistance of indianmeal moth to Bt in China financed by IFS (Sweden) from 1996 to 1998, Chief investigator./ (2) Studies on resistance of *Anopheles sinensis* to *Bacillus thuringiensis* supported by UNDP/WORLD Bank/WHO TDR from May,1999-May,2000, Chief investigator./ (3) Resource and genetic diversity of *Bacillus thuringiensis* in warehouse (Ph.D.dissertation)/ (4) Studies on control techniques and community of stored grain insects financed by Hubei province from 1991 to 1993./ (5) Migration research of *Nilaparvata lugens* (Hemiptera: Delphacidae) in China financed by National Key Program from 1993 to 1995./ (6) Resistance of *Nilaparvata lugens* (Hemiptera: Delphacidae) to chemical insecticides from 1993 to 1995 financed by National Key Program./ (7) Control effectiveness of rice bran oil to stored product pests

financed by Huazhong Agricultural University research program from 1992 to 1994.

If you would like to have him work for you, please contact:
Dr. Zhang Hongyu,
Department of Plant Protection,
Huazhong Agricultural University,
Wuhan 430070, P.R.China.
E-mail: zhongyu@public.wh.hb.cn

Post-Doc Microbial Control / IPM (including Bt crops)

I am seeking a postdoctoral position (or short-term consultancy) in applied entomology, particularly biological control and integrated pest management using microbial methods.

I have recently completed my PhD entitled "Factors influencing the horizontal transmission of *Metarhizium anisopliae* var *acridum* in locust and grasshopper populations" which was supervised by Dr. Matt Thomas and Prof. John Lawton. I am presently based in the Leverhulme Unit for Population Biology and Biological Control, which is a joint research programme between the Centre for Population Biology and CABI Bioscience, at Silwood Park, U.K.

The aim of my work has been to investigate aspects of host-pathogen ecology relevant to the use of *M. anisopliae* against locusts and grasshoppers in Africa. In particular, the main focus was on how different abiotic and biotic factors affect the epizootiological properties of the fungus when used as a mycopesticide. My approach used a range of laboratory and field studies investigating the importance of dose, temperature, host stage and thermal biology, sub-lethal effects and environmental influences (including intraguild predation) on both the efficacy of the disease and its ability to cycle between host populations. Further details and a publication list can be found under my name on the Centre for Population Biology web page:
http://forest.bio.ic.ac.uk/cpb/cpb/Directory.html.

Prior to my PhD I completed a MSc (distinction) in Pest Management (Applied Entomology option) with the Department of Biology, Imperial College at Silwood Park. Within this I completed a 4-month project investigating the impact of biological control of the Diamondback moth (*Plutella xylostella*) and host plant cropping practices in the Cameron Highlands, Malaysia. I subsequently spent a period of several months working as a research assistant investigating tritrophic (plant-pest-natural enemy) interactions in the same pest/crop system in Kenya.

Please contact:
Steven Arthurs
E-mail: s.arthurs@ic.ac.uk
Tel: + 44 207 5942527

MICROBIAL CONTROL NEWS

Unapproved Corn–Unfounded Concern

On September 18, the Washington Post disclosed that Taco Bell brand taco shells, sold in the US, tested positive for StarLink corn, which is approved only for use in animal feed. Sold by Aventis CropScience, StarLink is engineered to contain the Cry9C protein obtained from *Bacillus thuringiensis (Bt*). By Friday, September 22, Kraft Foods voluntarily recalled its Taco Bell taco shells from stores. As a result of the incident, Kraft is recommending that crops approved for animal feed should not be allowed to enter the market unless they have also been approved for use in food, and is calling for a mandatory review of all new biotech crops.

There are no known health risks associated with the StarLink corn; however, because of questions about the allergenic potential of the Cry9C protein, the Environmental Protection Agency has not approved StarLink for use in foods meant for human consumption. Steve Taylor, Head of the Department of Food Science and Technology, University of Nebraska, is concerned that the detection of Cry9C in taco shells could be misunderstood by the public or food industry and offers the following information:

"StarLink was not approved for food use because the product did not pass all screens for allergenicity. The Bt protein in StarLink, Cry9C, does not resemble known allergens, so in fact it may not be an allergen. However,

Cry9C was not immediately broken down in digestion tests. Other Bt products on the market contain a Cry1 protein, which is digested in a matter of seconds and has passed other screens for allergenicity. Furthermore, Cry1 proteins have been present in foods via Bt sprays used by farmers and home gardeners for many years.

"Was the public at risk because of this incident? I believe not. In order for people to become allergic to a protein they must be exposed to it multiple times over an extended period until they become sensitized. The protein must also be present as a relatively high percentage of total protein content. Most allergenic proteins are present at levels of one to 40 percent. Aventis indicates that the Cry9C protein is present in corn kernels at 0.3 percent, but the taco shells would contain far less due to the presence of other varieties of corn and the use of other ingredients. It is highly unlikely that Cry9C protein would be present in any corn products at a level of concern.

