sip NEWSLETTER

society for invertebrate pathology

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October 1995

ITHACA HOSTS 28th ANNUAL MEETING

The 28th Annual Meeting of SIP was held in Ithaca, New York, July 16 - 21,1995. It was the largest North American meeting the Society has ever held. There were 374 registrants, including 50 students, from 22 countries, representing all continents except Antarctica.

The scientific program consisted of over 270 presentations. This was the most ever for a SIP meeting in North America and the 3rd highest total ever (after Montpellier and Heidelberg). Electronic assembly of abstracts greatly facilitated the process of assembly and publication. The formatting of the program and abstract book was conceived and generously done by Rich Humber. The new look and larger size facilitated production and distribution.

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Deadline for the next Newsletter is December 15, 1995.

There were 10 symposia covering a wide range of topics. Twenty contributed paper sessions, three workshops, and two poster sessions rounded out the program.

Student Presentations and Awards: There were 47 student presentations -- 25 posters and 22 oral. The judges were assembled by Wayne Gardner and led by Randy Gaugler (posters) and Ellie Groden (oral).

Poster Presentations:

First Prize: Margaret A. Johnson, Gainesville, Florida, USA

Second Place: Patricia C. Bolin, St. Paul, Minnesota, USA

Third Place: P. J. Crawford, Raleigh, North Carolina, USA

Honorable Mention: Ping Wang, Ithaca, New York, USA

Don't Forget to Pay Your Dues for 1996

Dues notices for 1996 were recently mailed out by FASEB. To ensure that your membership remains current and that you continue receiving the Newsletter, please don't forget to return your notice with payment before the end of the year. **The next issue of the Newsletter will be sent only to paid up members.** Lapsed memberships require further action which only ends up costing the Society needlessly. Also please make a special effort to contribute to the Endowment Fund. If you haven't yet received your 1996 notice or have misplaced it, please contact FASEB as soon as possible.

Oral Presentations:

First Place: Alison L. Bawden, Canberra, Australia
Second Place: S. R. Hussain, Columbus, Ohio, USA
Third Place: Karyn N. Johnson, Canberra, Australia
Honorable Mention: Yi Wang, Rutgers, New Jersey, USA
Honorable Mention: Bettina Moser, Gainseville, Florida, USA

Social events: The Sunday evening mixer was well-attended and accompanied by a typical Ithaca summer rain shower. The 5K Fun Run was held on Wednesday morning, July 19. It was a highly successful non-competitive event. Forty-five participants ran and walked through beautiful and sometimes rigorous wooded and pastoral terrain. Prizes of local wine, maple syrup and t-shirts were awarded to 22 randomly-selected participants. The Wednesday afternoon barbeque was held at scenic Taughannock Falls State Park. Beautiful weather afforded great views of the lake and the falls. A spirited volleyball game led to voluminous consumption of spirited liquids afterward. The Thursday night banquet was highlighted by invertebrate delicacies and unlimited libation. Dancing was revived as an essential SIP custom and continued into the night accompanied by great rock-n-roll music. SIP Past Presidents Denis Burges and Don Roberts led the charge onto the dance floor.

Sponsors: Corporate sponsors again played an essential role in financial support of the meeting.

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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 in France. Submissions via EMail 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 December 15, 1995.

Local Committees: The meeting would not have been successful without the generous efforts of many Ithaca-based SIP members and their support personnel. We are truly grateful for all the help we received. It was a sincere pleasure to host all of you in Ithaca!

John Vandenberg and Alan Wood

1996 ANNUAL MEETING AND IIIrd INTERNATIONAL COLLOQUIUM ON *BACILLUS THURINGIENSIS* UNIVERSIDAD DE CORDOBA, CORDOBA, SPAIN SEPTEMBER 1-7, 1996

The 29th Annual Meeting of the Society for Invertebrate Pathology and the IIIrd International Colloquium on ***Bacillus thuringiensis*** will be hosted by the Catedra de Entomologia Agricola y Forestal E.T.S.I.A.M., Universidad de Cordoba. The meetings will take place on the Universidad de Cordoba campus. Arrangements have been made for accommodation in dormitories on the campus and at several hotels.

Cordoba is located in southern Spain in the center of Andalucia, on the plains directly south of the Sierra Morena hills on the Guadalquivir River. The city is served by a newly constructed high speed railway train (AVE) that runs from Madrid to Sevilla. Air service is conveniently available through Madrid and Sevilla Airports.

The attractions of Cordoba include Roman and Arabic archeological remains and Arabic and Christian monuments. The most famous monuments are the Mezquita (Mosque), which contains a Gothic Cathedral, and the Alcazar de los Reyes Cristianos.

The mixer will be held on Sunday evening, Sept. 1; on Monday evening there will be the Official Reception sponsored by the City of Cordoba on the Alcazar's Gardens; on Wenesday we will spend an enjoyable half day playing with a young bull and testing typical Andalusian wines and food; the banquet dinner will be held on Thursday evening with folk music (flamenco) entertainment and dancing.

One or half day excursions as well as pre and post Colloquium tours will be offered at extra cost for registrants and accompanying members.

The scientific program will feature plenary sessions, symposia, contributed papers, poster sessions, and evening workshops. **Ideas for symposia and workshops should be submitted as soon as possible.**

Prof. Candido SANTIAGO-ALVAREZ (Chair)
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FROM THE PRESIDENT

From the feedback that I have received, it appears that our recent annual SIP meeting in Ithaca, N.Y. was a great success. We had a very strong scientific program that attracted over 300 registrants, and our social programs were very well received and enjoyed by all. On behalf of the SIP, I wish to thank John Vandenberg, program chair, and Alan Wood, local arrangements chair, and their committees for their time commitment and efforts in organizing an outstanding meeting.

One of the many highlights of this annual meeting was the attendance of many graduate students and their participation in the student presentation contest. I was fortunate enough to attend a few of the student lectures and visit some of their poster presentations. They are to be congratulated for the general high quality of their scientific achievements and presentation of data. Student attendance at our annual meetings is increasing, and it is reassuring to see that we have many outstanding young people who will eventually be the future leaders of our Society. The SIP will continue to foster and encourage the involvement of students at our annual meetings. If student members have ideas or suggestions regarding their involvement

in Society activities, please write to any council member and we will be pleased to consider your input.

Progress in the formation of a Bacteria Division and Virus Division in the SIP in 1996 is proceeding with much enthusiasm and momentum. During the Ithaca SIP meeting, individuals with an interest in bacteria and viruses met and discussed the need and purpose in the establishment of these divisions. The most practical purpose of existing and new divisions is in providing input into the annual meeting scientific program. During the Ithaca organizational meetings, persons were asked to serve as planning coordinators to prepare new division bylaws for presentation to Council for approval at the 1996 annual SIP meeting. If you have an interest in joining one or both of these new divisions please indicate your interest by returning the questionnaire that will be included with your '95-'96 dues notice.

Planning for our 1996 annual meeting in Cordoba, Spain is well underway under the able leadership of Dr. Candido Santiago-Alvarez. The Meetings Board Committee met during our recent annual meeting and Candido made a detailed presentation of local arrangements and the preliminary list of conference organizers. Just Vlak, Chair of our Meeting Board will be meeting with Dr. S.-Alvarez and others in Sept./Oct., 1995 to discuss progress of the organization and scientific program. Organization of the program for the IIIrd International Conference on *Bacillus thuringiensis* will be the responsibility of Drs. A Klier, M. Lacadet and others.

Bob Granados, September, 1995

EDITORIAL

The Industrial Scene in Microbial Control; Where will we be once the dust settles?

Mergers, takeovers, libel suits and busts. These are all part of the evolution of a new industry. The base of the microbial control industry has been and will continue to be the small company which is usually founded on the basis of a product idea. In recent years the multinationals have become much more interested in microbial control due to a multitude of factors including the public's perception of chemical pesticides and new registration requirements. Once the product of a small company approaches commercialization, the multinationals are attracted but only if there is potential for substantial profit. But if the market is too small for the multinationals, there is hopefully still room for the small company to develop, produce and successfully market the product because these small niche products will become more and more important if we are ever to achieve our goal of "sustainable agriculture."

We have been informing you of the many interesting and exciting developments in the commercialization of pathogens in the Microbial Control News section. However, never before have we had the opportunity to provide you an issue with such an array of important, exciting, encouraging and dissapointing news. In an article reprinted from Scarab Biocontrol News, we inform you of the precarious state of products based on *Bacillus popilliae*, the first microbial control agent registered in the United States and available since 1945. At the same time, a new scarab active Bt is being developed by Mycogen. APHIS reports withdrawal of a controversial proposal to establish new regulations governing the introduction of certain nonindigenous organisms; none of the 251 comments received supported the proposed rule as written. EPA reports that it has approved for the first time full commercialization of a "plant-pesticide." In the next article, Mycogen reports that it has filed suit claiming patent infringement and seeking an injunction halting development and commercialization of this product. It further reports that its patent covering Bt gene technology is being extended to Europe. The Bt Management group calls for further proposals to address critical problems facing the industry, namely the potential of development of resistance. We have a new company from the Eastern Block seeking partners in the development, manufacture and commercialization of an array of microbial control products. Finally, we have an announcement by biosys of a "carefully planned strategic transition" whereby the company has acquired new technologies and companies.

These developments will certainly have important ramifications for the future development of microbial control. We are in a very critical period where several

developments may influence the industry tremendously one way or the other. Much venture capital has been invested in these industries; their failure may make it very difficult to attract much needed capital in the future.

However, there are also developments that we have not reported. For instance, it is rumored that a well-known company has dissolved its research component; another may be in the process of downsizing. Does anyone have any information on these developments they are willing to share with the SIP membership? We count on you for submissions.

Letters to the Editor are welcomed.

Mark S. Goettel
Newsletter Editor

MINUTES OF 1995 BUSINESS MEETINGS CORNELL UNIVERSITY ITHACA, NEW YORK

Minutes of the 28th Annual SIP Business Meeting

The Business Meeting was convened at 10:40 am by President Granados on July 20, 1995. Approximately 75 members attended.

Reports

In his **President's Report**, Bob Granados provided an overview of SIP progress over the past year.

* Two new Divisions are being formed: the Division of Virology and the Division of Bacteria.

* The Society's international composition continues to be better represented in the SIP leadership, with the formation of new committees and the appointment of new members to the Nominating and Membership Committees.

* The SIP's relationship with Academic Press and the Journal of Invertebrate Pathology has been strengthened through increased communication with Carol Reinisch (Journal Editor-in-Chief) and Chuck Crumly (Academic Press Editorial Office). Both Carol and Chuck attended the SIP Executive Council meeting in Ithaca, and convened a meeting of the JIP Editorial Board. Granados plans to re-activate the SIP Publications Board to maintain communication with the Journal.

* Management of SIP membership database and finances by FASEB (Federation of American Societies for Experimental Biology) continues to be beneficial for the Society. Debbie Stoutamire, FASEB's representative for SIP, attended the Executive Council Meeting to solicit input and to present information on additional services offered by FASEB. A small increase in FASEB's fee (to $ 4.00 per member and to $ 300 per month for membership services) was approved.

* There were 200 extra copies of Abstracts and Proceedings from the 1994 Montpellier Colloquium. Through the SIP newsletter, these have been made available to members for a modest fee. So far, 18 sets have been sold.

* The Society has resolved some uncertainty regarding expectations of profitability for our annual meeting. The Executive Council recommended that the objective for local organizers is to break even, or hopefully achieve a net gain.

With our membership at over 800, officers and committee members that increasingly reflect SIP's internationalism, and with a fiscally sound base, President Granados expressed his belief that our efforts to manage carefully and plan prudently for the future will result in a stronger, more dynamic organization.

In his **Treasurer's Report**, Harry Kaya reported that our Treasury is in good shape, with approximately $114,000 in chequing accounts or certificates of deposits (CD's). An additional $15,000 is distributed among Divisional Accounts and the Endowment Fund. Highlights of the year include:

- At the Ithaca meetings, the Executive Council instructed the Treasurer to increase the sum invested in CD's to $80,000, leaving approximately $34,000 in the Society chequing account.

- Income during 1994 totalled approximately $34,000 ($22,700 from membership dues, $5,000 profit from 1992 Heidelberg meeting, $3,000 in interest). Expenses during 1994 totalled $23,500.

- Student awards were increased in 1995 from $500 to $1500.

- The 1994 Colloquium in Montpellier has closed their books with a net gain of $3,370.

1995 SIP Meetings Local Arrangements Chair Alan Wood reported that 370 people, hailing from 22 countries had registered for the meetings. Wood is putting together a handbook for the use of future meeting organizers. **1995 SIP Program Chair** John Vandenberg reported that the meetings included 271 oral presentations, 47 student presentations (oral and poster), 88 posters, 10 symposia, 20 contributed paper sessions and 3 workshops. In addition, a 5K Fun Run was successfully completed. The help of many volunteers was acknowledged by Wood, Vandenberg and the audience.

1996 SIP Meetings Local Arrangements Chair Candido Santiago-Alvarez reported on plans for the 29th Annual SIP Meeting and 3rd International Conference on *Bacillus thuringiensis* which will be held in Cordoba Spain, September 1 - 6, 1996. A video, showing the meeting facilities, hotels and numerous attractions of Cordoba (including Roman ruins) was shown by Santiago-Alvarez. Cordoba is approximately 400 km from Madrid, and is most easily reached via high speed train from Madrid Airport. More information on the meetings will appear in upcoming SIP Newsletter editions.

Meetings Board Chair Just Vlak reported on the success of the 1994 SIP Colloquium, which was attended by 600. Vlak extended his thanks to Local Arrangements Chair Max Bergoin and his committee for their hard work. Sites and dates for future meetings include:

1996:	Cordoba, Spain,	September 1 - 6,	1996
1997:	Banff, Canada,	August 24 -30,	1997
1998:	Sapporo, Japan,	August 23 - 28,	1998

Meeting sites for 1999 and beyond are currently being solicited. Please contact Just Vlak if you are interested. Chairman Vlak also reported that as the SIP has grown, Society Divisions have played an increasing role in development of the meeting program. This trend will continue for future meetings.

