



NEWSLETTER

society for invertebrate pathology

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SAPPORO HOSTS 385 DELEGATES

The VIIth International Colloquium on Invertebrate Pathology and Microbial Control and IVth International Conference on *Bacillus thuringiensis* was held at the Green Hotel Sapporo, Japan August 23-28, 1998. There were 385 registrants, including 61 students and 24 companions, from 40 countries.

The scientific program consisted of the Founder's Lecture, two Plenary speeches, 24 symposium sessions by 87 speakers, 4 workshop sessions by 12 speakers, 84 contributed papers and 121 poster presentations. Total numbers were 307 presentations.

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Supplement No. 1.
Order & Membership Application Forms 4pp

The annual business meeting was held on Thursday morning and was well attended. At this meeting, the presidency of SIP was passed from Dr. Brian A. Federici to Dr. Juerg Huber.

Student Awards: There were 54 presentations 8 oral and 48 poster, entered in the student competition. Three awards were presented for the following oral presentations.

Ayuko Sato, Improvement of primary cell culture from lymphoid organ of *Penaeus japonicus*. Co-authors: K. Ishida, Y. Gao, P.C. Wang, T. Itami, Y. Takahashi and M. Matsumura (Institute of Applied Biochemistry, University of Tsukuba, Tsukuba, Ibaraki, Japan)

Hyun-Woo Park, Very high levels of Cry3A synthesis are obtained in *Bacillus thuringiensis* using

Don't Forget to Pay Your Dues for 1999

Dues notices for 1999 are included with this Newsletter. To ensure that your membership remains current and that you continue receiving the Newsletter, please don't forget to return your notice with payment immediately. This is especially important this year as we will be publishing a new **Membership Directory** early in the New Year. If you haven't received your 1999 notice or have misplaced it, please contact the SIP Executive Secretary. The address can be found on the next page.

SIP Office

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

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Homepage: "http://sip.home.ml.org"

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

dual sporulation-dependent promoters in combination with the STAB-SD mRNA sequence. Co-authors: B.Ge, L.S. Bauer and B.A. Federici (Department of Entomology and Interdepartmental Graduate Program in Genetics, University of California, Riverside, California, USA)

Samantha L. Jarrold, The role of cuticular lipids in the pathogenicity of the deuteromycete fungus *Metarhizium anisopliae* var *acridum* for the desert locust *Schistocerca gregaria*. Co-authors: D. Moore and A.K. Charnley (Dept. of Biology and Bio-chemistry, University of Bath, Claverton Down Bath, UK)

Five awards were presented for the following posters:

Tomoko Domae, Cabbage armyworm (*Mamestra brassicae* L.) resistance in sugar beet by introduction of insecticidal protein gene (cryIA(b)).

Co-authors: K. Kuwahara, A. Kanazawa, S. Asano and Y. Shimamoto (Faculty of Agriculture, Hokkaido University, Sapporo, Japan).

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

Deadline for next Newsletter is Jan. 15, 1999.

Disclaimer: The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her risk.

Sarah L. Burton, Structure-function relationships of *Bacillus thuringiensis* Cry1Ac delta-endotoxin. Co-authors: D. Derbyshire, D.J. Ellar, J. Li and A. Murzin (University of Cambridge, Dept. of Biochemistry, Cambridge, UK)

Jin-Ching Lee, Persistent baculovirus infection results from mutation of the apoptotic suppressor gene p35. Co-authors: H.-H. Chen and Y.-C. Chao (Institute of Molecular Biology, Academia Sinica, Nankang, Taipei, Taiwan, ROC)

Takayoshi Ishii, Comparative studies on growth characteristic and competitive ability of a nucleopolyhedrovirus, a granulovirus and an entomopoxvirus in larvae of the smaller tea tortrix, *Adoxophyes* sp. (Lepidoptera: Tortricidae). Co-authors: M. Nakai and Y. Kunimi (Dept. of Applied Biological Science, Faculty of Agriculture, Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan)

Yeon Ho Je, Production of baculovirus polyhedra with a green fluorescence. Co-authors: B. R. Jin, J.Y. Roh, J.H. Chang and S.K. Kang (The Research Center for New Bio-Materials in Agriculture and College of Agriculture & Life Sciences, Seoul National University, Suwon, Korea)

Students received their prizes of 30,000 yen (US\$ 215) at the awards ceremony during the banquet on Thursday night. Congratulations to all of the students for their excellent contributions.



Student winners receive their prizes from President Federici

Social Events: The meetings started with a mixer at the Conference Hall of the Green Hotel Sapporo on Sunday evening. On Tuesday, 19 companions visited the Historical Museum of Hokkaido (Kaitaku Kinenkan) and had a nice lunch in the Palace Hotel.

On Wednesday morning, the 5-K race was held at Makomanai Park near the Green Hotel. It was a fine day to run and walk the official course of the Park.

In the afternoon, 186 registrants were taken to Mt. Tarumae and Shikotsu Lake (Course A: 130 members) and the Noboribetsu Hotspring (Course B: 56 members). At course A, all of the participants climbed to the rim of the Mt. Tarumae and enjoyed a nice view of the Shikotsu Lake and later relaxed in the hot spring bath at the Shikotsu Kanko Hotel. At course B, members took the marvelous big hotspring bath and then walked around Hell Valley. Members of two courses returned to Sapporo Factory of Sapporo Beer Brewery Company and enjoyed a nice dinner.