"It is important to understand that only a very small amount of StarLink corn was planted, about 300,000 acres among the nearly 80 million corn acres in the United States (0.3 of a percent). That small amount could conceivably be produced by only 100 large farms. Because of the feed-only restriction, nearly all would have been properly channeled to feed operations, but even if the production from one or two farms was improperly channeled, there would be only a few thousand acres to be co-mingled with other grain. This clearly would not produce protein levels of any health concern. In addition, a recent news release indicates that Aventis is going to buy back all of the StarLink corn to assure that any further amounts do not end up in the food chain."

[Steve Taylor can be reached at staylor2@unl.edu.]

Ruth Irwin
Information Systems for Biotechnology
Virginia Tech
mailto:rirwin@vt.edu
Reprinted from: ISB News Report
October 2000

Ecogen Aquires Bt Business from Mycogen

In January 2000, Ecogen Incorporated acquired the sprayable Bt business of Mycogen Corporation, an affiliate of Dow AgroSciences LLC. The acquisition included the products MVP®, MVP II, Mattch®, M/C®, and rights to develop certain other products. These products join Ecogen's Bt insecticide line-up of Crymax®, Lepinox®, Raven® and Condor® to offer users a variety of different formulations and toxin compositions. Researchers who utilized MVP or M/C as sources of purified Cry1Ac or Cry1C, respectively, should contact Dr. Tim Johnson or Dr. Dirk Ave at Ecogen who will make arrangements to provide samples.

Dr. Tim Johnson
VP Sales and Marketing
Ecogen Incorporated

Non-target Effects of Bt Corn Prove Manageable

The environmental impacts of corn crops genetically engineered to contain the Bt gene continue to raise concerns. Subsequent to a laboratory study suggesting that the Bt endotoxin in corn pollen might present risks to monarch butterfly larvae, researchers have been examining the effects of Bt pollen on other non-target species and under field conditions. Scientists at the University of Illinois, led by M R Berenbaum, have now reported the results of field tests showing that Bt pollen is unlikely to affect wild populations of black swallowtails in the US(1).

The eastern black swallowtail (*Papilio polyxenes*) is found throughout the eastern United States as far west as the Rocky Mountains. The larvae feed almost exclusively on members of the parsley family found along roadsides and next to cultivated fields. They develop in two to three weeks, with three or more generations produced throughout the summer season, making exposure to Bt endotoxin from pollen a likely event.

Field Experiment

The investigators placed potted parsnip plants in an array consisting of five rows of five plants each along

the eastern edge of a field of Pioneer variety 34R07 Bt corn (Monsanto event 810) one day after the onset of pollen release. Three days later, a second array was placed at the south end of the first array. The eastern edge of the field was chosen to take advantage of prevailing westerly winds, maximizing pollen drift onto the host plants. The five rows of each array were spaced 0.5, 1, 2, 4, and 7 m from the field's edge and the plants within a row were spaced 1m apart. Ten first instar black swallowtails were placed on each plant, and pollen count falling on the host plants was monitored. Surviving larvae were counted and weighed at the end of seven days.

Laboratory Bioassay

Pollen from the Pioneer variety field Bt corn plants, non-Bt corn (Pioneer 3489), and Bt corn plants known to be insecticidal (Novartis variety Max 454) was collected. The Bt pollen from event 810 was suspended in acetone to constitute five doses ranging from 10,000 to 1 grain/cm2 and applied to uniform foliage disks punched from parsnip plants. The pollen from the non-Bt and Novartis Max 454 varieties were assayed at 10,000 grains/cm2 only and likewise applied. Forty-eight larvae per treatment and control group were placed individually in closed containers with one foliage disk, and the number and size of survivors recorded for three days.

In the field experiment, no relationship was found between the proximity to the field or the pollen count on the host plants and larvae survival or mass. Likewise, in the laboratory, the event 810 Bt pollen endotoxin had no effect on swallowtail survival or size. However, the Max 454 pollen associated with event 176, assayed to contain 40 times as much endotoxin on average as the 810 event, had a significant effect, reducing survivorship from around 85 to 20% after three days.

There was a lack of any measurable effect of Bt corn pollen (event 810) in the field on either mortality or size and weight of black swallowtail larvae. Even tested in the laboratory at Bt pollen concentrations 40 times higher, larvae size and weight were not affected. Thus, the authors concluded it did not appear likely that more prolonged exposure to Bt pollen would adversely affect survivability or reproduction of the black swallowtail larvae under field conditions in the US. They suggested that though risks to non-target species potentially exist, they can be managed by use of constructs with tissue-limited expression, or by event selection. The authors further noted that in contrast, the 80 million pounds of conventional insecticides and miticides applied in 1997, as reported by the EPA, have broad non-target effects and constitute a significant environmental problem.

The authors concluded, "The rational and careful use of genetically engineered crops, although not demonstrably entirely without non-target impacts, has considerable potential to reduce non-target impacts broadly and substantially by reducing inputs of less selective chemical pesticides. Such technology thus may potentially contribute to preserving agroecosystem biodiversity relative to other pest management options."