Division of Microsporidia Chair Tim Kurtti reported that the Division is in good health, with 78 members. At the 1995 meetings, the Division sponsored a symposium on protozoa host/pathogen relationships and a workshop on taxonomy. In addition, there were 5 student presentations on Microsporidia. Approximately 35 people attended the Division Business Meeting in Ithaca, where possible workshop and symposia topics for 1966 were discussed.

The Division of Microbial Control report was presented by Ann Hajek, Chair-Elect. The Division is going strong, with 354 members. At the 1995 meetings, the Division sponsored a workshop on registration of microbial control agents and a symposium on technology transfer. A slide set prepared by the Division is now sold out, with profits of approximately $6,000 and the Directory of Industries in Microbial Control is nearly sold out. At the 1995 business meeting, which was attended by approximately 40 members, attendees discussed disposition of funds currently in the bank (approximately $8,000) including their use for support of travel or registration for students and non-member speakers at Division workshops and symposia.

The newly formed **Division of Virology** was described by Bryony Bonning. At the Division's first business meeting in Ithaca, officers were elected (Chair: Norm Crook; Vice-chair: Suzanne Thiem; Secretary-Treasurer: Just Vlak), symposia suggestions for 1996 were discussed, and divisional activities (development of a listing of insect viruses and their location, an e-mail network, etc.) were reviewed. It was agreed that Suzanne Thiem will coordinate development of by-laws for presentation to Council in September, 1996.

The newly formed **Division of Bacteria** was reported on by Brian Federici. At the Division's first business meeting in Ithaca, officers were elected (Chair: Andre Klier; Vice-chair: Barbara Knowles; Secretary-

Treasurer: Bill Moar; Members-at-Large: Sue MacIntosh and Betty Davidson). During 1995/96, the Division will develop the program for the 3rd International Bt Conference in Cordoba, Spain (1996) and will develop by-laws for approval by the Executive Council.

New Initiatives Committee Chair Lerry Lacey reported that the committee met twice in the past year. Key projects for 1995/1996 will include promotion of SIP, possible development of SIP branches in South America and Asia, and development of stronger links with industry. In addition, the use of World Wide Web by the SIP will also be investigated.

Jimmy Becnel, **Membership Committee** Chair, reported that there are now 821 members of SIP, a 3% increase over last year. Members come from 48 different countries, with 50% from outside North America. During the next year, the committee will develop and produce an SIP brochure, for which the Executive Council has approved $4,000. To generate a logo for the SIP, a contest will be announced in an up coming issue of the Newsletter. The Committee will also work with the New Initiatives Committee on SIP promotion and investigation of the World Wide Web.

Newsletter Editor Mark Goettel reported that 3 issues were produced in the past year, at a cost $15.00 per member. Goettel is investigating the potential of the World Wide Web for use as a communication system for members that supplements the Newsletter. Based on member input, the Executive Council approved the use of Air Mail rates to expedite delivery of the Newsletter to trouble spots outside North America. Goettel encouraged members to utilize the Newsletter for letters, to announce career changes, and to contribute information of interest to members. We have had positive input from Chuck Crumly of Academic Press on the Newsletter, who felt that it's the best he's seen for a scientific society.

New Business

John Vandenberg (USDA-ARS, USA) mentioned that two companies, neither of them solicited by SIP, actively pursued acquisition of booth space at the Ithaca meetings. The companies were charged $100 each. Vandenberg suggested that SIP meeting organizers may want to be more proactive about this particular fund raising method in the future. David Ellar (Cambridge University, U.K.) supported this idea as well as the idea of asking companies to finance production of conference satchels in exchange for placement of the company logo on the satchel.

Jim Harper (North Carolina State University, USA), chair of the Founder's Lecture Committee solicited members for suggestions on future nominees.

Bob Granados (Boyce Thompson Institute, USA) acknowledged the financial support provided by corporate sponsors and thanked them for their important contributions.

The Business Meeting was adjourned at 11:55 am.

Respectfully submitted by Wendy Gelernter, Secretary

Minutes of the Microsporidia Division 1995 Annual Meeting

The meeting was called to order by Chair Tim Kurtti on 17 July 1995.

The minutes of the 1994 meeting were read by secretary Bauer. Chair Kurtti moved that the minutes be accepted, the motion was seconded, and the minutes were approved by unanimous decision.

Old Business: Chair Kurtti solicited old business from the meeting participants. Al Undeen discussed the final draft and publication plans for the laboratory manual "Methods in Microsporidiology".

New Business: Chair Kurtti initiated discussion on a possible workshop topic for the 1996 SIP Meeting in Cordoba, Spain. This will be organized by Vice-chair Solter and possible topics include life cyles, epizootiology, or a continuation of the 1995 workshop on taxonomy and speciation. In addition, the Division agreed to sponsor a Symposium for the 1996 Meeting to be organized by Jimmy Becnel.

Ann Cali discussed possible changes in the constitution by-laws, however, no concensus was reached. She also requested symposium topics for 1996.

Ted Andreadis reminded the Division that a committee was needed to seek new candidates for 1996. The 3-person committee will be appointed by Chair Kurtti.

The meeting was adjourned by Chair Kurtti.

Respectfully Submitted by Leah Bauer, Secretary

Minutes of the annual meeting of the SIP Microbial Control Division

The meeting was called to order by Chair-Elect Hajek on Tuesday 18 July, at 7:35 pm with approximately 40 members in attendance. She summarized the report from the 1994 meeting and a motion was approved to dispense with a complete reading of the minutes. The Division balance of funds (combining two accounts) is $8,253. Membership is 354, down from 380 last year.

Old business: The Division slide set is sold out. The final benefit to the division was approximately $6,000. Hajek thanked those who gave their time and effort to make this venture a success. There are only a few copies of the Directory of Industries remaining. The symposium and workshop from the 1994 meeting were reviewed and deemed successful. Joel Siegel gave a brief report on the safety committee and reported on recent medical literature of interest to members. He solicited possible interest in the development of a safety committee within the Division. However, in the absence of such interest, such a committee has not been formed.

Slate of Nominees: The Division's slate of nominees were listed:

John Vandenberg, Chair-Elect;
Lerry Lacey, Secretary-Treasurer;
Travis Glare & Bonifacio Magalhaes, Members-at-Large.

A motion to approve the slate as presented was approved.

New Business: Hajek solicited suggestions for both symposium and workshop topics for the 1996 meeting. She also reminded members of the space devoted to our Division in the SIP Newsletter and asked all members to submit pertinent items to the newsletter editor or to the Division Chair. Founder's Lecturer and Honoree nominees are sought by the SIP standing committee. Please pass ideas to Committee Chair Harper or to Chair Hajek.

There was a presentation of ideas for appropriate ways to use the Division's financial resources. A previous suggestion to give a Division student presentation award was discarded, based in part on the recommendation of SIP Council and the obvious conflict with the existing awards program. A list of items was written, discussed and then a show of hands was taken to assess member interest.

1. Travel / registration support for student attendance at SIP meetings .....29 votes
2. Travel / registration support for (non-member) invited speakers at Division symposia & workshops..... 23 votes
3. Student textbook stipend.....6 votes
4. Student journal (JIP) stipend.....4 votes
5. Recognition award for meritorious scientist in Microbial Control..... 3 votes

Investigation of the need for by-laws change to support any on-going or permanent program of the Division will be needed to put item 1 (above) in place. Support for travelling invited speakers (number 2 above) may be able to be accomplished on a case-by-case basis for one or more individuals at a particular meeting.

A request for slide contributions to the new SIP slide set (coordinated by Hajek) was made. Ideas relating to this set, including production on CD-ROM medium, were briefly presented.

Recognition of out-going Chair Klein's service to the Division was made with a hearty round of applause.

The meeting was adjourned at 8:15 pm.

The Microbial Control Division Workshop was held following the MCD business meeting. The workshop,

Current US Regulations Pertaining to Microbials, organized by John Vandenberg, drew a large crowd. Speakers included R. Rose from the US Environmental Protection Agency, C. Hartman from IR4 (a US federal organization concerned with pest control on minor commodities), R. Flanders from USDA, APHIS, and J. Irvin from Health Canada. The workshop was only 45 minutes but speakers and attendees had opportunity to continue discussion during refreshments after the session.

Respectfully submitted by John Vandenberg

ANNUAL REPORTS

President's Report, 1995

Throughout this past year I liaised closely with Alan Wood and John Vandenberg, the co-organizers of the 1995 SIP Annual Meeting to be held July 16-21 in Ithaca, N.Y. All committee members should be congratulated for their success in organizing a strong scientific and social program for our well-attended and dynamic meeting.

Following the Montpellier meeting I was in close communication with several persons including Harry Kaya, Mark Goettel, Max Bergoin, and Brian Federici in order to resolve the disposition of 200 extra copies of abstracts and proceedings from the 1994 Colloquium. It was decided that these volumes would be mailed to FASEB from France and be made available to the membership and nonmembers for a modest fee. Details for the acquisition of these publications were outlined in Vol. 27, No.1 of the SIP Newsletter.

During my first year as SIP President I wrote three letters "From the President" for SIP newsletters. My primary purpose was to communicate with the membership on selected issues of SIP business that transpired throughout the course of the year. I enjoyed writing this column, and judging from the positive comments received, I believe these letters have been a useful vehicle for communication. I will continue to write them during my second year in office.

Candidates for Office

The Nominating Committee, consisting of Tony Sweeney (Chair), Chris Payne, Max Bergoin, Ann Hajek and Barbara Knowles has released the following slate of candidates.

Vice President: Jurg Huber and Dudley Pinnock
Secretary: Sue MacIntosh and Jimmy Becnel
Treasurer: Ray Carruthers and Ted Andreadis
Trustees: Yi Pang, Jorge Ibarra, Jenny Cory and Juan Ferre

Biographies will be published in the next Newsletter. Ballots will be mailed out early next year.

Our Society's relationship with FASEB which began in August, 1991 is working quite well. We have been paying a modest fee for membership service and financial management. In early 1995, in consultation with our SIP Treasurer, I approved a modest increase in our fees to FASEB for 1995 services. Also due to rises in labor and operating costs I approved another modest increase in fees effective January 1,1996. Our total FASEB fees for membership services and financial management for 1996 will be approximately $6,810. I felt it would be useful to have a FASEB representative give SIP Council an overview of the services they currently provide to the Society and to outline other potential administrative services that we may contract to have provided in the future. Deborah D. Stoutamire, Client Services Representative for FASEB, has accepted my invitation and will address Council during the Ithaca meeting.

For several years, the Society has had a strong interest in re-establishing a formal relationship with Academic Press and the Journal of Invertebrate Pathology. To this end I invited Carol Reinisch, Editor-in-Chief of JIP, and Mr. Chuck Crumly, Editorial Office, Academic Press, San Diego, to attend our Council meeting in Ithaca and present us with a brief overview of editorial policies, etc. Mr. Crumly is interested in inviting the Society to become affiliated with the

Journal of Invertebrate Pathology. Academic Press will be having a meeting of JIP Associate editors during the course of the SIP Annual meeting.

I am very pleased to see that the proposed establishment of two new Society Divisions, Bacteria and Insect Viruses, is progressing under the criteria established in our by-laws. This development is further evidence of membership interest and scientific growth of our Society. I strongly support the leadership efforts provided by Brian Federici (Bacteria Division) and Bryony Bonning (Insect Virus Division) in establishing these divisions.

In November, 1994, vice-president Brian Federici and I were in Japan to attend a scientific conference. Professor Toshihiko Iizuka from Hokkaido University in Sapporo graciously invited us to Sapporo in order to visit the two potential meeting sites for the VII International Colloquium in Invertebrate Pathology and Microbial Control to be held in that city in 1998. Two very good meeting venues are under consideration. We also recommended that the costs for attending this colloquium be carefully considered in light of the strong value of the Japanese yen. I commented in my last newsletter article that it was not too early to start soliciting invitations for the site of our 1999 annual meeting.

During the past year I wrote to Dr. John Briggs and thanked him on behalf of the Society for the many years of excellent service that he provided as the Representative of the SIP to the International Union of Biological Sciences (IUBS). In the future, the IUBS will use FASEB as the permanent corresponding address for SIP and an officer of the Society (Secretary) will serve as the liaison with this organization.

In 1994-95, I appointed new members to several SIP committees. The composition of these committees was published in supplement 2 of newsletter 27, vol.2. One of these, the New Initiatives Committee (chaired by Larry Lacey), is charged with recommending to Council new projects or measures for the Society. In addition I appointed a nominating committee which has the important task of selecting a list of nominees for election to SIP office in 1996. The membership of the nominating committee includes Tony Sweeney (Chairperson) ,Just Vlak, Max Bergoin, Ann Hajek, and Barbara Knowles. This important committee is charged with finding candidates with strong leadership qualities and at the same time keeping the international composition of the Society membership in mind.

Our membership is approximately 817 full and student members; our officers and committee members increasingly reflect SIP's internationalism; the number of registrants for the 1995 Annual Meeting is encouraging; SIP is fiscally sound; we anticipate strengthening our relationship with the premier journal published in the field. Our careful management and prudent planning for the future will, I believe, result in a stronger, more dynamic organization.

Respectfully submitted by Bob Granados, President

Treasurer's Report

In 1993, the Council voted to change the fiscal year from May 1 in a given year to April 30 of the following year. This is our second year using this fiscal closing. Keep in mind that the financial statements do not account for funds spent in the current fiscal year (1995/96).