The banquet took place at the Conference Hall of the Green Hotel Sapporo. Male delegates received Japanese tenugui with ICIP logo, and female delegates each received a "happi". The banquet started with guitar solo by Hirano and followed Japanese traditional Taiko play by women's team of Hobetsu Hana Daiko. Women delegates wearing their happi danced with the members of Taiko team.



Dr. James Harper, Chair of the Founders Lecture Committee, presents awards to the 1998 Founders Honoree, Dr. Karl Maramorosch and Founders Lecturer, Dr. Jun Mitsuhashi

After a lovely dinner, awards were presented to the Founder's Lecturer, an Honoree, Student Competition and 5-K race winners. After the awards presentation ceremony, delegates danced to the music provided by the band Sapporo Yamaha team.

5-K Race Winners: 47 members officially participated in the race with no female for running in the over 35 category.



5-K winners, Nobuhiko Nakajima and Timothy Yoshino approach the finishing line at Makomanai Park

FIRST PLACE

Runner under 35 - male: Nobuhiko Nakajima

Time: 24 minutes 03 seconds.

Runner under 35 - female: Sumiko Koitabashi

Time: 31 minutes 28 seconds.

Runner over 35 -male: Timothy Yoshino

Time: 23 minutes 47 seconds.

Tied walker -male: Basil Arif

and female: Eva Nagi and Doreen Winstanley

Time: 42 minutes 05 seconds.

SECOND PLACE

Runner under 35 - male: Hiroshi Hayashi

Time: 24 minutes 35 seconds.

Runner under 35 - female: Eri Mizuno and Masako Katsube

Time: 34 minutes.

Runner over 35 -male: Mike Brownbridge

Time: 24 minutes 11 seconds.

Walker -male: Takeru Sato

Time: 49 minutes 06 seconds.

Walker -female: Motoko Ikeda

Time: 45 minutes 11 seconds.

THIRD PLACE

Runner under 35 - male: Takeuchi Katsuyosi

Time: 27 minutes 38 seconds.

Runner under 35 - female: Yukari Ikeda

Time: 48 minutes 54 seconds.

Runner over 35 -male: Peter Knell

Time: 24 minutes 54 seconds.

Walker -male: Dara Surendra

Time: 49 minutes 47 seconds.

Walker -female: Satoko Iwahori and Noriko Shirata

Time: 45 minutes 12 seconds.

Additional commendations; Arthur Aronson

Time: 27 minutes 45 seconds.

Corporate Sponsors: The meetings were supported by donations and support from the following:

Hokkaido Government

Sapporo City

Akiyama Foundation

Naito Foundation

Novartis Foundation (Japan) for the Promotion of Sciences

Oversea Companies:

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E.I.DuPont

Mycogen Corporations

Novartis Crop Protection

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Syukokai

Goto Yoshoku Kenkyusho

S.D.S. Biotec

Hokkai Sankyo
Kirin Beer Brewery
Kyowa Hakko Kogyo
Toray Industries
Hokkaido Wako
Shionogi Seiyaku
Nitto Denko
Nakayama Shoji
Beckman
Nissan Chemical Industries
Kubota
Nippon Kayaky
Towa Kagaku
Tomen
Sapporo Beer Brewery

Appreciation is extended to the staff of the Laboratory of Applied Molecular Entomology, Hokkaido University, Local Organizing Committee members, Kinki Nippon Tourist Corporation and EC Corporation.

Toshihiko Iizuka,
Chairman of VIIth ICIP Organizing Committee

SIP Annual Meeting 1999, University of California, Irvine, Irvine, California August 22-29, 1999

Let this serve as an early reminder to mark your calendars for the next annual meeting of the Society, which will take place on the campus of the University of California, Irvine. The UC Irvine campus is located about two miles from the Pacific Ocean close to many popular resort beaches and attractions.

The local organizing committee in conjunction with the program committee is in the process of preparing an exciting scientific program and a variety of social events. The following is a list of some of the symposia currently planned and under development:

Bacteria

Efficacy of Transgenic Plants
Status of Bt Resistance
Effects of Bacterial Toxins on Non-Target Organisms

Bacterial Virulence Factors

Viruses

Viral Genomics
Viral Ecology
Tritrophic Interactions

Microsporidia

Microsporidia of Forest Insects
Ecology of Microsporidia
Utility of Microsporidia as Control Agents

Microbial Control

Impact on Non-Target Organisms
Technology Transfer/How to get products used

Fungi

Fungal Genes useful for Biotechnology

Nematodes

Biology and Use along the Pacific Rim

Diseases of Aquatic Invertebrates

Economic Importance of Baculoviruses
Recent Advances in Invertebrate Immunity

With respect to the social program, there will be the normal Sunday evening Mixer, a Beach Barbecue (Wednesday), and a Banquet (Thursday). The excursion currently being planned for Wednesday afternoon is a trip to the wine country in southern California. Housing accommodations will include dormitories on the UC Irvine campus for those desiring relatively inexpensive housing or in local hotels, of which there are several within a few miles of the campus. A more detailed report on the symposia, social events, and housing arrangements will appear in the next Newsletter.