Source

Wraight CL, Zangerl AR, Carroll MJ, and Berenbaum MR. 2000. Absence of toxicity of *Bacillus thuringiensis* pollen to blackswallowtails underfield conditions. Proceedings of the National Academy of Science USA Online: http://www.pnas.org/cgi/content/abstract/130202097v1

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Reprinted from
ISB News Report - July, 2000

The International Biopesticide Consortium for Development (IBCD)

To promote, encourage and empower developing countries to develop regional capacities in biopesticide development, manufacture and use, the International Biopesticide Consortium for Development (IBCD) has been formed to provide training, advice, information and links to publicly funded programmes, commercial investors and biopesticide companies in the small enterprise sector.

The following organisations are members of the Consortium:

* CAB International, UK, Kenya, Malaysia, Pakistan, Switzerland, Trinidad and Tobago
* International Institute of Tropical Agriculture, Benin
* Natural Resources Institute, UK

* Institute of Biological Control, Germany
* PACE Consulting, USA

Associated organisations include:
- International Biocontrol Manufacturers Association
- CGIAR System Wide IPM Beneficial Micro-organisms Taskforce

For further information on the IBCD's objectives, activities and consortium members, please visit our website at: http://www.biopesticide.org/ or contact:

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MycoHarvester

The MycoHarvester is a device designed to harvest fungal spores safely and efficiently from a solid substrate (e.g. conidiated grains such as rice). It is suitable for small-scale, non-continuous preparation of mycopesticide samples or similar products, concentrating conidia in a form that is easy to desiccate and package. Experience in the International LUBILOSA Programme has shown that this is a key process in the development of commercially acceptable mycoinsecticides, and the MH1 model produces a product of high particle size quality, on a laboratory scale.

The device consists of a chamber in which spore separation and gross particle classification takes place using a fluidised bed and a proprietary dual cyclone, which further separates larger particles. The final spore product is easily collected from a tray underneath the cyclone. The unit is primarily designed for development of mycoinsecticides by small-medium scale sample preparation (processing up to 30 kg substrate per day). Advice and installation of industrial-scale equipment is available on request.

Contact:
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or visit our web site:
www.cabi.org/bioscience/biopesticides.htm

FUTURE MEETINGS AND WORKSHOPS

The Practice of Biological Control: Importation and Management of Natural Enemies and Agents. An IOBC-NRS/ESCOP Symposium, Montana State University, Bozeman, Montana, USA, August 2-5,2001

The science and application of biological control have become the focus of greater public appreciation and scrutiny than ever before. To develop and implement biological control programs, practitioners must be able to present the activities and goals of their discipline to diverse audiences. Therefore, the focus of the symposium is on education: what we have learned from the past century of biological control efforts, and how we can apply this knowledge.

The symposium will emphasize:
* a renewed focus on why biological control should be of major consideration in pest control
* development of effective education programs about biological control that target diverse audiences
* a new set of biological control case histories that illustrate important successes
* a discussion of the issues that promote and challenge the practice of biological control

The program will consist of keynote sessions and panel discussions concerning selected and contributed topics. Afternoon sessions will be dedicated to submitted poster sessions and opportunities for small group discussions. Submitted posters are open to all areas of biological control, and need not address any of the listed topics.

Point your browser to <http://www.montana.edu/wwwcf/biocontrol/mainframe.htm>. Registration will be limited to 250, so don't be left out.

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The VIIIth meeting of the Phytopathogens group on:
INFLUENCE OF A-BIOTIC AND BIOTIC FACTORS ON BIOCONTROL AGENTS

Scientific and organizing committee: N. Delen, Y. Elad and J. Köhl,
International Advisory: C. Alabouvette, G. Defago, Y. Elad, D. Funk-Jensen, J. Köhl, J.M. Whipps

Following the 30.11-3.12.2000 Sevilla meeting, our working group will have a meeting in **Kusadasi in May 2002**. Colleagues from Ege University at Izmir will organize it. The workshop will take place in the famous tourist resort of Kusadasi that is equipped with all necessary facilities. Kusadasi is easily accessed from outside Turkey. It is situated South of Izmir, on the Aegean Sea and has pleasant weather during spring. Apart from being a tourist attraction by itself it is situated near Ephesus, an ancient city dating back to 3000 BC and to other ancient sites.

The theme of the workshop will be: "Influence of a-biotic and biotic factors on biocontrol agents". The aim is to present research and information on biocontrol agents and their interaction with fungal and bacterial pathogens. We will emphasize: *i*. micro-climate, *ii*. soil/ substrate/ crop/ fertilization, *iii*. chemicals, *iv*. saprophytes / non-target microorganisms, *v*. mesofauna effect on and interaction with population dynamics/ survival of antagonists, on their biocontrol activity and the economical feasibility of the BCA.