The Council instructed the Treasurer to explore the possibility of investing a portion of the funds into higher yielding interest accounts (certificates of deposits) than what is given in the checking account. The Council viewed mutual funds as being too risky an investment at this time. With the approval of President Granados and Vice President Federici, the Treasurer instructed FASEB to invest $55,000 into certificates of deposits. On November 23, 1994, $25,000 of the Society's Operations was deposited in a 6-month certificate at 5.5% interest and $30,000 ($25,000 of the Society's Operations and $5,000 of the Endowment Fund) was deposited in a 1-year certificate at 5.5% interest. The $25,000 (6-month certificate) has been rolled over for another 6 months at 5.25% interest. Future investments will be made to stagger the maturity dates so that investments will mature at 6-month intervals. The accountant is keeping the 1-year certificate which is earmarked for Society's Operations

($25,000) and the Endowment Fund ($5,000) separate. The Treasurer recommends that another $25,000 be placed into a certificate of deposit for this fiscal year (if approved, a total of $80,000 will be invested). This action will leave a balance of approximately $18,000 in the checking account for Society Operations. (A subsequent discussion with the accountant on July 31, 1995 resulted in the actual deposit being made at $20,000 for a 1-year certificate so that $33,000 will be available in the checking account). A future recommendation is to take a more aggressive posture and invest some of the money into long-term growth funds.

On November 10, 1994, Dr. Martin Shapiro and Dr. Jean Adams did an audit of the funds at FASEB. They found that the books were balanced and that the interest of the Society is being maintained at FASEB.

Revenues for 1994-1995 totaled $38,796 (Exhibit B). The majority of the income for Society Operations were from membership dues and interest income (Exhibit B). In addition, seed money provided for the Montpellier meeting ($7,000) has been returned to the treasury. The $5,000 (see Exhibit B) was also part of the seed money given for the Montpellier meeting, but it is recorded as income because those funds were transferred from the monetary gains from the Heidelberg meeting. The gains (or losses) from the Montpellier meeting have not yet been reconciled by the organizers. Hopefully, this will be done soon so that we can "close" the books on this meeting.

Expenditures for 1993-1994 totalled $24,852 and are itemized in Exhibit B. Major expenditures include addressing, mailing and shipping, costs associated with printing of the SIP Newsletter, supplies and duplicating, and FASEB associated service costs. Another major expenditure which has not yet been subtracted and listed under Assets is the outlay of funds for future meetings ($5,600). This expenditure becomes accountable after the meeting is held.

The bottom line is that the SIP has $114,109 in the Society Operations. I believe that the proposed budget for 1995-96 is self explanatory.

Harry Kaya, Treasurer

EXHIBIT A

SOCIETY FOR INVERTEBRATE PATHOLOGY
BALANCE SHEET
APRIL 30, 1995

	Society Operations	Microsporida Division	Microbial Control Division	Endowment Fund	Total
ASSETS					
Cash - Checking Accounts	$ 57,959	$ 706	$ 8,253	$ 589	$ 67,507
Accrued Interest Receivable	1,015	-	-	94	1,109
Certificates of Deposit (Note A)	50,000	-	-	5,000	55,000
Advances For Future Meetings (Note B)	5,600	-	-	-	5,600
Total Assets	$ 114,574	$ 706	$ 8,253	$ 5,683	$ 129,216
LIABILITIES AND FUND BALANCE					
Liabilities:					
Accounts Payable	$ 465	$ -	$ -	$ -	$ 465
Total Liabilities	465	-	-	-	465
Fund Balance:					
Fund Balance - Beginning of Year	103,408	560	5,464	5,375	114,807
Current Year Net Income (Exhibit B)	10,701	146	2,789	308	13,944
Fund Balance - End of Year	114,109	706	8,253	5,683	128,751
Total Liabilities and Fund Balance	$ 114,574	$ 706	$ 8,253	$ 5,683	$ 129,216

EXHIBIT B

SOCIETY FOR INVERTEBRATE PATHOLOGY
STATEMENT OF REVENUE AND EXPENSE
FOR THE PERIOD MAY 1, 1994 THROUGH APRIL 30, 1995

	Society Operations	Microsporida Division	Microbial Control Division	Endowment Fund	Total
REVENUE					
Slide Sales	$ -	$ -	$ 2,200	$ -	$ 2,200
Membership Dues (Note C)	22,695	146	708	-	23,549
Annual Meeting Income- Heidelberg Meeting	5,000	-	-	-	5,000
Contributions	119	-	1,250	207	1,576
Dues Handling Fees	309	-	-	-	309
Abstract and Proceedings Sales	1,904	-	-	-	1,904
Interest	3,150	-	70	233	3,453
Miscellaneous Income	805	-	-	-	805
Total Revenue	33,982	146	4,228	440	38,796
EXPENSE					
Addressing, Mailing and Shipping	1,656	-	459	-	2,115
Newsletter	9,017	-	-	-	9,017
Directory	1,302	-	-	-	1,302
Travel:					
Founders Lecturer	1,500	-	-	-	1,500
Other	-	-	800	-	800
Supplies and Duplicating	1,241	-	39	-	1,280
Accounting Services	3,000	-	-	-	3,000
Dues Processing Fees	4,134	-	-	-	4,134
Telephone	107	-	-	1	108
Credit Card Charges	898	-	-	-	898
Miscellaneous	546	-	141	11	698
Total Expense	23,401	-	1,439	12	24,852
Net Revenue Before Fund Transfers	10,581	146	2,789	428	13,944
Transfers Between Funds	120	-	-	(120)	-
Net Revenue After Fund Transfers (Exhibit A)	$ 10,701	$ 146	$ 2,789	$ 308	$ 13,944

NOTES TO THE FINANCIAL STATEMENTS
FOR THE PERIOD MAY 1, 1994 THROUGH APRIL 30, 1995

Note A: Certificates of Deposit

	Certificate of Deposit # 076-880123-1	Certificate of Deposit # 076-835440-4
Society Operations:		
Cost	$ 25,000	$ 25,000
Maturity Date	11/22/95	11/23/95
Interest Rate	5.5 %	5.25%
Endowment Fund:		
Cost	$ 5,000	-
Maturity Date	11/22/95	-
Interest Rate	5.5 %	-

Note B: Advances For Future Meetings

"Advances For Future Meetings" consists of the following:

Banff Meeting - 1997	$ 2,000
Spain Meeting - 1996	3,600
	$ 5,600

Note C: Membership Dues

Membership dues revenue consists primarily of amounts collected during May 1, 1994 through April 30, 1995 for 19 calendar year dues. Dues have been collected from the following membership categories:

	Society Operations	Microsporida Division	Microbial Control Division	Total
Full Member (685 @ $30)	$ 20,550	$ -	$ -	$ 20,550
Student Member (132 @ $15)	1,980	-	-	1,980
Microsporida Member (73 @ $2)	-	146	-	146
Microbial Member (354 @ $2)	-	-	708	708
Miscellaneous 1993 Amounts	165	-	-	165
	$ 22,695	$ 146	$ 708	$ 23,549

PROPOSED BUDGET FOR SIP FOR 1995-1996

EXPECTED REVENUES

	Society Operations	Microsporidia Division	Microbial Control	Endowment	Total
Membership (n) dues:					
Full (700) at $30	21,000	-----	------	------	21,000
Student (140) at $15	2,100	-----	------	------	2,100
Microspor Div 90 at $2	-----	180	-----	------	180
Micro Contr Div 360 at $2	-----	-----	720	------	720
Interest Income	4,000	-----	200	250	4,450
Sales of Pubs	400	-----	-----	-----	400
Total	27,500	180	920	250	28,850

ESTIMATED EXPENSES

	Society Operations	Microsporidia Division	Microbial Control	Endowment	Total
Addressing, Mailing & Shipping					
Newsletter*	5,500	-----	-----	-----	5,500
Dues, Ballots, etc.	2,500	100	400	-----	3,000
Prog. & Abstracts**	4,000	-----	-----	-----	4,000
Directory	1,500	-----	-----	-----	1,500
Composition & Printing					
Newsletter (3)*	4,500	-----	-----	-----	4,500
Directory	1,500	-----	-----	-----	1,500
Prog. & Abstracts**	5,000	-----	-----	-----	5,000
Office Supplies & Copying	2,300	-----	-----	-----	2,300
Accting Services (FASEB)	3,600	-----	-----	-----	3,600
Founder's Lecture+					
Travel	1,400	-----	-----	-----	1,400
Subsistence	600	-----	-----	-----	600
Honorarium	500	-----	-----	-----	500
Miscellaneous	200	-----	-----	-----	200
Student Awards	1500	-----	-----	-----	1,500
Dues Processing (FASEB)	4,000	-----	-----	-----	4,000
Telephone	100	-----	-----	-----	100
Credit Card Charges	800	-----	-----	-----	800
Miscellaneous	350	-----	-----	-----	350
Foreign Membership++	-----	-----	-----	210	210
Total Expected Expenses#	39,850	100	400	210	40,560
Net Revenue	(12,350)	80	400	40	(11,710)
Cash Outlay, Future Meetings: Seed Money##	10,000	-----	-----	-----	10,000
Net Cash Increase or (Decrease)	(22,350)	80	400	(10)	(21,710)

*Total cost (addressing, mailing, shipping fax, supplies, etc.) was $9,017.18 from May 1, 1994 to April 30, 1995.
**The printing cost for the Program and Abstracts for the Ithaca meeting was $4,202.
+The Founder's Lecture travel budget has been increased to ensure adequate allocation of funds for international travel.
++Support for membership for scientists in some countries is provided by the interest generated from the Endowment Fund. I project that seven scientists can be supported in the 1995/1996 fiscal year.
#Note that our estimated expenditures exceed our expected income, and we may be in deficit spending. However, our financial health will be excellent as long as we can be profitable from our annual meetings.
##There is also a continuing need to provide "seed" money for future meetings. Although the 1995 meeting in Ithaca does not require funds at this time, Spain (1996) and Banff (1997) meetings may need additional support. Funds may be also needed for the 1998 meeting in Japan.

Meetings Board Committee Report

The 'XXVIIth Annual Meeting' and the 'VIth International Colloquium of Invertebrate Pathology' in Montpellier, France, August 28 to September 2, 1994 was a great success and confirmed the strong formula of the SIP colloquia. Over 600 participants attended the meeting, the largest SIP meeting ever. The conjunction with the '2nd International Conference on *Bacillus thuringiensis*' also proved a success and, if possible, will be repeated on a bi-annual basis. The Committee is very greatful to Dr. Max Bergoin and his team for organizing such an enjoyable meeting. The final profit of the meeting was US$ 3,300.

During the Business Meeting of the Executive Council of SIP at Montpellier, the Chairman of the Meetings Board Committee, Dr. Brian A. Federici, stepped down to serve in higher Office (Vice-President of SIP). The Committee is very grateful for his dedication which has resulted in some excellent venues for the annual meetings. Dr. Just M. Vlak, Department of Virology, Wageningen Agricultural University, Wageningen, the Netherlands, accepted a two-year term as chairman of the Meetings Board Committee. During this year Dr. Mike Adang, Department of Entomology, University of Georgia, Athens, USA, and Dr. Yoshifumi Hashimoto, Department of Applied Biology, Kyoto Institute of Technology, Faculty of Textile Sciences, Matsugasaki Sakyuku, Kyoto 606, Japan, were appointed as members of the committee.

The chairman met once in person with the Chairman of the Local Organizing Committee of the 1996 meeting in Spain, Dr. Candido Santiago-Alvarez, to monitor progress. The site for the 1996 meeting, originally destined to be Sevilla was changed to Cordoba. The organizing committee is being assembled and facilities are contracted.

The confirmed sites and chairs for SIP Meetings are:

1995 - Ithaca, USA, July 16-21, J.D. Vandenberg
1996[1] - Cordoba, Spain, September 1-7, C. Santiago
1997 - Banff, Canada, August 24-30, M. Goettel
1998[1,2]-Sapporo, Japan, August 23-28, T. Iizuka

[1] International Colloquium,
[2] International Conference on *Bacillus thuringiensis*

The committee solicits sites for the years 1999 (USA), 2000, 2001 (USA) and 2002 (International Colloquium) meetings. The committee has the intention to maintain an international spread of future meetings, alternating sites between Northern America and other parts of the world.

Just M. Vlak, Chair

Report For Founders Lecture Committee

The 1994 Founders Lecture was presented at the VIth International Colloquium on Invertebrate Pathology at Le Corum Conference Center in Montpellier, France, on August 29th at the Opening Plenary Session by Dr. Lois Miller, honoring Prof. Constantin Vago. The only member of the Committee able to attend this year's (1994) meeting was Dr. Richard Daoust, Chairman. As a result no committee meetings were held in Montpellier.

The Founders Lecture which lasted about 40 minutes, was well received by delegates, and award certificates and the honorarium to the speaker were given at the spectacular banquet in the medieval cathedral which nearly all delegates attended. Dr. Vago was extremely honored by the award and delivered an eloquent speech at the awards banquet. The plaques, prepared again by contacts of Dr. John Briggs, were extremely professional.

Dr. Daoust spoke to numerous members at large at the Montpellier Meeting to canvas the membership to submit recommendations for nominations for the 1995 Honoree and Lecturer. Several members outside the committee did make recommendations for 1995 selections for the Ithaca, New York meeting.

Following the Montpellier Meeting, committee members communicated mostly by fax messages due to worldwide distribution of members in Europe, U.S.A. and Australia, and the decision was made to focus the awardee selection on bacterial workers since workers on this topic were last selected at the San Diego, CA meeting in 1988.

The Committee unanimously selected Dr. Howard T. Dulmage (deceased) as Honoree, former head of the

Cotton Insects Research Lab, of the United States Department of Agriculture, Agriculture Research Service, Brownsville, Texas. Dr. Dulmage was among the handful of "Giants" that promoted the use and development of *Bacillus thuringiensis* as a biological pesticide without having had the benefit of the sophisticated molecular biological skills available to us today.

The 1995 Lecturer selected by the Committee is Dr. David J. Ellar from the University of Cambridge, Department of Biochemistry, Cambridge, England. Dr. Ellar has made major contributions to the understanding of *B. thuringiensis* crystal protein using sophisticated molecular biological techniques. He has gained an international reputation for the high quality of his research.