Brian Federici and Harry Kaya

FROM THE PRESIDENT

I hope all of you had a safe trip back home after the Sapporo Meeting. From the feed-back I have received, it is clear that our VIIth International Colloquium on Invertebrate Pathology and Microbial Control was a great success. We had a very strong scientific program, particularly since the colloquium was combined with the IVth International Conference on *Bacillus thuringiensis*. The meeting attracted over 400 registrants and our social program was also well received and enjoyed by all.

On behalf of SIP, I wish to thank Toshihiko Iizuka and his team for their excellent organization, their time commitments and their efforts to make the Sapporo meeting a success. Our Japanese colleagues had a particularly difficult task, as they went through a nightmare just before the opening of the meeting. They had to look for a new venue, since the facilities originally foreseen went bankrupt. They coped so well with all these problems behind the scene that nothing could be felt by the participants of the conference. I think that this is the biggest compliment that can be given to an organizer of a meeting.

For those of you who, unfortunately, were not able to attend the Sapporo Meeting, there is the possibility of getting a free copy of the proceedings (you shall only have to come up for the mailing costs) from our new Executive Secretary, Margaret (Peg) Johnson. Meetings Program and Abstracts are going to be dispatched together with the Newsletter.

The meeting in Japan, which was particularly well attended by the Asian members of SIP and which also attracted several new members to SIP within this area, once again confirmed the success of the policy of the SIP's policy to hold its meetings in all parts of the world where there is activity in invertebrate pathology and where we have active or potential members. For scientific work, communication with colleagues working in the same field of research is mandatory.

With its meetings, SIP creates a forum for this kind of activity, especially in providing contacts. But in times of limited travel funds, there are other means of communication. In recognition, SIP has expanded its activities in the Internet. I would really like to

encourage you to visit our web site. We are now in the very lucky situation that our homepage is administered by Peg Johnson, who at the same time is our Executive Secretary. The flow of information is, therefore, very short and the homepage is always up to date. Therefore, if you wish to contact one of SIP's officers, I recommend that instead of using the address or phone number in your notebook - which is probably not up to date - go into our homepage, where you will find the most recent information.

In order to make the SIP homepage a success and a useful tool for communication, we also need your assistance. Please communicate topics, which you think are of interest to other members of SIP, to Peg Johnson. Our web site will be a tool for the distribution of information in addition to the Newsletter, which we will continue to publish in a printed form, since not all of our members have access to the World Wide Web.

I have already appointed the members of the Nominating Committee, entrusted with the task of nominating candidates willing to stand for election to SIP office. The committee consists of Wendy Gelernter (Chair), Bob Granados, Isabelle Thiery and Toshi Iizuka. I encourage you to contact any of these individuals and provide them with names of persons who you feel would be excellent nominees for office. The recommendations of the committee can then be discussed at our next annual meeting in Irvine, California.

Until the Irvine meeting takes place, we also hope to put a process to an end which has kept SIP busy for many years: the amendment of our constitution and bylaws. Brian Federici, our past President, has volunteered to give the bylaws a final kick together with the Ad Hoc Bylaws Committee (Elizabeth Davidson, James Fuxa, Donald Roberts, John Vandenberg), making them ready for approval by the members at the next annual meeting. You will find their proposals for the changes of the bylaws in this issue of the Newsletter.

Juerg Huber

EDITORIAL

The High Cost of Scientific Publications; Are We Pricing Ourselves out of the Market?

It is evident that the increased interest in Invertebrate Pathology and Microbial Control is reflected in the number of journals, journal articles and books being published in this area. For instance, from the "Books published since 1981" compiled by Mauro Martignoni (SIP Newsletter Vol. 30, No. 2, Suppl. 2), it can be seen that between 1981 and 1987, on average, only 3.3 books in the area of Invertebrate Pathology were published each year. Since then, the average has jumped to 6 books per year over the last decade. And by the number of new books being announced in recent issues in the SIP Newsletter, it is apparent that this trend is continuing.

On the journal scene, we now have numerous journals to choose from, many with little or no page charges. Several new journals were launched this decade (e.g. Biological Control, Biocontrol Science and Technology) and some have even changed their name in order to become more attractive to microbial control (i.e., BioControl).

However, there is a very disturbing trend. Costs of journal subscriptions have risen an average of 10% per year, well higher than the inflation rate. This, coupled with reductions in library budgets, and severe currency devaluations in many countries, has resulted in a crisis situation. For instance, at the Lethbridge Research Centre, we have reduced the number of subscriptions to journals by 25 this year (thankfully none of the journals that I desperately rely on were cut at least this year!) and we have been without a book budget for several years now. Under such conditions, it can be easily concluded that the market for scientific books and journals is rapidly shrinking.

It is especially discouraging to learn that the book on Formulations that we have all been anxiously been waiting for has just doubled in price, from its original price of £75.00 as announced in the June Newsletter to £ 192.00 (see page 43). One would expect that with electronic printing, allowing multiple printings at minimal extra costs, thereby alleviating the need for expensive inventories, book prices should actually be

coming down instead of rising. But this is not the case.