We wish to bring together students, researchers and implementers of biocontrol of plant diseases to discuss potential improvements of biocontrol activity. We expect 150 participants from many countries to participate in the workshop, as was the case in our earlier workshops. It is too early to give you precise information about the duration and time schedule of the workshop, however, we expect that it will last 3 days and one extra day will be devoted to a touristic field trip. Presentations will be carried out orally or as posters, in English, and ample amount of time will be devoted to discussions. As was done in the past, we expect to publish short papers of the presentations in the frame of the IOBC/WPRS Bulletin. The second information circular with information regarding time, costs, publication, dead lines etc. will be out in April 2001.

We look forward to seeing you in Kusadasi, Turkey.
Y. Elad, N. Delen, J. Köhl

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Visit the web site of IOBC/WPRS phytopathogens working group:
http://www.agri.gov.il/Depts/IOBCPP/IOBCPP.html

BOOK REVIEWS

If you have a book that you would like to review, or have just authored or published a book that you would like reviewed, please contact the SIP Book Reviews Editor, Dr. James Becnel at:

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"**The Microsporidia and Microsporidiosis**"
Murray Wittner and Louis M. Weiss eds.
ASM Press Washington D.C.
1999, 553pp.

This multi author volume is the latest of several monographs/books published in the 20th century[1] which have dealt with microsporidia now classified as a distinct phylum. There has been a significant shift of emphasis towards the medical aspects of microsporidial infections as a direct result of the increased prevalence of clinical disease mainly in AIDS patients. Fourteen species of microsporidia have been described from systemic or tissue-restricted infections in man. The human association, together with new technology, has generated a shift from mainly descriptive work towards a fundamental understanding of microsporidian biology at the biochemical and molecular levels. There are contributions from thirty two experts.

One measure of current interest in the group is the almost explosive increase in the number of genera from 15 recognised by Kudo (1924) to 144 in the present volume. By now there are too many known species for individual descriptions to be included so that the systematist should combine the new with the old volumes to gain background information. The new volume concentrates on aspects of development, ultrastructures, biochemistry, molecular biology, immunology, clinical syndromes, *in vitro* culture, diagnosis and epidemiology and includes reviews of species of special interest in medicine, veterinary medicine, fish biology and entomology.

The book begins with a short history of the study of microsporidia. This is followed by a comprehensive account of the variations in structure, especially ultrastructures, of all stages in the life cycles. The descriptions are extensively illustrated with micrographs of a wide range of species but some incorrect text references to figures could be frustrating for the newcomer and this detracts from an otherwise exemplary chapter. The chapter on development and life cycles reviews the general stages of typical microsporidia (environmental and intracellular phases) and provides a useful diagram, showing how monokaryotic and diplokaryotic species can vary in merogonic and sporogonic sequences as represented by fifteen genera. Specific examples are used to illustrate these life cycle differences at the ultrastructural level. This is the only chapter that retains the genus *Septata*, which is otherwise synonymised with *Encephalitozoon*.

The chapter on molecular biology ably illustrates the giant leaps made in understanding the relationships of microsporidia within the eucaryote and in developing within phylum systematics according to evolution of genera. Both sides of the case for microsporidia being primitive amitochondriate organisms or degenerate fungi with secondary loss of mitochondria are presented with the balance of evidence favouring the latter. The disparate results given by molecular and morphological data are discussed in relation to determination of generic relationships within the phylum. The contributions of PCR and riboprinting as diagnostic methods are presented and there's a useful table of primer sequences for PCR detection of human microsporidia. Biochemistry and physiology constitute another chapter. Detection of a suite of enzymes and their substrates has enabled advances to be made in determining energy metabolism and other biochemical pathways but rapid progress has been inhibited by the complexity of host parasite interactions and much needs to be done in this area. A chapter devoted to the polar filament (polar tube), an organelle unique to the phylum and common to all species in the phylum, covers the stimuli for spore activation, theories for polar tube discharge and sporoplasm emergence. The proteins constituting the polar tube must be labile enough to allow eversion at germination, flexible enough to allow passage of the sporoplasm through the tube and rigid enough to penetrate a host cell plasma membrane while injecting the sporoplasm into its new cellular environment. Biochemical and molecular data on several of these proteins from different species are presented.

Following these chapters, which utilise a broad range of microsporidia to illustrate points, there follows a series devoted to microsporidia which have emerged as important pathogens of man and mammals. The chapter on immune reactions to microsporidial infection covers the role of the innate, humoral and cell mediated responses in control of disease. Most of the data relate to infections of *Encephalitozoon cuniculi*, the first microsporidium of mammalian origin to be cultured *in vitro* and thus the first to be available in quantity for experimental infections using susceptible and refractory mutant mice. The chapter on clinical syndromes begins with an excellent assessment of the cause-effect relationship of microsporidia and disease and proceeds to illustrate the difficulties in relating them with reference to *Enterocytozoon bieneusi* and *Encephalitozoon intestinalis*. The chapter deals almost

exclusively with these two species while systemic infections, which may be more severe and life treatening, are given summary treatment. Human ocular microsporidioses of two types are covered in a separate chapter. Infections found in immunodeficient patients involve the corneal epithelium and conjunctiva only and cause a superficial keratitis, while those found in immunocompetent patients, involve the corneal stroma and cause stromal keratitis. The organisms and treatment of infections are described and there is a brief mention of ocular microsporidiosis in a cat, blue foxes, a rabbit and a rat.