The Founders Lecture will be given by Dr. Ellar at the Opening Plenary Session of the XXVIIIth Annual Meeting of the Society for Invertebrate Pathology at Cornell University, in cooperation with the Boyce Thompson Institute for Plant Research and USDA, Ithaca, New York on July 17, 1995.

Respectfully submitted by Jim Harper, Chair

Student Awards Committe Report

Participation of students in our annual meetings is increasing dramatically. At our XXVIth meeting in Asheville, North Carolina, in 1993, nine oral presentations and eight posters were judged in the Student Awards competitions. This year, in Ithaca, we will judge 27 oral presentations and 23 posters by students. These students are representing over 30 institutions from 11 countries and 4 continents. These presentations will again contribute to the overall quality of our meeting.

Scheduling of student presentations within sessions dedicated solely to that purpose will provide for a more efficient judging process. This alleviates the problem of locating and judging student presentations that have been historically scheduled within various contributed paper sessions. I encourage continuation of this practice whenever possible. This will provide for greater visibility of our student participants while improving conditions for the judges.

Judges will select 1st, 2nd and 3rd place awardees in each of two categories (oral presentation and poster presentation) this year. 1st and 2nd place awardees will receive monetary gifts, while all three places in each category will receive plaques to commemorate their achievement.

I would suggest that we, as a Society, begin considering naming the two first place awards in these Student Competitions in memory or honor of one of our founders or some other deserving individual.

Submitted by,
Wayne A. Gardner, Chair

Membership Committee Report

Composition of SIP Membership: Membership in the SIP has increased approximately 3% during the past 12 months (see charts). Currently, there are 821 members worldwide representing 48 countries. Approximately 50% of the members are from outside North America with the largest increases in membership from Eastern Europe (up 60 %), South America (up 23 %) and the Middle East/Africa (up 17 %).

Activities during 1994/95:

- James J. Becnel was appointed the new Membership Committee Chairman replacing Wendy Gelernter. Jorge Ibarra from Mexico was added to the committee.

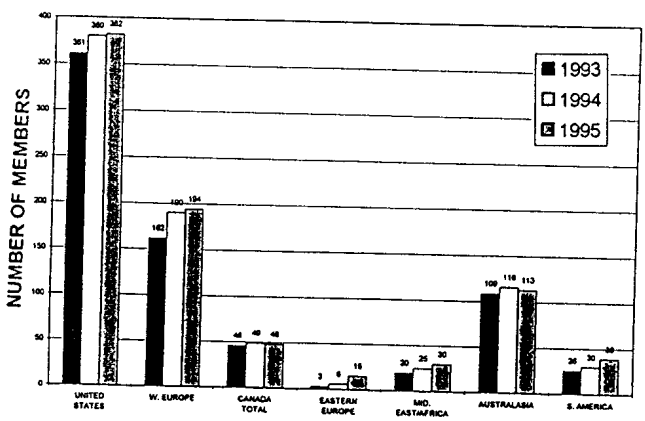
- Membership forms in Spanish and Portuguese were updated to reflect recent changes. This was done primarily through the efforts of Jorge Ibarra. These membership forms were distributed at several South American meetings.

- Membership packets (composed of a copy of the Newsletter, SIP data sheet and an application form) were mailed to individuals requesting information on the Society.

Suggested activities for 1995/96:

- Submit articles or information about the society (purpose, benefits and activities) to suitable outlets.
- Conduct mailings based on JIP contributors who are not members and participants in invertebrate pathology related meetings.
- Continue to promote increased participation in the annual meetings (the society's number one fund raiser) through cooperative efforts with other groups (such as the Bt group).
- Increase SIP profile (and therefore membership) by becoming involved in contemporary issues in which the Society has played an important role.
- Investigate the possibility of establishing a worldwide web site on the Internet to provide information about the Society. Basic information about the Society (purpose, benefits, membership application, list of members, meetings etc.) could be provided and eventually it may be possible to provide electronic access to the Newsletter.

SIP MEMBERSHIP 1993-1995



1995 SIP Membership Summary

Location	1993	1994	1995	% change
United States	361	380	382	
Canada	46	49	48	
Mexico	8	8	16	
North America	**415**	**437**	**446**	**2.0**
Austria	2	3	4	
Belgium	4	6	7	
Denmark	5	5	4	
Finland	3	4	4	
France	34	43	35	
Greece	0	1	1	
Ireland	1	2	2	
Italy	5	8	16	
Netherlands	7	10	10	
Portugal	5	7	9	
Spain	5	6	8	
Sweden	7	9	7	
Switzerland	6	8	5	
United Kingdom	65	67	66	
Germany	13	11	16	
W. Europe	**162**	**190**	**194**	**2.1**
Czechoslovakia	2	3	5	
Hungary	0	1	7	
Poland	1	1	2	
USSR	0	1	0	
Russia	0	0	1	
Eastern Europe	**3**	**6**	**15**	**60.0**
Egypt	3	4	7	
Israel	11	11	11	
Jordan	1	1	2	
Kenya	1	2	1	
Niger	0	2	1	
South Africa	2	3	4	
Turkey	2	2	2	
Ethiopia	0	0	2	
Middle East/ Africa	**20**	**25**	**30**	**16.7**
Australia	28	27	24	
B. Solomon Is.	1	1	1	
Ceylon		1		
China	13	10	11	
French Polynesia	0	1	0	
India	1	1	3	
Indonesia	1	1	1	
Japan	39	46	45	
Mauritius	1	1		
New Zealand	8	10	9	
Phillipines	4	3	3	
Reunion	0	1	0	
W. Samoa	1	0	0	
Singapore	4	4	5	
S. Korea	1	2	1	
Korea	0	0	1	
Taiwan	4	3	6	
Thailand	3	4	3	
Australasia	**109**	**116**	**103**	**-2.6**
Argentina	3	5	5	
Brazil	12	12	15	
Columbia	0	1	1	
Costa Rica	1	2	0	
Dominican Rep.	1	1	1	
Venezuela	1	1	1	
S. America	**16**	**22**	**23**	**4.0**
Total	**727**	**796**	**821**	**3.0**

The Membership Committee: The Membership Committee for 1995/96 consists of Jorge Ibarra, Robert Anderson, Lerry Lacey and James Becnel.

Submitted by James J. Becnel, June 1995

Newsletter Report

Three issues of the Newsletter comprising a total of 124 pages were produced in the 1994-95 year. The Newsletter provided members with information on meetings, meeting and committee reports, positions available, obituaries, and member address changes. Features included an article on Honorary Members, Microbial Control News and Letters from the President. In addition to 76 pages of Newsletter text, there were 4 supplements comprising 48 pages which included additions and corrections to the 1994-95 Membership Directory, a registration package for the Ithaca meetings, proposals for new Divisions and a 1995-96 Membership Directory.

Text was prepared in Lethbridge, but printed and mailed by FASEB in Maryland. We appreciate the cooperation of FASEB in producing our Newsletter. We also wish to thank Karen Toohey for preparation of the camera-ready copies.

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.

Financial Report, August 1994 - July 1995

Total Cost of Newsletter (3 issues) : $11,865
Cost per member based on 800 members: $14.83

Expenses at Lethbridge

	Vol. 26(3) (40pp)	Vol. 27 (1) (28pp)	Vol. 27(2) (56pp)
- desktop spec.	$263.16	$142.86	$140.85
- stationary	142.40	57.40	39.18
- postage	5.04	9.95	25.42
Total	$410.60	$ 210.21	$ 205.45

Expenses at FASEB

	Vol. 26(3) (40pp)	Vol. 27 (1) (28pp)	Vol. 27(2) (56pp)
- printing	$1,299	$1,247	$2,758
- mailing	1,261	695	3,247*
- misc.	206	35	291
Total	$2,766	$1,977	$6,296
Total	**$3,177**	**$2,187**	**$6,501**

*Includes mailing of meeting program. Cost of printing program is $4,402 and is not included in the above figures.

Issues: There are presently 3 issues per year. The Fall issue (Oct. or Nov.) contains the meeting and committee reports. It also contains information on Nominees for office. The next issue is in February. It contains registration information on the next meetings and gives the abstract submission deadlines. The 3rd issue is in Spring (May or June) and is mailed out with the meetings program. Then there is a "blackout period" of approximately 5 - 6 months. This is a very long time when members do not receive any news and is problematic as far as announcements regarding meetings, positions etc. are concerned. Producing a short summer issue would incur additional costs of approximately $1,000 to $2,000/year.

Mailing: The Newsletter is presently sent out first class to members within North America. Delivery time is approximately one week. The Newsletter is sent to the rest of the world via a distribution consultant. It arrives in Western Europe and some South American countries in approximately 3 weeks. Up to 4 weeks are required for delivery to Australia and up to 5 weeks for Israel & Egypt. We do not know how long it takes to China and Eastern Europe as we've had no replies to our survey from these areas. The most frequent complaint is from overseas members who receive their Newsletter past deadlines. We attempt to turn the Newsletter around between 1-2 weeks after the deadline (although this is sometimes extended if we have not received urgent material before the deadline). The Newsletter is sent from Lethbridge by overnight courier and it takes FASEB another 1 - 2 weeks to process the Newsletter. Sending

the Newsletter to all members via airmail would double our mailing costs (ie. would cost $5,000 - 6,000 more per year). An alternative might be to selectively airmail to problem areas (Eastern Europe, Middle East, Africa, and Australasia) where we have approximately 200 members (approx. 25% of membership). This would increase mailing costs by approximately $2,000 - 3,000 per year.

Respectfully submitted,
Mark S. Goettel, Editor
Elizabeth W. Davidson, Assistant Editor
June, 1995

Report of the New Initiatives Committee

During the past year the new initiatives committee was formed consisting of:

Dr. John Vandenberg, USDA-ARS, Ithaca, NY, USA
Dr. Mary Barbercheck, Entomology, NC State, Raleigh, NC, USA
Ms. Jennifer Altre, Entomology, Cornell, Ithaca, NY, USA
Ms. Claire Vidal, Univ. Montpellier, FRANCE
Dr. Roger Frutos, CIRAD, Montpellier, FRANCE
Dr. Elizabeth Davidson, Arizona State University, Tempe, AZ, USA
Dr. Michael McGuire. USDA-ARS, Peoria, USA
Dr. Mark Goettel, Agriculture Canada, Lethbridge, CANADA
Dr. Don Steinkraus, University of Arkansas, Fayetteville, AR, USA
Dr. Wendy Gelernter, PACE, San Diego, CA, USA
Mr. Karel Bolckmans, Biobest Biological Systems, Westerlo, BELGIUM
Dr. Lawrence Lacey, USDA-ARS, Montpellier, FRANCE

We will be actively looking for more international members.

During the S-240 meeting in Orlando, FL in February, Drs. Barbercheck, McGuire, Vandenberg & Lacey met to discuss possible activities of the committee. An outreach program was proposed to promote our field to minority groups. Another proposal was to develop an SIP position (advertisement and information about the Society) on the worldwide net. Jimmy Becnel, chair of the membership committee has also mentioned this.

The committee met again just before the SIP meeting in Ithaca to discuss these issues and additional activities. Subjects that were discussed included: establishing a branch of the Society in South America; selling booth space to private industry at SIP meetings; putting together a list of invertebrate pathologists (along with their specialties) for distribution to regulatory agencies and groups that influence public policy on the use of insect pathogens; investigate means (including JIP) that will promote SIP; establishing student fellowships (perhaps with the help of industry) to assist with meeting travel and/or registration; sponsoring another symposium at ESA; make press releases at meetings as a means of publicizing insect pathology in general and SIP in particular.

We will be investigating further the possibility of establishing a home page on the Worldwide Web, which could include, among other items, a mission statement, information on becoming a member, address of the home office (FASEB), and perhaps the most recent SIP Newsletter.

L. Lacey, chair

Microsporidia Division Annual Report

1994 Annual Meeting: The Microsporidia Division held its 1994 Annual Business Meeting on September 1 at the 27th Annual Meeting of the Society for Invertebrate Pathology that was incorporated with the Sixth International Colloquium of Invertebrate Pathology and Microbial Control in Montpellier, France. The meeting was convened by Vice-Chair Timothy J. Kurtti. Minutes of the 1993 business meeting, read by the Secretary Leah Bauer, were approved by the approximately 30 members that were in attendance. Al Undeen provided an update of his progress with a manual "Methods in Microsporidiology" which is being sponsored by Southern Regional Agricultural Experiment Stations in the U.S., Southern Regional Project 240, Development of Entomopathogens as Control Agents for Insect Pests. Topics for a Division-sponsored Symposium at the 1995 meeting were discussed along with topics for

a workshop. Some of those present expressed a need for preserving type specimens and defining criteria for genus and species descriptions. Leellen Solter agreed to organize a taxonomic workshop for the 28th Annual Meeting. At the end of the meeting Tim Kurtti assumed the Chair of the Division, Leellen Solter the Vice-Chair and Chair-Elect. Leah Bauer agreed to serve as Secretary for another term.

The Division sponsored a workshop at the Colloquium. "Cellular and molecular biology of microsporidia in cell culture" was organized and convened by Tim Kurtti. Speakers were Elizabeth Canning, Ren Ishihara and Takeshi Kawarabata.

Post 1994 Meeting Activities: Wayne Brooks has organized a Division sponsored symposium for the Ithaca meeting: "Protozoa: host pathogen relationships and adaptive strategies". Speakers lined up for the symposium are Richard Clopton, Joseph Maddox, Theodore Andreadis and James Becnel. A workshop on microsporidian taxonomy has been organized by Leellen Solter: "Microsporidian taxonomy: when molecular data do not support morphological data."

Membership and Finances: There are now 78 members in the Division. The funds available are $568 as reported by Harry Kaya at the 1994 SIP Business Meeting.