It is encouraging to learn that more and more full-text journal articles are now becoming available on the internet, as per the article by C. S. Prakash on page 53. Although the price for access to these journals may remain steep, at least this is a step in the right direction.

What else can be done? I believe that, unless commercial publishing houses immediately respond to the crisis at hand and drastically reduce their prices for journal subscriptions, books and internet access, it will be the responsibility of organizations such as ours to step in. Many scientific societies have published non-profit journals for many years. Some of them have been badly burned in the process. But many others have reaped the benefits.

The bottom line is that it is our responsibility to ensure that our science is made available to the scientific community at a reasonable cost. I would urge all future authors to ensure that a firm and reasonable price be set with the publisher, before committing oneself to writing a book or book chapter. Consideration should also be given to the price and availability of a journal when choosing a journal for submission of our manuscripts. Letters to the Editor are welcome.

Mark S. Goettel

BUSINESS MEETING MINUTES AUGUST 27, 1998, SAPPORO, HOKKAIDO, JAPAN

The **SIP Business Meeting** was convened at 10:25 by President Federici. Approximately 90 members were present. Summaries of reports are provided below.

REPORTS

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

- * SIP brochures are now available. Members will each receive one with their Newsletter.

- * Minutes from the 1997 Business Meeting were approved.

* The financial situation has improved with a positive balance thanks to the Banff meeting.

* At present, there are approximately 850 members of SIP with a decrease in membership from western Europe but increases of approx. 1-2% from Australia and Asia.

* The Divisions are strong with approximately 200 members in each Division. A new Division for Fungi was approved at the Council Meeting.

* A minute of silence was observed in memory of the three members of SIP who passed away during the past year.

* Thanks were extended to Dr. Iizuka and others for organizing a great meeting this year.

The Treasurer, Ted Andreadis, was not present so Brian Federici and Peg Johnson both presented information from the **Treasurer's Report**. The net worth of the society is presently \$143,000 with an operating budget of \$50,000 per year. The society is in sound financial health, especially after the profits from the Banff meeting. The annual dues cover about \$23,600, which is only half of the operating expenses. Therefore, because dues are now quite low, in the next few years members should anticipate a dues increase to better cover operating expenses as well as help with invited speakers and other miscellaneous costs.

The largest change is that management services have been completed revamped. The charge from FASEB was increasing at 20% per year with about \$17,000 charged in the last year, so Brian Federici decided to search for a better alternative. The American Mosquito Control Board was contacted, and they estimated a charge of \$7200 per year. Allen Press was also contacted and they submitted an extensive estimate totaling ca. \$13,500 per year. Margaret (Peg) Johnson also submitted a bid for \$600 per month. Her bid was chosen with an expected savings of \$10,000-13,000 per year. She will attend society meetings and will act as liaison with the treasurer and web page. Her position is now named Executive Secretary. As another money-saving change, the newsletter printer has been changed.

A new committee has been formed called the **Database and Website Committee**. This committee will concentrate on contents of the society website as well as considering the security of the site. The chair

is David Onstad and members include James Becnel (from the Membership Committee), Mark Goettel, Richard Humber, and Peg Johnson.

The **Founder's Lecture Committee** has been changed and now includes Dudley Pinnock (chair) with Harry Kaya, Max Bergoin, and David Ellar.

The Constitution and By-Laws have not been changed for 30 years. Extensive changes have been proposed which were reviewed by Council. These will be published in the Fall Newsletter, and will be discussed at the business meeting next year. Highlights of changes include adding chairs of the Divisions to Council as non-voting participants, Division Chairs will be responsible for the scientific program of meetings, and By-Laws of Divisions will be more uniform. To approve these changes for the Constitution, a written ballot will require 66.7% approval and to approve By-Laws changes, a vote of 60% will be required at the Business Meeting next year.

Dr. Toshi Iizuka, principal organizer of the **Sapporo Meeting**, reported that 170 SIP members attended the meeting along with 140 non-members, 65 students, and 35 companions for a total of 410 attendees. There were 307 presentations and 121 posters.

Just Vlak, chair of the **Site Selection and Meeting Board**, provided the following schedule of meetings:

1999	Irvine, California	Aug. 22-27
	B. Federici/H. Kaya	
2000	Guanajuato, Mexico	Aug. 13-18
	J. Ibarra	
	(timing was chosen so that this meeting immediately precedes the International Congress)	
2001	Haifa, Israel	2nd half of August
	M. Broza	
2002	Iguassu Falls, Brazil	August
	F. Moscardi	
2003	Burlington, VT has been proposed by J. Burand for August.	
2004	possibly in Europe	

Brian Federici and Harry Kaya will co-chair the organizing committee for the Irvine Meeting. Program

Committee will include Sarjeet Gill, John Trumble, and Mir Mulla as well as Division Heads. Dr. Federici expressed concern about accommodations if attendees total more than 400. The meeting will be held on the University of California, Irvine campus at the Beckman Center of the National Academy of Sciences. Univ. CA, Irvine is an especially appropriate location for an SIP meeting because Dr. E. A. Steinhaus helped organize the biological sciences on this campus and one hall is named after him.