The chapter on laboratory diagnosis deals almost exclusively with human microsporidioses, and the species that are mentioned as infecting other mammals and birds are typically those which also cause infection in man and are thus important in the epidemiology of human disease. Emphasis is put on light microscopic detection including immunodetection and the appendix gives the protocols for various staining methods. There are good colour illustrations of expected staining results. PCR methods are covered in the chapter on molecular biology.

The chapter on *in vitro* culture gives a brief history, which began with isolation of microsporidia from insects, then concentrates on the methods for isolating species from various human tissues. Frustratingly it has remained impossible to establish the commonest of the human infections, *Enterocytozoon bieneusi*, in continuous culture. The chapter also covers cryopreservation and the areas in which *in vitro* cultured organisms can aid research.

Three chapters dealing successively with microsporidia which parasitise non-human homeothermic vertebrates, fish and insects receive different treatments. The first two emphasise clinical signs and pathology, while the third briefly covers pathology, transmission and host specificity but concentrates on the extraordinary diversity of life cycles seen in insect hosts. These range from a simple merogonic and sporogonic sequence in a single host, to complex cycles involving horizontal and vertical transmission with two generation of one host, an alternate host, several merogonic and sporogonic sequences and four morphologically different types of spore within a species. The chapter ends with brief descriptions of 81 genera associated with insects. These descriptions are based on sporulation sequence(s) and nuclear complement (monokaryotic or diplokaryotic) but do not fully differentiate spore structures on which identification depends.

The last chapters deal with epidemiology, again restricted to human infections, a checklist of available generic names with type species and type hosts and a glossary of terms used to describe microsporidia.

Inevitably with multi author volumes there is much duplication and information is not necessarily where you expect it to be according to chapter heading. The ultrastructure and characterisation of the few microsporidia which infect man are extensively covered in the chapters on structure and life cycle and to a lesser extent elsewhere. Polar filament extrusion is dealt with in at least three places. The most fascinating life cycles are reported, not in the chapter on life cycles but under the heading of insect microsporidia. The definitions set out in the glossary are not universally adhered to in the texts. Merogony is said to apply strictly to diplokaryotic cells (glossary) but is applied throughout the book to any sequence of pre-sporogonic division. The umbrella like structure in microsporidian spores is called the anchoring disc and the central part representing the anterior termination of the polar filament is called the polar sac (glossary). These terms are reversed in the chapter on structure.

These minor criticisms apart, this is a monumental achievement which will serve as the standard reference for microsporidia well into the 21st century, heralding the era when the sequence of the entire genome will be known for one or more microsporidia. The past volumes will still serve their purpose, especially in providing descriptions and extensive references for the known species from all animal phyla up to 1977 (Sprague & Vavra, 1977) and from vertebrates up to 1986 (Canning & Lom, 1986) but this volume reflects an unprecedented massive input of research occasioned by the discovery of microsporidial infections in AIDS patients fifteen years ago.

Elizabeth U. Canning

[1] In chronological order:

Kudo, R.R. (1924). A biologic and taxonomic study of the Microsporidia. *Illinois Biological Monographs* **9**:1-268.

Sprague, V. & Vavra, J. (1976). Biology of the Microsporidia. In: *Comparative Pathobiology*. Vol. 1. (eds. L.A. Bulla & T.C. Cheng) pp. 371.

Sprague, V. & Vavra, J. (1977). Systematics of the Microsporidia. In: *Comparative Pathobiology*. Vol. 2. (eds. L.A. Bulla & T.C. Cheng) pp. 510.

Canning, E.U. & Lom, J. (1986). *The Microsporidia of Vertebrates*. Academic Press

Bioassays of entomopathogenic microbes and nematodes.

A. Navon and K. R. S. Ascher (eds.). CABI Publishing, UK, 324 pp.

In Italo Calvino's book, *"The Baron in the Trees"*, the reader becomes immersed in the life of a young man, Cosimo, whom one day quarrels with his father and decides to live up in the trees, as a form of rebellion. He spends the rest of his life moving high above pedestrians, and living a very satisfying life. What does Calvino's book have to do with a book on bioassays of insect pathogens? Not much. But the field of insect pathology seems to me to be one where its practitioners, for the most part, live up in the trees, with rivers of knowledge flowing underneath, information superhighways being built way below, while they continue searching among the branches for the elixir that will make biocontrol work as a reliable and widely used pest management option. Among the trees on which we cruise, we find the virology tree, a strong, robust tree, almost as mighty as the fungal tree. The protozoan tree is beautiful, not too large, while the bacteria tree is on the verge of falling down, due to the large amount of people on the *Bt* branches, including wizards that transplant genes and hope for the best.