Respectfully submitted by Leah Bauer, Secretary

Microbial Division Annual Report

1994 Annual Meeting: The annual meeting of the Division was held at Montpellier, France in conjunction with the 27th Annual Meeting of the Society for Invertebrate Pathology and the 6th ICIP. The meeting was called to order by Chair Michael Klein on 30 August at 19:40 with about 25 members in attendance. The low attendance was a result of three other events on the program that evening. The conflicting events were noted as a problem by members at the Society Business Meeting. The minutes from the 1993 Ashville Meeting were read by Secretary Vandenberg and accepted by the members. The 1994 Annual Report was summarized and accepted. The Division Business Meeting followed the successful Division Symposium on Safety of Exotic Fungi, and the Workshop on Application Technology for Microbial Agents. Members were reminded of the upcoming Symposium on Microbial Control of Soil Insects. Mark Goettel reported on the Safety Subcommittee established at Asheville. A group of 15 members met and decided that a position paper on safety issues would not be developed. A motion to establish a safety working group, define its mission in writing, and distribute that to the SIP Executive Committee was passed. Joel Siegel expressed interest in helping organize the group and in defining its mission. Joel also gave an update on recent articles on Bt safety. The articles implied that Bt is not as safe as many members feel it is. These concerns will probably be among those covered by the new working group. Secretary Vandenberg gave an update on the Division's Slide Atlas and Directory. Only 50 slide sets and 9 Directories remained. The use of Division funds was discussed, but no decisions were made. Hugh Evans was elected to fill the vacant slot for the at-large member of the Division Executive Committee. The meeting adjourned at 11:05.

The final 37 sets of the Slide Atlas on Microbial Control have been sold. The Division was able to provide a service to members of the Society by producing this atlas, and was able to make a profit from its sale. The efforts of Mark Goettel, Ann Hajek, and John Vandenberg in the production and sale of the Microbial Control Slide Atlas have been appreciated. Since the new Society Slide Atlas on General Insect Pathology is being organized by the Division Chair-Elect, it is unlikely that the Division will attempt to develop a new atlas at this time.

A limited number (7) of The Division's Directory of Industries Involved in the Development of Microbial Control Products, and the two update Supplements issued in 1992 and 1994 are still available from the Division Secretary-Treasurer. The Division will access the need to reissue or update this Directory.

Membership and Finances: There were 354 members in the Division as of April 30, 1995. This was a decrease of 26 members from the high of 380 members at the end of last year.

Statement of Finances

Division Checking Account	
Beginning balance May 1	$4370.51
Debits:	
postage and related supplies	433.66
travel support for 1994 meeting	800.00
SUBTOTAL DEBITS	1,233.66
Credits:	
sale of slide atlas and directories	2,200.00
interest on checking account	69.15
SUBTOTAL CREDITS	$2,269.15
Ending balance April 30, 1995:	$5,406.00
Division Balance With FASEB	
Beginning balance May 1, 1994:	$1,089.00
Debits:	
misc.	200.00
SUBTOTAL DEBITS	$ 200.00
Credits:	
dues	708.00
contributions	1,250.00
SUBTOTAL CREDITS	$1,958.00
Ending balance May 1, 1994:	$2,847.00
TOTAL AVAILABLE	$8,253.00

Mike Klein, Chair

HOW DO I BECOME A MEMBER OF SIP?

SIP is open to anyone who is interested in the study of diseases of invertebrates. Membership fees are $U.S. 30/year with supplementary fees for membership in the Divisions.

Application forms are available from the chair of our Membership Committee:
Dr. James Becnel, MVERL,
P.O Box 14565, USDA/ARS,
Gainesville, FL 32604.
Phone: 904-374-5961 Fax. 904-374-5922.
EMail: JBECNEL@NERVM.NERDC.UFL.EDU.

NEWS ITEMS

National Biological Control Institute on World Wide Web

NBCI has just established a Home Page on the Internet World Wide Web, and I invite you to take advantage of this service. We will be developing the material available on our Home Page to a much greater degree over the coming months, and welcome your suggestions on what should be added or deleted. Our Home Page location is:
http:/WWW.aphis.usda.gov/nbci/nbci

Ernest S. Delfosse, Director
National Biological Control Institute
Tel: 301-734-4329, Fax: 301-734-7823
Email: EDELFOSSE@APHIS.USDA.GOV

Virus Diseases of the Silkworm in Sericulture of Southern India

Infectious diseases of the silkworm in sericulture still cause severe problems in developing countries. I was appointed by Japan International Cooperation Agency, as a consultant from December 15, 1994 to March 1, 1995, to work on silkworm pathology and to instruct the counterpart, Mr. B. Nataraju of the Central Sericultural Research and Training Institute, Mysore, India.

The work plan included (1) epizootiological survey of sericultural farms, (2) practical control of the viral infections, (3) demonstration and teaching of techniques in the identification, and serology of silkworm viruses.

In southern India, sericulture is practiced throughout the year. I surveyed about 20 farms in Mandya, Bangalore, Hassan and Mysore districts. Each farm frequently got a poor crop of cocoons due to virus diseases. The nuclear polyhedrosis virus (NPV) was the major pathogen. The flacherie and densonucleosis viruses were also present under unfavorable rearing conditions. No cytoplasmic polyhedrosis virus was found.

Most of the farmers rear silkworms in their dwelling houses. Under the circumstances, spraying of a

mixture of 1% bleaching powder in 0.2% slaked lime solution (saturated) was recommended for disinfecting the rearing place and equipment without a health hazard to the residents. The 0.2% slaked lime solution was highly effective to dissolve nuclear polyhedra quickly and inactivate occluded virions. For disinfection of rearing houses independent of the dwelling, spraying of slaked lime solution, followed 30 minutes later with 2% formalin, was recommended. The traditional bamboo tray smeared with cow dung used during silkworm culture, was highly contaminated with NPV which was difficult to inactivate.

In order to reduce or control the viral infections, the rearing under sanitary conditions should be integrated with resistant varieties of the silkworm.

Hitoshi Watanabe
Nodai Research Institute
Tokyo University of Agriculture
Setagaya-Ku, Tokyo 156, Japan

SIP LOGO CONTEST

$US 250 prize for winning entry!

At the Ithaca meeting, Council decided that its time SIP adopted a new logo. Here is your chance to design it and make money too! The logo should be in black and white and should be appropriate for use in letterhead etc. Send your submissions by **30 December, 1995** to Dr. James Becnel, MVERL, P. O. Box 14565, USDA/ARS, Gainesville, FL 32604. Phone: 904-374-5961 Fax. 904-374-5922. EMail: JBECNEL@nervm.nerdc.ufl.edu.

Good Luck

SIP reserves the right not to accept any of the submissions.

Revision of the *Bacillus thuringiensis cry* Gene Nomenclature

In a project undertaken by the Bt cry gene nomenclature committee, 96 known toxin genes have been assigned unique names based solely on amino acid identity. The toxin genes fall into 17 primary groups comprising the *cry* genes *cry1-cry15* and the *cyt* genes *cyt1* and *cyt2*. The basic naming strategy adopted is similar to that proposed by Hofte and Whiteley except that Arabic numbers are being used instead of Roman numerals in the primary rank. The majority of toxins have similar names to those currently in use, a list of the more common toxins is shown below and gives both the old and new names.

New - Old	New - Old
Cry1Aa - CryIA(a)	Cry3A - CryIIIA
Cry1Ab - CryIA(b)	Cry3B - CryIIIB
Cry1Ac - CryIA(c)	Cry3C - CryIIID
Cry1Ad - CryIA(d)	Cry4A - CryIVA
Cry1B - CryIB	Cry4B - CryIVB
Cry1C - CryIC	Cry7Aa - Cry3C
Cry1D - CryID	Cry9A - CryIG
Cry1E - CryIE	Cry9B - CryIX
Cry1F - CryIF	Cry9C - CryIH
Cry1I - CryV	Cry10A - CryIVC
Cry2Aa - CryIIA	Cry11A - CryIVD
Cry2Ab - CryIIB	Cry15A - 34kDa
Cry2Ac - CryIIC	Cyt1A - CytA
	Cyt2A - CytB

Further information can be obtained from Dan Zeigler at the Bacillus Genetic Stock Center (Department of Biochemistry, Ohio State University, 484 West 12th Ave, Columbus, OH. 43210-1292; E-mail zeigler.1@osu.edu) who should also be approached with respect to the naming of new genes. A World Wide Web site will also be maintained at the BGSC providing information on the new nomenclature system. This site can currently be found at the following URL:
http://www.sussex.ac.uk/Users/bafn6/bt.

A review has been written for Microbiological Reviews which will also contain this information.

Neil Crickmore
University of Sussex, Brighton, U.K.

Ecological Database of the World's Insect Pathogens

David Onstad at the University of Illinois and Illinois Natural History Survey received funding for a second year from the National Biological Control Institute (USDA-APHIS) to continue improving and expanding

the Ecological Database of the World's Insect Pathogens, EDWIP. He plans to fill in the gaps concerning the ecology of the insect hosts and add more associations between insect species and pathogen species. The Larsson, Humber (ARSEF), and Martignoni databases will be used to add more entries to the database. With additional references published on viruses since Dr. Martignoni's retirement, the number of associations is likely to approach 4,500 by the middle of 1996.

A smaller but important database is WIPLI, World's Insect Pathogens: Lack of Infection. This complementary database consists of published negative lab results for insect-pathogen associations. Currently, 106 entries have been made based on only three recent publications.

Onstad requests that anyone knowing of a published host-range test send him the article or reference. In addition, any unpublished or published information regarding viruses, fungi, protozoa, and bacteria (other than *B. thuringiensis*) that may contribute to the database will be accepted.

In 1996, the two databases will probably be placed on the World Wide Web so that any scientist with Internet connections can search them.

Send submission to: David Onstad, Center for Economic Entomology, Illinois Natural History Survey 607 E. Peabody Dr, Champaign, Ill 61820 USA

Formation of new Division on Viruses Update

Further to the proposal for the establishment of a Division on Insect Viruses which appeared in the last issue of the Newsletter (Vol. 27, No. 2, Suppl. No. 1), we currently have signatures of over 60 SIP members, with more trickling in. We are in the process of drafting bylaws. They will be submitted sometime this Fall. Until the bylaws are approved and officers elected, the following people are serving as officers (95-96):

Chair: Norman Crook, Horticulture Research International, UK
Vice-Chair: Suzanne Thiem, Michigan State University, USA
Secretary-Treasurer: Just Vlak, Agriculture University, Wageningen, The Netherlands
Member at Large: Bryony Bonning, Iowa State University, USA

At our organizational meeting held during the Ithaca meetings, we discussed several issues including the possibility of setting up a insect virus computer listserver, homepage, or network. Another important issue that was brought up was to determine which insect viruses exist in collections around the world. We are interested in any additional ideas that people have for the new virology division as well as possible seminar topics for upcoming meetings.

Suzanne Thiem
Tel: 517-336-1713; Fax: 517-353-5598
Email: smthiem@ibm.cl.msu.edu

SIP Division of Bacteriology/ Bacteria Update

Over the past few years, many members of the Society researching bacteria, particularly those studying *Bacillus thuringiensis*, have expressed an interest in forming a Division of Bacteria. Toward the end, a meeting of interested members was held at the Cornell SIP meeting to elect an initial set of officers and begin formal development of a Division. Andre Klier was elected Chair, and Barbara Knowles, Vice Chair, with Bill Moar agreeing to serve as Secretary. Sue MacIntosh and Betty Davidson were elected members-at-large. During the next six months, by-laws for the Division will be formulated, and it is anticipated that these will be approved by the Council at the SIP meeting in Cordoba, Spain, thereby formally establishing the Division. Once established, the Division will play the lead role in determining the scientific content of the plenary sessions and symposia held at SIP's annual meetings and International Colloquia. In addition, the Division will likely be responsible for organizing the International Conferences on *Bacillus thuringiensis*, now held every two years in conjunction with SIP meetings. Members interested in joining the Division once established should complete and return the form that will accompany the annual dues form. The Society is looking forward to establishment of the Division to

represent its interests in this exciting and rapidly developing field.

Brian Federici
Tel. 909-787-5006; Fax. 909-787-3086
Email: federici@ucrac1.ucr.edu

MICROBIAL CONTROL NEWS

Bacillus popilliae Unavailable in USA

The use of milky disease bacteria has reached a low point in the U.S. with a lack of a commercial source of the spore powder. Ringer Inc. withdrew their *in vitro* produced product, Grub Attack, in 1991 after evidence showed that the primary bacteria in several samples were *Bacillus polymyxa* and not *B. popilliae*, and that those samples lacked infectivity for Japanese beetle larvae. The loss of Grub Attack meant that only material produced *in vivo* (Doom and Japidemic) by Fairfax Biological laboratory was available. However, several years of extremely low larval populations in the early 90's, severe health problems of David Chittick, and the death of Howard Chittick in early October, 1994, resulted in those products being very scarce or totally unavailable.

There is a continued interest in the milky disease bacterium. Fairfax Biological Laboratory intends to reregister Doom and hopes to increase production in 1995. In addition, several companies continue to explore the possibilities of producing *B. popilliae* on artificial media. Renewed availability of milky disease products will enable researchers to continue to investigate optimum use patterns and the value and limitations of using this biological agent.

From: Scarab Biocontrol News No. 1 June, 1995

Scarab Active Bacteria Under Development in USA

Bacillus thuringiensis var *japonensis*, strain buibui, is being evaluated through a collaboration between Mycogen Corporation and Kubota since 1992. This unique *Bt* isolate, which was discovered in Japan in 1991, has activity against larvae of several scarab species including Japanese beetle and a variety of chafers. Mycogen intends to commercialise a product based on *Bt* buibui in 1996 under the name M-press® bioinsecticide. For more information contact Mycogen Corporation, 4980 Carroll Canyon Road, San Diego, CA 92121 USA.