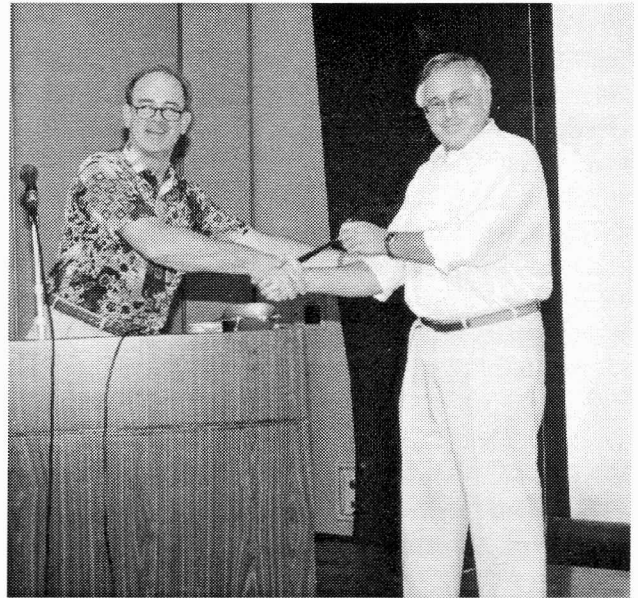
Accommodations will be possible in about 10 hotels (within driving distance) at \$70-120/night and on campus in dormitories for \$45/night. Access to airports is excellent, the site is within 3-4 km of the ocean and there are many attractions in the area (to be described in the next Newsletter). The meeting registration has been estimated at \$250-275 for members, \$175 for students, and \$100 for companions.

Jorge Ibarra will organize the meetings in Guanajuato in the year 2000. This city is a beautiful old colonial city in the center of Mexico at 1600 m above sea level (so summers are cooler than other parts of Mexico). Whether the meetings will be held in a conference center or in a hotel has not yet been decided. Hotel prices are very reasonable at \$32-61/night and this city has an international airport for easy access.

Newsletter costs have decreased from \$18/member last year to \$16/member this year largely due to a 50% reduction in the cost of printing. Members are urged to renew membership because a new membership directory will be published this next year. Don Dean asked Council to consider putting the Newsletter on the website to reduce printing costs.

The **Journal** editor, Carole Reinisch, has stepped down and Brian Federici will be the next editor. He plans to expand the number of Associate Editors and add an Editorial Board of 16-20 members. He would like to have Academic Press put more funding into JIP and speed up the publication process to 6-9 months from submission to publication. At present, the rejection rate for manuscripts is 50%. He would also like the review process to take place on the Internet. The society was reminded that supplemental issues (e.g., proceedings of symposia) can be published (net

\$100/page including 33% from Council, 33% from Academic Press, and 33% from authors).



Brian Federici passes the gavel to Juerg Huber at the 1998 Business Meeting in Sapporo

New Business

Juerg Huber was welcomed as the new President. He hopes to improve meeting attendance as well as continue coordinating SIP meetings with meetings of other organizations (e.g., International Conference on Bt). He looks forward to working with the new Executive Secretary and improving the website and warns of a possible dues increase in the future.

The new Executive Secretary, Peg Johnson, was introduced and she gave a brief overview of her duties, including collecting dues, managing the membership database, managing bank accounts and the budget, and mailing to members. She can be contacted by e-mail, fax, or phone, as in previous membership directories and/or the Newsletter.

Two resolutions were adopted by Council:

* Recognize and celebrate the fortieth (40th) anniversary of the convening in August 1958 of the 1st International Conference on Insect Pathology and Biological Control with the leadership of Professor Jaroslav Weiser in Prague, Czechoslovakia.

* Recognize and celebrate the thirtieth (30th) anniversary of the 1st meeting of the Society for Invertebrate Pathology in August 1968 with the leadership of Professor Edward A. Steinhaus, at the Ohio State University, Columbus, Ohio, U.S.A.

The meeting was adjourned at 12 noon.

Respectfully submitted,
Ann Hajek, Secretary

DIVISION MINUTES

Microbial Control Division Business Meeting 8:30 p.m., 24 August 1998, Green Hotel, Sapporo, Japan

Chairman John Vandenberg brought the meeting to order at 8:35 p.m. after reviewing the agenda. Members attending: 54 at the start of the meeting; 59 mid-meeting and 64 at the end of the meeting. A motion to accept the minutes without reading was made by Clay McCoy and seconded by Ann Hajek. The vote was unanimous in favor of the motion. The minutes from last year's meeting are posted on the SIP home page. Chairman Vandenberg proposed a moment of silence in memory of Norm Dubois.

Student travel awards: John thanked the student award committee for their efforts in selecting the students that were supported with travel grants. Awards went to Sami Elawad and Liga Jankevica.

Discussion regarding the student awards for 1999: The awards could have been advertised a little earlier in order to have more nominees before the October deadline. John appointed the 1999 award committee: J. Pell Chair, R. Pereira, L. Lacey, the new member at large. There will be two \$500 awards to travel to meeting in Irvine.