Throughout the years, great strides have been made in advancing the field of insect pathology, but the practicality of using microbial organisms for insect pest management remains distant. The potential of microbial agents, which has been recognized for decades, still exists, but so many years having passed by makes one wonder what will it take for this potential to be attained and become a common day occurrence, as use of other means of pest management are today. This book is a welcome contribution that should help focus research efforts involving bioassays within the different pathogen groups. Nineteen scientists from 7 countries have contributed 8 chapters (one of them divided into 4 sections) with length ranging from 7 to 55 pages.

The book opens with a *Bacillus thuringiensis* chapter divided into four sections. The first of these sections, "*Bioassays of Bacillus thuringiensis products used against agricultural pests*", presents basic information on artificial diets, leaf and potted-plant bioassays, and data collection, among other topics. A brief explanation on the mode of action of *Bt* would have made this a better rounded chapter, and would have helped readers unfamiliar with the topic. The second section covers *"Bioassays of Genetically Engineered Bacillus thuringiensis Plant Products"* and provides the reader with information on the methodologies that can be used to assay for the different insecticidal Cry proteins expressed in transgenic plants. Among the types of bioassays covered are leaf, pollen, root, and callus, as well as diet incorporation. With the recent controversy on transgenic pollen effects on beneficial organisms, it seems imperative to develop rigorous field and laboratory research protocols to address the issue. The same applies for possible effects of exudates from roots of transgenic plants. The third section is on *"Bioassays of Bacillus thuringiensis subsp. israelensis"*; it is very concise (7 pages) and concentrates on mosquito bioassays. The last section is on *"Production of Bacillus thuringiensis Insecticides"*, and presents information on isolation, characterization, preservation and storage of *Bt* strains, followed by detailed methods on production.

The second chapter, *"Bioassays of replicating bacteria against soil-dwelling insect pests"*, is extremely helpful in understanding the difficulties - and ways to overcome these - involved in working with soil-dwelling insects. One of the main problems is that many soil-dwelling insects have long life cycles, which makes rearing a challenge. In addition, bacteria must be ingested; thus bacteria can be applied directly to the soil, to food in the diet, or force fed. Another method that is described is direct injection into the hemocoel. There is also a good deal of information on the proper methods to statistically design the bioassays. On top of all this, the authors have included clear figures on how to calculate doses for culturable and non-culturable bacteria.

Chapter 3, *"Bioassays of Entomopathogenic Viruses"* is an excellent and comprehensive review of the topic. The write-up is nicely arranged, and covers virus production *in vivo*, *in vitro*, purification methods,

quantification, and identification. Among the bioassay methods discussed are surface dosing, diet incorporation, droplet assay, and diet-plug assays. It also covers methodology for field and greenhouse experiments.

The longest chapter in the book (55 pages) deals with *"Bioassays of Entomopathogenic Fungi"*. The different bioassay procedures are preceded by 12 pages in which the authors present a detailed step-by-step introduction to fungal entomopathogens, including their mode of action, isolation and production methods, post-harvest storage, and formulation, among others. The review of bioassay procedures is by far the best in the literature, and includes specific examples of different techniques such as spraying, immersion, dusting, direct deposition, soil inoculation, baits, etc. The authors have presented information from more than 140 references, and have also included recipes for some selective and general culture media. I am certain that this chapter will become an essential reference for those of us working with fungal entomopathogens.

One of the chapters I enjoyed the most was Chapter 5, "*Bioassays of Microsporidia.*" In 31 pages, the authors present a historical background, the manner in which microsporidia work, and the different ways in which bioassays can be conducted. If the reader is interested in working on microsporidia, this chapter should definitely be a first stop, which should be followed by some of the 80+ references cited by the authors. Something that I would have liked to have seen in this chapter, was a couple of paragraphs on how to deal with microsporidia contamination in lab-reared insect colonies.

The "Introduction" in Chapter 6, dealing with "*Bioassays of Entomopathogenic Nematodes*", turned out to be the most densely packed three pages covering the basics of nematodes as biocontrol agents that I have ever seen. For someone wanting to get the essentials on entomopathogenic nematodes (EPN's), this introduction is extremely useful. The rest of the chapter presents the different bioassay methods that can be used, but unfortunately, the photographs used are not the best (e.g., a nematode photo where the specimen is cropped, and a white trap which does not help a novice figure out how it works, even after reading the text).

The nematode chapter is followed by a 45 page long chapter on "*Statistical and Computational Analysis of Bioassay Data*." Statistics is a field of science which I like to compare to a lonely tree in a large desert. Each one of its branches is occupied by a single person, whose mission in life is to inform its neighbor that the branch he/she is sitting on is not the best, even though they both produce similar sized fruits. The chapter presents information on how to analyze the data obtained in bioassays, giving examples for calculating LC_{50}, EC_{50}, LT_{50}, among others. I found the inclusion of this chapter to be satisfying, even though I can't say I could follow all the information presented. But yet, this has always been my problem with statistics, and that was the reason why I have been living up in the trees, ever since taking biometrics.