From: Scarab Biocontrol News No. 1 June, 1995.

Invade® is a product marketed for grass grub (*Costelytra zealandica*) control by Coated Seed Ltd, PO Box 11007, Christchurch, New Zealand. Invade is a high density concentrate of cells ($> 4 \times 10^{10}$ cells/ml) of the bacterium *Serratia entomophila*, the causal agent of amber disease in grass grub. The product can be kept under refrigeration for up to 3 months without loss of efficacy. Invade is applied to pasture at the rate of 1 litre/ha diluted in 100 litres of water. Bacteria are placed into the soil using a modified seed drill. Application usually results in an epizootic of disease in the season of application and the bacteria can persist in the soil providing control of the pest in subsequent generations.

From: Scarab Biocontrol News No.1 June, 1995.

USDA Withdraws Proposal To Regulate Nonindigenous Species

On January 26, 1995, the Animal and Health Inspection Service (APHIS) published a proposed rule in the Federal Register (60 FR 5288-5307, Docket No. 93-026-1) to establish regulations governing the introduction (importation, interstate movement, and release into the environment) of certain nonindigenous organisms. In that document, APHIS stated that the proposed rule appeared to be necessary because the plant pest regulations under which the movement of certain nonindigenous organisms are currently regulated do not adequately address the introduction of nonindigenous organisms that may potentially be plant pests. The proposed regulations were intended to provide a means of screening certain nonindigenous organisms prior to their introduction to determine the potential plant pest risk associated with a particular introduction.

We initially solicited comments on the proposed rule for 60 days ending on March 27, 1995. We also

hosted three public hearings regarding the proposed rule during that initial comment period, in Kansas City, MO, on March 6, 1995; in Sacramento, CA, on March 7, 1995; and in Washington, DC, on March 10, 1995. We received several requests for an extension of the comment period to allow interested parties additional time to comment on the proposal, as well as a request that we hold a public hearing in Hawaii. In response to those requests, we published a notice in the Federal Register on March 21, 1995 (60 FR 14928-14929, Docker No. 93-026-2), that extended the comment period for the proposed rule until May 26, 1995, and announced that a public hearing would be held in Honolulu, HI, on April 6, 1995.

By the close of the extended comment period, we had received a total of 251 comments. The comments were submitted by farmers; weed control committees and districts; university researchers; biological control researchers, producers, distributors, and practitioners; waste treatment and recycling facilities; composters; members of Congress; local State, and Federal agencies; commercial laboratories; organic farmers and cooperatives; private citizens; a fish hatchery; collections and museums; industry associations; scientific societies; and foreign government agencies.

None of the commenters supported the proposed rule as written. Some commenters requested that the proposed rule be withdrawn and reconsidered, while others recommended that we incorporate changes in any final rule to be published. Many commenters disagreed with the proposed lists of regulated organisms and exempted organisms, or expressed the belief that the proposed rule would impose unnecessary restrictions on the introduction of organisms. Finally, many commenters disagreed with APHIS' analysis of the economic impact of the proposed rule, stating that they believed that the costs of complying with the proposed regulations would be greater than APHIS had anticipated.

After considering all the comments, we have concluded that we should not proceed with a final rule based on the proposal because the revisions that would be necessary to reconcile the proposed regulations with the very diverse views expressed in the comments would be so significant that the final rule would be substantially different from the proposed rule on which the public had the opportunity to comment. Therefore, we are withdrawing the January 26, 1995, proposed rule. We do, however, plan to develop new proposed regulations to address the inadequacies in our current plant pest regulations and to provide a means of screening organisms prior to their introduction to determine the potential plant pest risks associated with such introductions. The concerns and recommendations of all those who commented on the proposed rule that we are withdrawing will be considered during the development of any new proposed regulations. Further, we will publish an advance notice of proposed rule making in a future issue of the Federal Register to solicit additional input from interested persons and to present opportunities for additional public participation in discussions of the scope, rationale, and basis of any new proposed regulations.

Dr. Matthew H. Royer, Chief Operations
Biological Assessment and Taxonomic Support,
PPQ, APHIS, Suite 4A01
4700 River Road Unit 133,
Riverdale, MD 20737-1236
Tel: (301) 734-7654

EPA Issues Registration and Approves Full Commercialization for Potato Plant-Pesticide

May 5, 1995. EPA today approved for the first time full commercialization of a plant-pesticide - a potato that contains genetic material needed to make an insecticide within the plant. Because the insecticide is natural and nontoxic to animals, it does not pose a risk to public health or the environment. In addition to the registration, EPA also issued an exemption from a tolerance for residues of the plant-pesticide active ingredient *Bacillus thuringiensis* (CryIII (a) delta endotoxin and the genetic material necessary for its production) in potatoes. EPA's initial approval of the registration for this plant-pesticide was in late March, which allowed for planting limited acreage for plant propagation (seed potatoes). On May 5, EPA amended the March registration to allow full scale commercialization of this plant-pesticide in potatoes (registered and produced by Monsanto Co. of St. Louis) under the trade name NewLeaf. EPA has

undertaken these actions after a thorough examination of this product to ensure that human health and the environment would be protected. The plant-pesticide was produced when genetic material necessary to make an insecticidal substance was taken from a bacterium found in nature, *Bacillus thuringiensis*, and transferred to potatoes. Transfer of this genetic material into the plants enables them to produce an insecticidal protein identical to that produced in the bacterium. In this case, the Colorado potato beetle is the target insect of the *Bacillus thuringiensis* insecticidal protein produced by the potato plant. The insecticidal protein is produced in very small quantities by the potato plant, is nontoxic to mammals, birds, and most other insects. The use of this new plant-pesticide will eliminate the use of chemical pesticides now sprayed on the crop to control the Colorado potato beetle. In addition, the registrant has provided a pesticide resistance management plan which was found to be scientifically sound by EPA's Subpanel of the Scientific Advisory Panel. The Agency has reviewed and previously registered approximately 175 *Bacillus thuringiensis* pesticide products for insect control since 1961. Monsanto is working with EPA to refine the management plan further. EPA believes this product will contribute to the goal of reduced pesticide risk and use.

Darlene Dinkins, Communications Branch
Field Operations Division, U.S. EPA
Tel: (703) 305-5017; Fax: (703) 305-5558

Mycogen Sues Monsanto for Patent Infringement in Development, Sale of Insect-Resistant Plants and Seeds

San Diego, Calif. May 23,1995 Mycogen Corporation announced today that its Mycogen Plant Sciences subsidiary (MPS) has filed suit for patent infringement against Monsanto Company in Federal District Court here.

The patent infringement action claims that Monsanto's use of synthetic *Bacillus thuringiensis* (Bt) genes to develop and sell plants and seeds for insect-resistant crops infringes Mycogen's patent covering the process used to synthesize Bt genes. The suit also contains state law claims relating to Monsanto's published statements disparaging Mycogen's patents and technology.

On January 10, 1995, Mycogen was awarded a patent (US 5,381,831) covering methods of modifying Bt gene sequences to make them resemble those of the plants into which they are to be inserted. Such modifications improve the gene's efficiency in producing Bt proteins, which deter feeding by insects.

MPS's complaint states that Monsanto's acts of infringement include 'the making of synthetic *Bacillus thuringiensis* genes for expression in plants and seeds in accordance with the methods of [Mycogen's patent], the sale, license and use of such genes, and the manufacture, use and sale of agricultural products, including... cotton, cottonseed, corn, potatoes, Bollgard™ cotton lines, and New Leaf™ potato lines, in which such genes are incorporated or expressed."

Monsanto has applied for Environmental Protection Agency approval to begin selling seeds for insect-resistant cotton and potatoes next year. MPS's infringement claims cover both products already developed by Monsanto and products under development.

The patent infringement claim seeks an injunction halting Monsanto's development and commercialization of plants and seeds using the process covered by Mycogen's patent. The state law claims seek unspecified damages for unfair competition, trade libel, intentional interference with prospective business advantage and unjust enrichment arising out of statements Monsanto has made. MPS claims that these statements have frustrated its attempts to procure licenses for its patents and technology.

Carl Eibl, Mycogen's executive vice president finance and legal affairs, said MPS decided to file suit after repeated efforts to negotiate an agreement with Monsanto relating to the development and commercialization of insect-resistant plants failed to reach an acceptable resolution.

"Monsanto has insisted that it have control over this technology and the pricing of insect-resistant corn and cotton," Eibl said. "MPS intends to make this

technology available to the industry through collaborative arrangements such as licenses and joint ventures."

In March 1995, MPS received Environmental Protection Agency approval to produce hybrid seed corn with Bt-based resistance to European corn borers, and the company anticipates approval for commercial sale in time for the 1996 growing season. MPS also is developing hybrids with Bt-based resistance to corn rootworms, another significant corn pest, and is transforming cotton varieties with synthetic Bt genes that protect the plants from budworms, bollworms and boll weevils.

Mike Sund, Director, Corporate Communications
Mycogen Corporation,
4980 Carroll Canyon Road, San Diego, CA 92121,
Tel: (619) 453-8030; Fax: (619) 453-5494

Mycogen Receives Notice of Allowance for European Patent Covering Bt Gene Technology for Insect-Resistant Plants

San Diego, Calif, June 15, 1995 Mycogen Corporation announced that its plant science subsidiary has received a Notice of Allowance from the European Patent Office (EPO) for patent claims covering technology to optimize expression of *Bacillus thuringiensis* (Bt) proteins that make crop plants insect-resistant.

The notice, dated June 7, 1995 advised Mycogen that the EPO has allowed claims both to its method of modifying Bt gene sequences to make them resemble those of plants, and to modified genes and transgenic plant cells developed by using that method. In January 1995, Mycogen received a U.S. patent on a related application covering a similar method.

Several major crop plants, including corn, cotton, canola, potatoes and tomatoes, have been transformed with synthetic Bt genes, and seeds for some are expected to be marketed in the U.S. in 1996.

"This method of synthesizing Bt genes is a 'recipe' that has produced transgenic plants with increased levels of protein expression for effective insect control," said Jerry Caulder, Mycogen's chairman, president and chief executive officer. "The U.S. and European patent offices have both recognized that our researchers invented this method. This further strengthens Mycogen's proprietary position in Bt-based insect resistance in plants."

In 1983, researchers Michael Adang and John Kemp first described plants transformed with genes from Bt bacteria in a U.S. patent application. Experiments continued with various approaches to increase protein expression until a research team composed of Michael Adang, Donald Merlo, Elizabeth Murray and Thomas Rocheleau decided to modify Bt gene sequences to make them resemble plant genes. This modification dramatically increased expression levels, and patent applications covering the team's discovery were filed in the U.S. and Europe by what is now Mycogen's plant science subsidiary.

In March 1995, Mycogen received U.S. Environmental Protection Agency approval to produce seeds for corn hybrids with Bt-based resistance to European corn borers, which cost U.S. farmers as much as $ 1 billion a year in lost yields. Caulder said that the company is developing corn hybrids with Bt-based resistance to corn rootworms, an even more widespread and costly pest, and cotton varieties with synthetic Bt genes that protect the plants from budworms and bollworms.

"Our strong technology position already is helping us build our existing seed corn business, and we think it will give us leverage to participate in the cotton seed business," he said. "For other crops, we're looking into joint ventures or licensing arrangements with companies that need access to Bt-based insect control."

Mycogen's EPO patent is a foreign counterpart of U.S. Patent 5,380,831, which is the subject matter of a patent infringement lawsuit the company has filed against Monsanto Company in Federal District Court in San Diego.

Michael Sund, Director, Corporate Communications
Mycogen Corporation,
San Diego, CA 92121
Tel: (619) 453-8030 Fax: (619) 453-5494

Bt Management Working Group

The Bt Management Working Group is a consortium of 17 companies involved in the development and commercialization of *Bacillus thuringiensis*-based insecticidal products. During 1991 -1995, the BMWG has funded Bt research projects dealing with Bt mode of action and resistance totalling $185,000.

Our current funding period will end Dec. 1995. Proposals are now being solicited for the next funding period (Jan. - Dec. 1996). Successful proposals will be funded for one year, with the subsequent year's funding contingent upon submission of a satisfactory progress report by Sept. 1996.

Investigators currently funded by the BMWG are also invited to submit new proposals or requests for extension of ongoing projects. These will be given equal consideration to new project proposals. Successful proposals will address one or more of the following topics: (not listed in order of priority)

1) **Monitoring**: There is a need to develop a better understanding of variable susceptibility and baseline "R" (gene frequency) levels of key pest populations in various agricultural areas. Methods for the detection of Bt resistance in field populations are needed. Standardized bioassay methods for measuring Bt resistance levels need further development to provide reliable methodology at lower cost, greater throughout, and applicability to more researchers.

2) **Basic Research**: More information is needed to better understand the mechanism of resistance in pests such as armyworms, loopers, etc. Does Bt resistance in other lepidopteran pests develop in the same way as observed for diamondback moth? Cross-resistance is not well understood. Studies are needed to determine the potential for cross-resistance to develop among various Bt products / isolates having differing toxin compositions. What differences exist in the ability of various pest species to inherit genes for Bt resistance, and how genetically stable are these resistant populations?

3) **Bt Utilization Strategies**: Which strategies are best for using Bt effectively and at the same time reducing the potential for the build-up of resistance? (i.e. - refugia ?; rotations ?; combinations ?; high dose / low dose applications ?) Data from controlled field testing is needed to validate proposed models and theories.

The deadline for submission of proposals is Nov. 1, 1995. Proposals should be no longer than 10 pages and must include a clear statement of the objectives of the study relating to one or more of the topics above, an outline of proposed methods to include existing facilities and capabilities to accomplish the objectives and a proposed budget and timeline. Abbreviated curricula vitae of the principal investigator(s) should be included with the proposal. Any number of unique proposals may be submitted by the same researcher.