Liga Jankevica and Sami Elawud receive their student travel awards from the Microbial Control Division.

Support for an Educational Video (revisited): Harry Kaya proposed that MCD support production of a nematode training video with \$2,000 or what can be spared. The video will be used to train and inform extension personnel and others on how to utilize insecticidal nematodes. The video should be ready by March 1999 for distribution worldwide.

Wendy Gelernter asked how much money MCD has. Chair Vandenberg said approximately \$10,000. We receive annual dues from approximately 385 members, but \$1,000/year will be used for student awards. Mark Goettel inquired if MCD will get credit and who are the other supporters? Dr. Kaya said that SARA gave \$30,000. Ann Hajek moved that MCD support the video and Mark Goettel seconded the motion. Thirty MCD members voted for the motion and 0 against.

Wendy Gelernter moved that MCD support the video production with \$1,000, Mark Goettel seconded the motion. Mark said MCD has other items like directory to pay for. The vote for the motion was unanimous. Chair Vandenberg requested a showing of the video at next business meeting.

Election of new Member-at-Large: Names of nominees for this position were posted in the Hotel lobby 24 h before the Division meeting. The nominees are: Michael Brownbridge and Mitsuaki Shimazu. Harry Kaya moved that nominations be closed. Mike Klein seconded the motion. As the candidates left the room for a vote by the members, Ann Hajek spoke about M. Shimazu and his professional background. Dr. Brownbridge was elected.

New officer slate for 1999: Chair Vandenberg appointed Lawrence Lacey as chair of the nominations committee for next year's nominations for chair-elect, secretary treasurer, and two members at large.

Various announcements: Dr. Vandenberg spoke on the impending proposed changes in the Society's by-laws and their impact on the Division. If approved as proposed, there will be new, standardized by-laws for Divisions. Also there will be a role for Division chairs on the program committee. Chairs for each division would also serve as *ex-officio* officers of the Society and would attend Executive Council meetings.

John announced that Peg Johnson will be distributing the **slide atlas**. There are 150 slide sets with Peg.

The chair also announced that **new books** in insect pathology and microbial control were in preparation or soon to be released: Denis Burges announced that his book on *Formulation of Microbial Pesticides* will be published by Kluwer Academic Publishers on September 14 this year and will cost \$302. He also announced that the *Insecticide Manual* will include microbials (1½ - 2 pages per organism) and will be available at the Brighton meeting.

Lawrence Lacey described the work in progress on a *Field Manual for the Application and Evaluation of Entomopathogens* which will be published by Kluwer Academic Publishers in 1999.

Mark Goettel spoke about the production of a directory of specialists in development of fungi in microbial control. If members are working with fungi, they were asked to contact Tariq Butt for forms.

John Vandenberg reminded the members about the Microbial Control News section of the SIP Newsletter. Members with items of interest were asked to send the information to the Newsletter editors, Mark Goettel or Jimmy Becnel.

John asked that MCD members with ideas for the Founders lectures contact Jim Harper or members of Founders Lecture Committee.

Directory of Industries 2nd edition: Mark Goettel circulated a draft copy of the Directory of Industries and asked for any updates. The cost estimate for printing 410 copies is \$520. One copy will be free for MCD members. It would cost \$1,249 for copies for all members. These could be mailed separately or sent with the Newsletter. Other options include posting the Directory on the SIP website.

Discussion on the options followed. Clay McCoy and Hugh Evans suggested that we put it on the home page. Paresh Shah said that there have been no response to the questionnaire on web site. Trevor Jackson suggested that it be posted on website and advertised in Newsletter and a hard copy could be sent on request. Denis Burges urged that directory be mailed to all members of MCD as a form of advertising.

Wendy Gelernter asked for the recommendations of Mark and Paresh. Paresh suggested that we send it with the Newsletter and list it on website. Mark Goettel's recommendation is that we send it to MCD members and offer to sell to non-MCD members, undecided on whether to post it on the web.

Chair Vandenberg asked that we deal with the two issues separately. 1) Denis Burges moved that we send hard copies with the Newsletter with some extras printed for sale. The motion seconded by Chris Lomer. The motion carried unanimously. 2) Wendy Gelernter moved we put the Directory on the web, Ann Hajek seconded the motion. It carried unanimously.

Symposium and workshop ideas for the 1999 program: John asked that members contact the chair regarding symposium and workshop ideas for 1999. Denis Burges suggested we have more comprehensive

presentations from industry. Chris Lomer suggested that industry could respond with what they want us to be researching. Pat Vail suggested that we need to dissect the major obstacles to industry (for example persistence of microbials. What is the evolution of product development and what has caused some not to make it.

Harry Kaya suggested a symposium on our goals and our obstacles. Tommy Wada proposed a comparison between product registration in the U. S. with other developed countries. Judy Pell offered that a symposium on environmental effects on persistence of microbials would be good to present at the same time as a workshop on products.

John asked that Trevor Jackson, Chris Lomer, Denis Burges, Pat Vail, Wendy Gelernter, Hugh Evans, and Tommy Wada, get together to generate some ideas.