Finally, the last chapter is a real page turner. It deals with "*Legislation Affecting the Collection,Use and Safe Handling of Entomopathogenic Microbes and Nematodes*". The bottom line is that according to the Convention on Biological Diversity, which was signed at the Rio "Earth Summit" in 1992 and by August of 2000 had been ratified by 178 countries, collecting any life form outside your country requires "*Informal Prior Consent*" from the country where collections are intended before a visit is made. The benefits ensuing from the collected organisms must also be negotiated in advance. Needless to say, this is a major task to accomplish, but it must be observed in order to avoid problems down the line. I would recommend this chapter as essential reading to anyone who might be considering collecting (i.e., removal of genetic resources) in foreign countries.

Using some buzzwords from film critics, this book is neither "*mesmerizing*", "*captivating*", nor a "*tour de force*". What it is, is an excellent source of information on the different ways to conduct bioassays using insect pathogens. The inclusion of a chapter on statistics and on legislation of genetic resources are valuable additions.

The price seems high (ca. 34 cents per page), but unfortunately, pricing of scientific books nowadays does not seem to obey the laws of common sense. Now, fellow insect pathologists, it's time to cross-pollinate those trees.

Fernando E. Vega
Silver Spring, Maryland

NOTES FROM THE EDITOR

As mentioned in my Newsletter Report for 2000, I discovered that an error occurred in the numbering of the Newsletters. The December 1999 Newsletter was incorrectly labeled as Volume 32 (3) instead of 31(3). This lead to the misnumbering of the February and June 2000 Newsletters as 33(1) and (2) instead of 32(1) and (2). The Newsletter Editors regret this error. In order to alleviate confusion, Council suggested that the numbering continue and that the error be ignored. Consequently, I hope that at some future time, one of our members doesn't get too frustrated looking for issue 31 (3), and Volume 32 which have never existed!!

It is with mixed feelings that I wrap up this, my last and 24th issue as Newsletter Editor. I thank all those who contributed material for these issues. My tenure as Editor saw the passing of the gavel from Chris Payne, to Bob Granados, Brian Federici, Juerg Huber and finally to Jim Harper. I very much enjoyed working with these fine Presidents. My tenure also saw the transfer of Executive Services, including printing and distribution of the Newsletter from FASEB to our Executive Secretary, Peg Rotstein. I have especially enjoyed working with Peg; its always nice to be able to joke around with someone, even when the pressure to meet a deadline is upon us!

Special thanks go to all those who religiously sent me photographs of the meetings, especially Don Roberts and Toshi Iizuka, and more recently, Peter Krell. Commencing with the February issue, the Newsletter will be in the hands of our new Editor, Lee Solter. I take this opportunity to thank Lee for accepting this position. I revert to Assistant Newsletter Editor for the time being to help Lee out as she learns the intricacies of her new position!

A final thanks to my desktop assistants, initially Mary Sonntag and thence my wife, Karen Toohey. who spent many hours typing, arranging and editing the Newsletter. Thanks and Holiday Greetings to all.

Deadline for Next Issue: Please submit all material to Lee (see address on p. 2) by **January 15, 2001.**

Founder's Lecture Committee Chair, Dudley Pinnock, presents awards to 1. Brian Federici, the Founder's Lecturer, and 2. Denis Burges, the Founder's Lecture Honoree; 3. The Organizing Committee; 4. Organizing Committee Chair, Jorge Ibarra.