Send proposals to: Tom Currier
Ciba, 3054 Cornwallis Rd.
Research Triangle Park, NC 27709
Tel: (919) 541-8559; Fax: (919) 541-8585

ECOTOX Seeks Partners

Our biopreparations' research and manufacturing company, ECOTOX, deals with the development of industrial technologies and biological preparation production for plant protection against a wide range of suctorial and rodent harmful insects and fungal diseases.

Our products are ecologically safe, harmless to people and useful insects. They were approved for use by Russian Ministry of Public Health Care and State Commission on chemical preparations.

ECOTOX would like to find business partners interested in joint production or sale of biopreparations such as BICOL, BAXIN, ALITRIN, TRICHODERMIN and in joint scientific and technical developments in the field of biopreparations.

Biopreparations are manufactured by our company based on bacteria and fungi. These biopreparations are highly efficient against 140 kinds of leaf-cutting and plant sucking insects on vegetables, fruit trees, bushes, medicinal herbs, hops, vineyards, sunflower and cereals. Our company produces biopreparations against different kinds of fungal diseases.

Our employees are biotechnologists with 20 years experience in laboratories and plants in the field of development of biopreparation technology (including waste water treatment).

We have 11 registered invention patents in biopreparation technologies. At our laboratories microorganism-producers are also available. Our products are manufactured from Russian raw materials at plants and laboratories situated in Russia and CIS. Production capacity is up to 20 tons per month.

Our company has preferential taxation and privileges in export customs duties. If you find the above mentioned information of interest to you please do no hesitate to contact us. We are ready to provide you with any additional information.

BICOL is especially effective against: -larva of potato beetles, caterpillar, cabbage moth, beet webworms, codling moth, black-veined fall webworm, leaf-rolling moth, American tent caterpillar, gypsy, abraxas, grossulariata, etc. Bicol is used on the following plants: potato, tomato, pepper, cabbage, beet, carrot, apple-tree, pear-tree, plum-tree, sweet cherry, apricot-tree, mulberry-tree, currant, gooseberry, pyrethrum, eglantine, valerian, calendula, hop, cucumber, etc.

BAXIN is an effective biological preparation that suppresses the growth of more than 100 species of different leaf-cutting caterpillars on the following plants: beet, carrot, cabbage, apple, pear, plum, cherry , apricot, mulberry-tree, currant, gooseberry, vine, hop, flowers. Baxin is manufactured as a concentrated wettable dry powder.

ALIRIN-B is very effective against white and grey rots, such as cochitosis, blackarm and other diseases on cucumbers, cabbage, strawberry, tomato, potato and others. It is the best protection for wild as well as for greenhouse plants. Alirin-B will preserve seedlings and increase your harvest. Using Alirin-B you will raise your cucumber harvest by 3 kg/m^2; food grains by 15-30% and cabbage by 40%. Alirin-B is manufactured as a concentrated wettable dry powder.

LUTAN is very effective against different species of plant pathogenic fungi. This preparation can be used for plants growing in fields and greenhouses and for preserving fruits and vegetables during transportation and storage. Lutan is manufactured as a concentrated paste.

Dr. Tatiana Nugmanova, General Director
ECOTOX, 125299, PO Box 39,
Moscow, Russia
Fax: (095) 216-99-06 / (095) 216-93-67
Tel: (095) 159-30-61 / (095)976-43-16

Recent Developments at Biosys

Over the past three years, biosys has been involved in the implementation of a carefully planned strategic transition. As part of its strategic plan, the Company has acquired new technologies and companies (Table 1), significantly enhancing its product mix and market scope (Table 2). As a result the Company is well positioned for impressive and profitable growth. To strengthen the position of the Company, the "new biosys" has relocated its corporate offices from Palo Alto, California to Columbia Maryland. The new address is:

biosys, inc., 10150 Old Columbia Road
Columbia, Maryland 21046
Tel: (410) 381-3800; Fax: (410) 381-3840

biosys' manufacturing facilities will remain in Decatur, Illinois, at the Archer-Daniel's Midland site.

The new Operating Committee consists of the following:

Edwin Quattlebaum, Ph.D., President and Chief Executive Officer
R. Patrick Simms, Senior Vice President, Manufacturing and Business Development
Ramon Georgis, Ph.D.,Vice President, Research and Development
Russell Katzer, Vice President, Marketing and Sales
Michael Thomas, Vice President and Chief Financial Officer
Owen Jones, Ph.D., Managing Director, AgriSense

Table 1. Companies Acquired by biosys

Company	Major Technology	Status
Agri Sense	Phermones	Acquisition completed in 1992
Crop Genetics International	Baculoviruses	Acquisition completed in March 1995
AgriDyne	Plant-Derived Compounds	In Process

Table 2. Major Technologies, Products and Markets of biosys

Technology	Products	Markets	Location
Entomopathogenic Nematodes	BioSafe®, BioVector®, Vector®	Turf, Greenhouses, Retail, Citrus	USA,Canada, Japan, W. Europe
Pheromone	Selibate®, Decoy® (Mating Disruption)	Cotton, tomato Forest	USA, Europe Far East,Egypt
	Monitoring & Trapping Devices	PCO, Stored Products, Greenhouses	Middle East, India
Baculovirus	Spod-X®	Vegetables, Greenhouses, Cotton	USA, W.Europe
	GemStar™	Cotton	USA
	AfNPV[a]	Cotton, Vegetables	
Neem	Azatin®	Turf, greenhouses	USA
	Turplex®	Mushrooms	
Fermentation	*Bacillus thuringiensis*[b]		

[a]under development
[b]Contract manufacturing with Ciba-Geigy and Ecogen

MEMBERS ON THE MOVE

Michael J. Bidochka has accepted a tenure-track position as Assistant Professor in the Biology department at Trent University. He will be studying the population and molecular genetics of entomopathogenic fungi and is particularly interested in exploring fungi endemic to Canada. Michael was previously at the Boyce Thompson Institute for Plant Research, Cornell University and sends his regards to Drs. Raymond St. Leger, Don Roberts, Ann Hajek, Lokesh Joshi and Bob Granados for their help and encouragement during his stay in Ithaca. Mike's new address is: Department of Biology, Trent University Peterborough, Ont, Canada K9J 7B8
Tel: 705-748-1021, Fax: 705-248-1205
E-mail: mbidochka@trentu.ca

After seven years as a post-doc in David Ellar's lab in Cambridge, **Neil Crickmore** has been appointed to a faculty position at the University of Sussex at Brighton (UK) where he will teach biiochemistry / molecular

genetics. At least in the short term, he intends to continue working with *Bacillus thuringiensis* using the tools of molecular biology and protein engineering to further investigate the pathogenic mechanism of the bacterium. Neil's new address is: School of Biological Sciences, University of Sussex, Brighton BN1 9QG, UK Tel (office): +44 1273 678917;(lab): +44 1273 678897 Fax: +44 1273 678433,
Email: n.crickmore@sussex.ac.uk

Alan Sawyer (USDA-ARS, Ithaca, NY) is heading for better weather. Seventeen years of continuous cloud cover is enough! Beginning August 6, Al will be joining USDA-APHIS-PPQ, Hawaii Methods Development Station, on the tropical Pacific island of Oahu. Ah, that sounds better. Al will be trying to make sense of the accumulated data from California on medfly interceptions, trapping, detections, and control and eradication efforts. What can be made of these numbers? Who knows, but the goal is to develop a "computer-based management decision model" that will help the managers do their job. As this has little to do with insect pathology, Al will be scarce at SIP meetings, but you may still see him hanging out with ESA types. New address: USDA-APHIS-PPQ Hawaii Methods Development Station, 41-650 Ahiki St., Waimanalo, HI, 96795. Tel: (808) 259-8822. No EMail yet. Aloha!

Your Newsletter Editor, **Mark Goettel** has moved to Montpellier France on a work-study-leave from Agriculture & Agri-Food Canada, where he will be spending the next year at INRA's Unité de Recherche en Lutte Biologique headed by **Pierre Ferron**. He joins SIPers **Jacques Fargues, Marc Rougier** and **Nathalie Smits** where he will be studying the environmental constraints of entomopathogenic fungi. As an added bonus, Mark's office is next to fellow Canadian and SIPer **James Coupland** who is part of the CSIRO lab. See page 2 for Mark's new address.

MEMBER NEWS

Mr. Ismail Abdel-Hamid is working as an assistant researcher at Agricultural Genetic Engineering Research Institute. He recently finished his M.Sc. studying a new virus infecting the pink bollworm (PbW). This small picnoline virus was located in the cytoplasm of infected larvae and adults. It is successfully transmitted to the progeny via transovarial transmission. For his Ph.D. study Mr. Abdel-Hamid will move to the baculovirus molecular biology and enhancing its effect.

Ismail welcomes messages from SIP members and sharing with them ideas for baculovirus molecular biology and its roll in the integrated pest management program.

Ismail Abdel-Hamid
Agri. Genetic Eng. Res. Inst. (AGERI)
ARC, 9 Gamaa St. Giza 12619, Egypt
Fax: (202) 573-1574, Email: nagel@frcu.eun.eg

PUBLICATIONS

Scarab Biocontrol News

Insect pests of the family Scarabaeidae are becoming an increasing problem worldwide with the phasing out of persistent chemicals for their control. As a result, biological control is gaining an increasing amount of attention as an alternative for scarab pest management. There are, however, few forums where this topic is discussed in detail. Recent workshops in California, Mexico and New Zealand have shown that there is a worldwide interest in this topic and there is much to be gained from cooperation and coordination between different research groups. To address this need, we plan to produce 2 issues of *Scarab Biocontrol News* each year, to provide a forum for discussion and source of new information for researchers working on the biocontrol of scarabs. To assist us in this task we welcome news and information from others working in the area. We would appreciate information on new techniques dealing with biocontrol agents, reports on meetings, information on new products, publications at the "in press" stage, etc. We hope that *Scarab Biocontrol News* will become an important tool in linking research groups and advance our management skills in order to limit damage caused by this important pest family.

Trevor Jackson
AgResearch, P.O. Box 60, Lincoln, New Zealand
Ph. 64 3 325 6900; Fax: 64 3 325 2946
E.mail: jacksont@agresearch.cri.nz

New Book Announcement

A new book containing papers presented at "**The Pacific Rim Conference on Biotechnology of *Bacillus thuringiensis* and Its Impact to the Environment**" is available. The meeting was held at Academia Sinica in Taipei, Taiwan, R.O.C. in October, 1994.

Contents include symposia papers on the topics of:

* Structure and function of Bt toxins
* Bt isolation and characterization from countries around the globe
* Development and field application
* Registration and regulation of Bt products
* Environmental impact of Bt application

This book is hard cover in 7"x 9" format and has over 500 pages.

It can be purchased for $50 (US) from:
Hua Shiang Yuan Publishing Co.
P.O. Box 78-79, Taipei, Taiwan, R.O.C.
Fax: +886-2-6601010

For surface mail, add $8; for air mail add $30. Make money orders payable to Hua Shiang Yuan Publishing Co. in U.S. currency. Credit cards accepted (Visa, Mastercard or JCB). Please include credit card account number with expiry date and sign.

***Bacillus sphaericus* Mechanism and Application as a Mosquito-Larvicide**

Edited by Yongmei Zhang

Contents

1. Mosquito-Born Diseases and Mosquito Control
2. Biological Characteristics of *Bacillus sphaericus*
3. Classification Identification and Distribution
4. Mosquito-larvicidal Toxins
5. Pathology
6. Genetics
7. Safety
8. Production
9. Efficacy of *Bacillus sphaericus* Against Mosquito Larvae
10. Principles and Methods for Evaluation of *Bacillus sphaericus* in the Laboratory and Field
11. Recycling and Persistence of *Bacillus sphaericus*

Price: $40, Surface Mail add $7; Air Mail add $25.

This new book can be purchased from: Eying Liu
Wuhan Institute of Virology, Adademia Sinica, Wuhan 430071, P.R. China

MONTPELLIER ABSTRACTS AVAILABLE

Abstracts and Proceedings from the VIth International Colloquium on Invertebrate Pathology and the IInd International Conference on *Bacillus thuringiensis* are available by sending a cheque or money order made out to the "Society for Invertebrate Pathology" in US currency to FASEB, C/O Debbie Stoutamire, 960 Rockville Pike, Bethesda, Maryland, 20814 USA.

Handling, processing and mailing fee is $U.S. 9.00 for mailing in North America and $U.S. 13.00 for mailing overseas. Upon payment of the above fee, the costs are as follows:

Abstracts free for members in good standing in 1994.
Abstracts for non-members in 1994.....$25
Proceedings..... $25

If both Proceedings and Abstracts are ordered at the same time, the handling fee remains the same.

POSITIONS AVAILABLE

Post-Doc Entomopathogenic Fungi: Available immediately. Seeking an innovative, dynamic, enthusiastic entomologist/pathologist for Post Doctorate research on the development of entomopathogenic fungi for IPM. Contact: B.L. Parker, University of Vermont, Tel: (802) 656-5440
Email: bparker@clover.uvm.edu

Graduate Research Assistant: Ph.D. for research of environmental risk assessment (fate) of recombinant - DNA baculoviruses: viral competition, biotic transport. Competitive stipends. Available January 1996. Contact: J. Fuxa, Department of Entomology, Louisiana St., Univeristy Baton Rouge, LA 70803 USA, Tel: (504) 388-1836; Fax: (504) 388-1643 Email: jfuxa@lsuvm.sncc.lsu.edu

POSITION WANTED

German biologist, Ph.D. 1994, is looking worldwide for a post-doc or other position in biological control of pests or insect vectors. Previous experience was investigations into the influence of environmental factors affecting the efficacy of *Beauveria bassiana* for control of reduviid bugs (Triatominae) at the National Institute of Agronomic Research, La Minière, France and the Institute of Tropical Medicine, Tuebingen, Germany. Field experience in Latin America and Africa; languages: German, French, Spanish and English. Dr. Christian LUZ, ITM, Wilhelmstrasse 27, D-72070 Tuebingen, Germany, Fax: 49 70 71 29 30 17

MEETING AND WORKSHOP ANNOUNCEMENTS

Third International Lincoln Workshop, Microbial Control of Soil Dwelling Pests, AgResearch, Lincoln, New Zealand, February 21 - 23, 1996.