John reminded all to attend the MCD symposium on "Microbial Insecticides, Novelty or Necessity?" chaired by Hugh Evans and Wendy Gelernter.

Since there was no additional new business, Keith Jones moved and Hugh Evans seconded that the meeting be closed.

Chair Vandenberg opened the workshop on new microbial control product developments at 9:45 p.m. The following (with affiliation in parenthesis) presented information on new products: Tom Currier (Novartis); C. Y. Chen (Thermo Trilogy); Sue McIntosh (Agrevo); Andrew Rath (Abbott Lab); Nikolai Van Beek (Dupont); Marta Dissevelt (Koppert); Jim Kerwin (Agriquest); Santoshi Yamanaka (SDS Biotech); (Kabota); Tommy Wada (Tomen).

Respectfully submitted,
Lawrence A. Lacey
Chair-elect, MCD
Acting Secretary

Microsporidia Division Minutes

The annual business meeting of the Division on Microsporidia was held at 8:30 pm on August 24,

1998 at the 31st Annual Meeting of the Society for Invertebrate Pathology in Sapporo, Japan. Nine members were present. The chair, Leellen Solter could not attend the meeting. The vice-chair, Andreas Linde, acted in her place. After Andreas Linde summarized minutes from the 1997 business meeting, Margaret Johnson motioned that they be accepted and Paul Van Poppelen seconded the motion. The motion was unanimously accepted.

Old Business: The Division sponsored a workshop, "Microsporidia – Current Status as a Biological Control Agent" organized by Andreas Linde at the 1997 Banff meeting. Dr. Linde discussed the effectiveness of the workshop as roundtable discussion. He expressed that this was useful format and it is important to discuss microsporidia as long term biocontrol agents. Although this worked well in the previous year, he suggested that a lecture format is a better idea for this year's workshop. In Sapporo, a workshop was organized by Andreas Linde and Takeshi Kawarabata on "Microsporidian Cell Biology".

Andreas Linde announced that the number of divisional members is still unknown because of problems with getting the membership list from FASEB in the past. The Executive Secretary, Margaret Johnson, reported that presently the division has 110 members but this number is uncertain. Because of new management services, we should have a better idea of the correct number of division members after the 1999 membership renewal. The Division treasury balance was previously reported to be \$1,210 for 1997 and has increased to \$1,473 in 1998.

During the 1997 meeting, Wayne Brooks presented amendments to the Division by-laws. Mail ballots were sent out to all division members and a total 30 were returned to Leellen Solter. The changes were approved unanimously. Andreas Linde reviewed the changes to the by-laws, which now reflect the by-laws of the Society more closely.

New Business: An election of new officers was held. The chair, Leellen Solter, appointed a nomination committee consisting of Ted Andreadis, Carlos Lange, and Gernot Hock.

The slate of candidates consisted of:

Chair: Andreas Linde

Vice-Chair: James Becnel

Secretary: Margaret Johnson

Trustees: Ingemar Fries and Louis Malone

Dr. Linde asked for any additional nominations from floor. There were no additional nominations. Paul Van Poppelen motioned that we accept the nominees. Margaret Johnson seconded the motion. All 9 attendees approved the nominees.

Suggestions were solicited for topics for a workshop and symposia for the 1999 meeting in Irvine, California. Paul Van Poppelen mentioned that the division should sponsor an introduction to microsporidia to stimulate interest due to waning membership. He suggested that we set up a table with information and demonstrations to attract interest in the division. The SIP program committee, consisting of the president and all division chairs, met Friday morning and discussed Paul Van Poppelen's suggestions to have a "Microsporidia exhibition" at the meeting in Irvine. There were no objections to this idea.

Paul Van Poppelen also suggested that we should use our funds to stimulate membership and honor retirees. A cash award, in the name of a retired scientist, would be given to a notable scientist who has contributed to the field of microsporidiology. This idea was discussed among the participants. The chair and vice-chair will discuss a possible nominating committee for this award.

Andreas Linde suggested that the next workshop should be based on working groups or areas such as microsporidia of Gypsy Moth or the use of microsporidia as biocontrol in forestry and agriculture. James Becnel will propose and organize the workshop in Irvine, California in 1999. Members of the Division are encouraged to suggest workshop topics to the organizer of next year's workshop, James Becnel (jbecnel@gainesville.usda.ufl.edu).

Margaret Johnson solicited information for the web site. This is an excellent way to provide information to all members and scientists around the world. Please send contributions to her at sipinfo@gator.net.

Andreas Linde concluded the meeting by thanking Leellen Solter for her excellent service as chair of the division. Margaret Johnson moved to adjourn the meeting and Paul Van Poppelen seconded the motion. The motion to end the business meeting was carried unanimously.