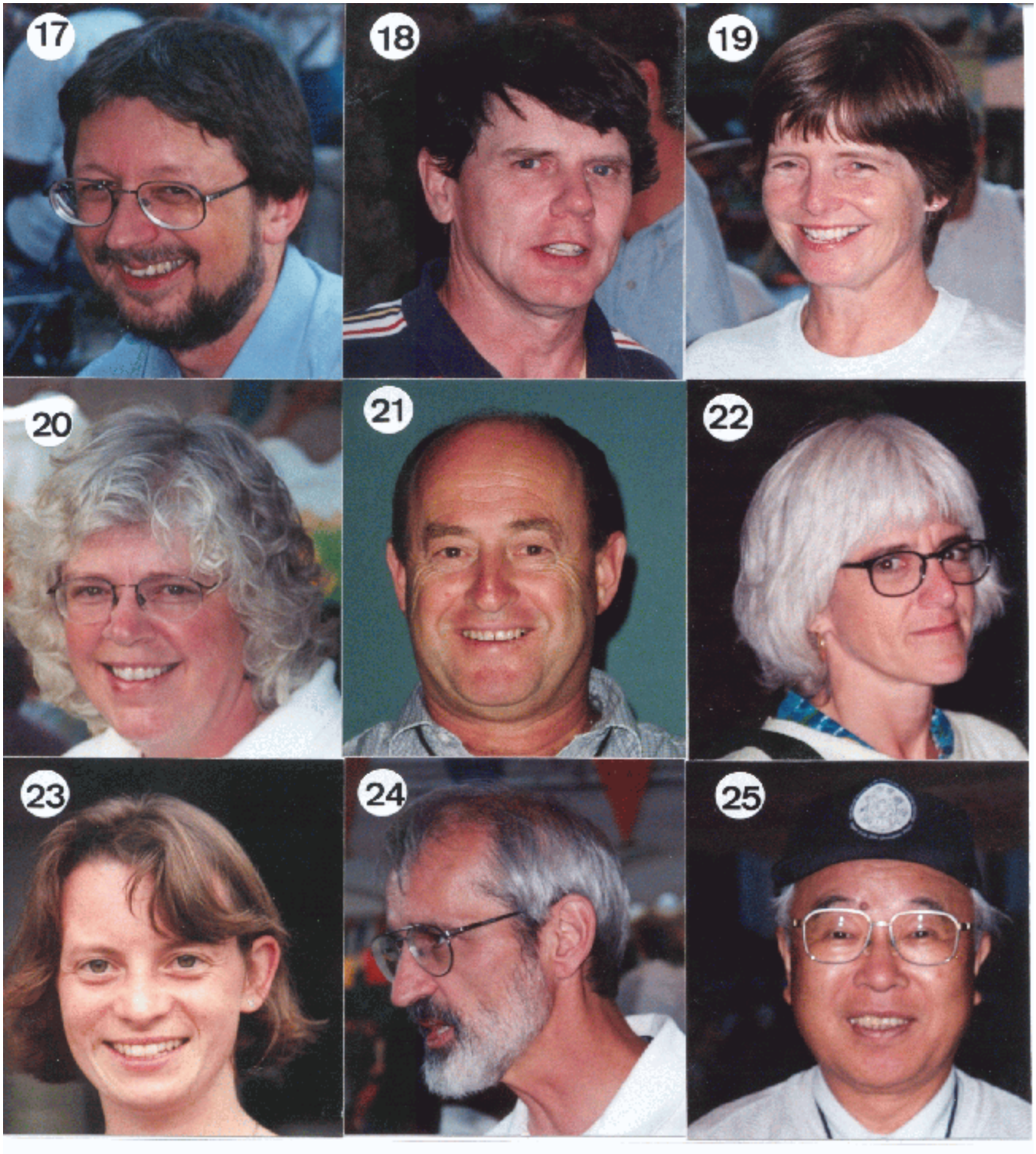
Photos from Guanajuato

5. A rainy coffee break in the University courtyard; 6. Juerg Huber; 7. Mycotech; past and present, “He’s the only one left!” 8. Dudley Pinnock; 9. James Harper, Brian Federici and Bob Granados “Its all on tape!” 10. Fransisco Villalobos and Mrs Kaya.

Photos from Guanajuato

11. Coffee break in the courtyard.; 12. One big and happy crowd at the banquet. 13. Magda Mirachet and Mir Mulla "Now how did we get so lost?" 14. View from the University courtyard; 15. View of the BBQ; 16. Mariachi band.

Photos from Guanajuato



17. David Dent; 18. John Burand; 19. Doreen Winstanley; 20. Sue MacIntosh; 21. Itmar Glazer; 22. Wendy Gelernter; 23. Tina Scopa; 24. Peter Krell; 25. Toshi Iizuka.

Photos from Guanajuato

SIP Expertise Database Questionnaire

This form is available on the Internet at www.sipweb.org.
We suggest that you fill out the online form if possible.

First Name:_____ Last (Family) Name: _____

For each of the following list those subjects you are expert on.

For the taxa you can be as broad, or specific, as you want

1. Pathogen group (Circle as many as apply to you):

Virus Protozoa Bacteria Nematodes Fungi Other:_____

2. Pathogen taxa within group: _____

3. Invertebrate taxa: _____

4. Area of Study: (Circle as many as apply to you):

Molecular Biology | Taxonomy | Physiology | Epizootiology | Microbial Control |

Immunology | Manufacture | Formulation | Safety | Pathogens of Beneficial Invertebrates

List Other(s): _____

5. Geographic area of your work: _____

ATTENTION! PLEASE VOTE!

PROPOSED CHANGE TO THE SIP CONSTITUTION

Addition to Article IV. Section 2. (this would mean that Sections 2,3 and 4, within Article IV, would be renumbered to Sections 3,4 and 5.

"The Trustees participate in all decision-making by the Council. They provide an additional conduit for SOCIETY members to provide information and express needs to the COUNCIL, as well as provide continuity to the Council by virtue of overlapping four-year terms."

The proposed change to the SIP Constitution will be adopted only if at least two-thirds of the valid ballots returned are marked yes.

I support the proposed amendment to the Constitution as stated above
(Circle one)

YES **NO**

Please send this ballot with your membership renewal
or renew your membership online and cast your ballot at the same time.

Mark your ballots here (or online) and return them before 1 February, 2001