This workshop is the third of a series, initiated in 1990, to allow discussion on the important theme of microbial control of soil dwelling insects. The purpose of the workshop is to bring together researchers working in microbial control to discuss recent advances in this area and develop cooperative research programmes. In this workshop we want to emphasize the role of the soil environment as a reservoir for pathogens and the use of molecular biology techniques to aid identification and tracking of insect pathogens. The practice of microbial control will be discussed also.

WORKSHOP THEMES

The soil environment
Ecology of pathogens in soil
Epizootiology and modelling
Synergism between pathogens
Use of viruses for control of soil dwelling pests
Parasite/pathogen interactions
Production and formulation of pathogens for biocontrol

Registration fee: NZ $150 (including Proceedings, lunches and local transport)
Student fee: NZ $80

Second Lincoln Training Course, Control of Soil Dwelling Pests, AgResearch, Lincoln, New Zealand, February 26-29, 1996

An intensive course on insect pathology and microbial control of insect pests will be presented at Lincoln on February 26 - 29, 1996. The course is designed for researchers with some background in microbiology and/or entomology who are seeking to widen their skills in this expanding science area. The course will be highly interactive and involve a number of top specialists working in the area.

COURSE THEMES

Pathogens for control of soil dwelling insect pests
Insect pathology - diagnostics, histology
Mass production of pathogens
Bioassays and field trial procedures
Ecology and enumeration of pathogens in the soil

The course is organised by the Microbial Control Group of AgResearch at Lincoln who have more than 12 years experience in microbial control of soil dwelling pests. The group developed Invade® for control of the grass grub *Costelytra zealandica*, the world's first microbial insecticide based on a bacterium from the Enterobacteriaceae.

Course leaders include Drs. Trevor Jackson, Travis Glare, Maureen O'Callaghan and Tracey Bourner

Fees: There will be a course fee of NZ $750 for training and provision of materials (Student rates available). Accommodation can be arranged in nearby Christchurch.

Dr. T.A. Jackson, AgResearch Lincoln, PO Box 60, Lincoln, New Zealand

Second Pacific Rim conference on biotechnology of *Bacillus thuringiensis* and its impact to the environment, Chiang Mai, Thailand
November 4 - 8, 1996

Enquiries: please contact:
Mr. Ocha Prachuabmoh, Secy.
The 2nd PacRim Conference on BT,
P.O. Box 1087, Kasetsart, Bangkok 10903, Thailand.
Tel. 662-579-5583, 579-3704; Fax 662-579-5583.

The Second En Gedi Conference on Bacterial Control of Agricultural Insect Pests and Vectors of Human Diseases, Jerusalem, Israel
August 18 - 23, 1996

The organizing committee invites you to participate in The Second En Gedi Conference on Bacterial Control of Agricultural Insect Pests and Vectors of Human Diseases, highlighting **"The 20th Anniversary of the Discovery of *Bacillus thuringiensis* subsp. *israelensis* (Bti)."** The 20th anniversary meeting, to be held in a tourist resort near Jerusalem, provides a multi-disciplinary atmosphere for the exchange of professional knowledge, experience and research results in all facets of *Bacillus* research with special emphasis on biological control of insect pests.

Authors are invited to submit abstracts for both oral and poster presentations, which will be published in the Meeting's Abstracts. The deadline for submission of titles is February 28, 1996 and of abstracts is 30 April.

Registration fee is $250, which includes: shuttle from airport on day of arrival (Sunday and Monday); evening reception; a tour to Tse'elim, the discovery site of Bti; reception at Ben Gurion University of the Negev; all day coffee and beverages; abstracts.

The deadline for registration is June 30, 1996. After that date, registration fee will be $300. Student fees will be $150 and $200.

For further information please write to:

Yoel Margalith,
Ben-Gurion University of the Negev,
P.O.B. 653,
Beer-Sheva 84105, Israel
Tel: (972)- 7-461340; Fax: (972)-7-472963
Email: yoelm@bgumail.bgu.ac.il

EDITOR'S NOTES

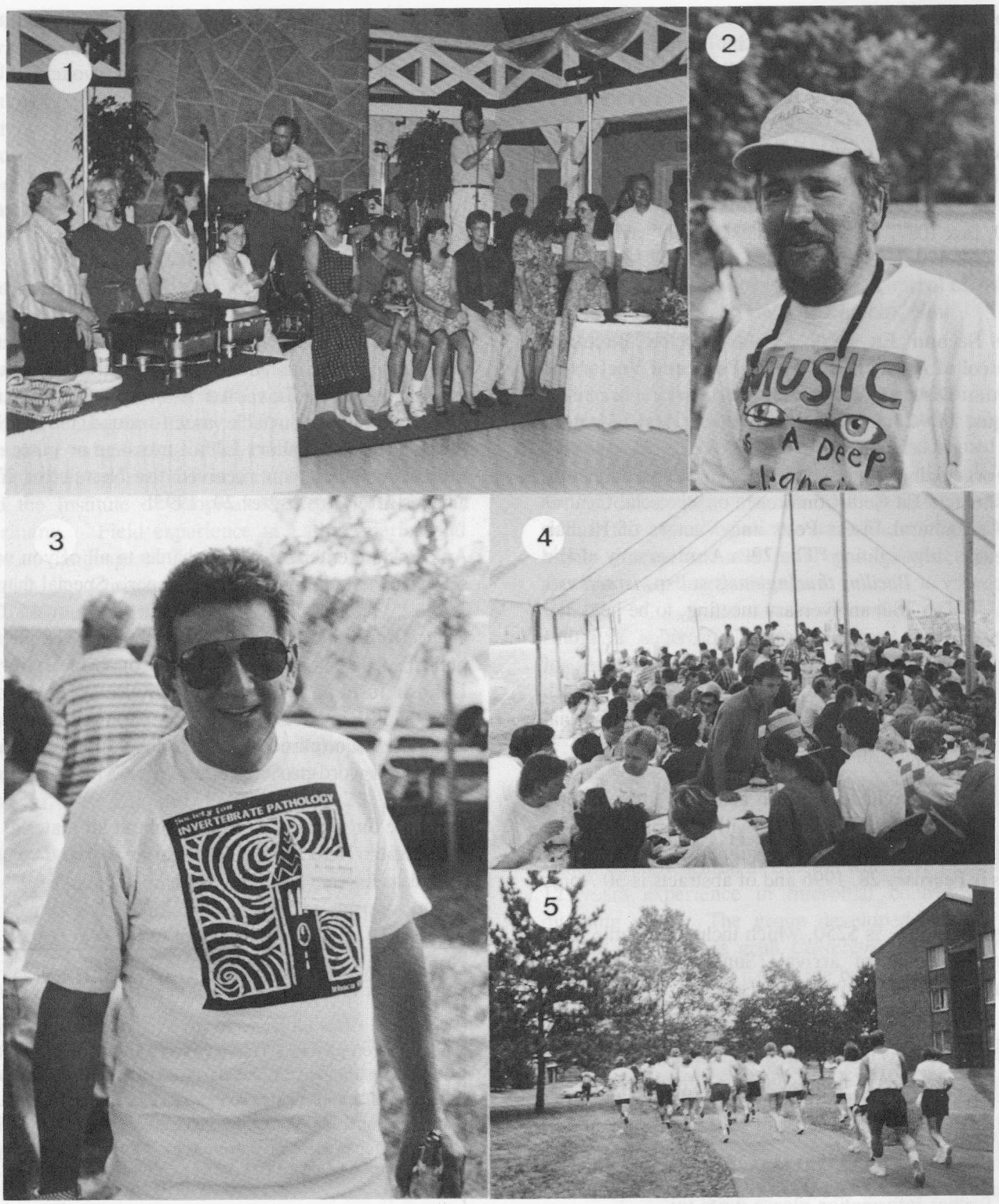
Newsletter Mailing. In an effort to improve our delivery of the Newsletter in a timely, yet most economical manner, the next issue of the Newsletter will be delivered to American members via a bulk mailing permit. This issue is being selectively air mailed to known trouble areas around the world. **Please send me a short EMail message or postcard indicating when you received the Newsletter if it arrives after November 20, 1995!**

Acknowledgements. Many thanks to all of you who submitted material in a timely manner. Special thanks to those who submitted material via EMail or on disk and to **Don Roberts** for submitting photos. The photos published in this issue were taken by **Don Roberts**, **Lokesh Joshi** and Assistant Editor, **Betty Davidson**. We thank **Karen Toohey** for preparation of the text and **James Coupland** and **Nathalie Smits** for help in getting the word-processing set up in Montpellier.

Deadline for next issue. Please submit all material by **December 15, 1995** for publication in the January, 1996 issue.

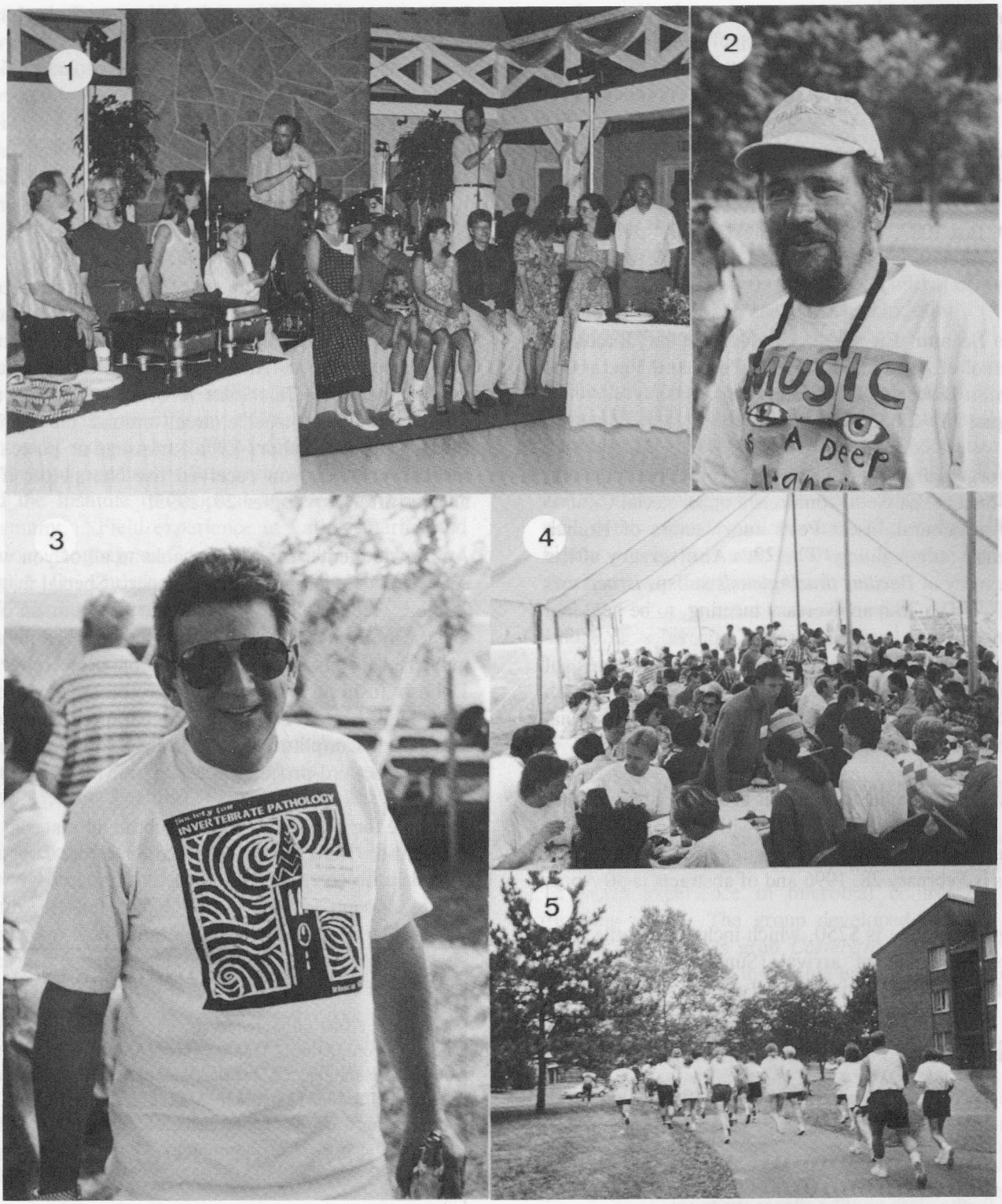
LAST CHANCE TO DONATE SLIDES

The **Slide Atlas on General Invertebrate Pathology** is nearing completion. This is your last chance to donate slides of pathogens (molecular, cellular, and organismal levels), diseased hosts, schematic life cycles, etc. All submissions are welcome. Send slides to Dr. Ann E. Hajek, Department of Entomology, Cornell University, Ithaca, New York 14853-0901.



1) Members of Organizing Committee and Volunteers; 2) Program Chair, John Vandenberg; 3) Local Arrangements Committee Chair, Al Wood; 4) B.B.Q. at Taughanock Falls; 5) Start of 5 K - Fun .....walk?

PHOTOS FROM ITHACA



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PHOTOS FROM ITHACA

11) Ohio State Graduates, Bob Rose, Dwight Lynn, Doug Streett, Betty Davidson & Ann Cali; 12) Terry Couch, Al Yousten & Bruce Carlton; 13) Rejane de Moraes & Marlinda Souza; 14) Paulo Velarhinos, Bonifacio Magalhaes & Peter Kolakowski; 15) Cristina del Rincón-Castro; 16) Claire Vidal; 17) Harry Kaya " Fleld work sure has been easier since we discovered this mega-spore mutant of *Beauveria*!"

PHOTOS FROM ITHACA