Respectfully submitted,
Margaret Johnson
Secretary, Microsporidia Division

Virus Division Minutes

Twenty-one members attended the Virus Division meeting on Tuesday August 25, 1998. The membership stands at 181 persons as of the end of August and the balance is US\$ 622. Initiatives were requested to increase the financial balance. Suggestions were made to give out student awards and to invite symposium speakers. The reports of the Secretary/Treasurer were accepted. A revolving list of symposium topics was generated for the next SIP meeting(s). Also suggestions for Founders Lecturer's and honorees were collected. New officers were elected (Ian Smith, England, vice-chair, Johannes Jehle, Germany, secretary/treasurer, Doreen Winstanley, England, member-at-large). Peter Krell (Canada) is chairperson and Nikolai van Beek (United States) completes the slate of present officers. Suzanne Thiem, United States (chair), Just Vlak, the Netherlands (secretary/treasurer) and Hisanori Bando, Japan (member-at-large) rotated off.

Just M. Vlak,
Secretary/Treasurer, Virus Division

Bacteria Division

The retiring Bacteria Division Chair André Klier gave a report on the status and activities of the Division during the past year. The main role of the Division had been the planning of the IVth International Conference on *Bacillus thuringiensis* in conjunction with the local organizing committee in Sapporo. The total of current Division members was 146 and the membership funds available totaled \$494. Following the recent transfer from FASEB of the organisation of the Society, a

separate mailing list and e-mail address list was now available for the Division and could be used for rapid communications to Division members between annual meetings.

Professor Klier introduced David Ellar as the new Chair for 1998/99. The SIP President Brian Federici told the meeting of the changes involving the Divisions that had been agreed by the SIP Council. In particular he drew attention to the fact that Division Chairs would now be Members of Council and would be expected to play a major role- with the local organizing committee - in planning the SIP meeting Programme each year. The Constitutions of Divisions would be reviewed and updated where necessary. The attention of the meeting was drawn to the need for an election of Division Officers. For this purpose a notice of the election should be posted 24 hours previously. Dr Alejandro Bravo had agreed to appointment as Vice-Chair for 1998/9.

The remainder of the meeting focused on a discussion of possible bacterial topics for the 1999 meeting in California. Four symposium topics were supported strongly and the Chair undertook to attempt to develop these themes with the assistance of Division members. These topics were: "The Efficacy of Transgenic crops transformed with *Bacillus thuringiensis*," "The Ecobiology of Entomopathogenic Bacteria," "New Technologies for the Development of *Bacillus thuringiensis* toxins," and "Resistance to *Bacillus thuringiensis* toxins." The strong view was expressed that in the symposium dealing with the efficacy of transgenic crops in the field, speakers should include a broad representation from producers, growers and field entomologists.

The meeting also discussed the possibility that the Division might consider formulating a statement on behalf of the Society on the safety of transgenic plants.

Dr David J. Ellar,
Chair, Bacteria Division

ANNUAL REPORTS

President's Report 1998

As I write this report, the Society finds itself in very good shape, with slightly more than 800 members worldwide, and a strong financial balance. During the past year, we changed our management services provider, and made progress on revisions to the Constitution and Bylaws. Our annual meetings continue to have strong scientific and social programs, and to be well attended. I summarize here the key events of the past year, and identify items that will need consideration during 1998/1999.

Financial Status. Our financial status remains strong, with a balance at the end of the fiscal year, April 30, 1998, of \$151,416. This is an increase of \$5,324 over 1997, due largely to a surplus generated by the Banff meeting. At last year's Council meeting it was decided not to raise dues owing to our substantial positive balance. However, annual costs of running the Society are not supported by dues, and a modest dues increase should be considered within the next few years. This would permit us to provide partial support for invited speakers and students at annual meetings. Beginning this year, as a result of changing our management services provider, we will realize a savings of about \$10,000 per year. Still our dues remain low, and an increase of \$10-20 would not be unreasonable, and would provide us with greater financial flexibility.

Membership. Membership remains strong, though the number of dues-paying members slipped by about 5% this past year. The reasons for this are not clear, but the reduction appears to be due to retirements, changes in interest, and failure to pay dues on time. As I noted last year, many members have expressed to me the view that they like the moderate size of the Society because the annual meetings remain of a size that provides focus as well as many opportunities for interactions with colleagues. Thus, I think our objective should be to maintain a membership size of 800 to 1,000 members. As we are now near the low end of this number, we should undertake a campaign to increase membership during the next year.

Annual Meetings. The Banff meeting was an extraordinary success, financially, scientifically, and

socially. Mark Goettel and his colleagues did an outstanding job, and even managed to arrange for excellent weather, aside from generating a surplus of more than \$20,000. This is one of the reasons we do not have to consider a dues increase at this time.

The Sapporo meeting is also on its way to being very successful, thanks to Toshi Iizuka and his colleagues. Current registrations are running a little over 360, and the diversity and depth of the abstracts indicates the scientific program will be excellent. When we first began planning this meeting, the Yen stood at 80 to the \$ U.S., which gave many of us serious cause for concern. However, the drop in the value of the Yen by approximately 40% relative to most hard currencies has made the cost of the meeting very reasonable.

Next year's annual meeting will be held at the University of California, Irvine in southern California, and the 2000 meeting at Guanajuato, Mexico. The planning for both is well underway. As will be discussed at the Sapporo Council meeting, for upcoming meetings, we will be returning more fully to placing control of the scientific program in the hands of a Scientific Program Committee, with most of the input coming from Division Chairs.

Divisions. We now have four Divisions, with two others in the planning stages. These are Microbial Control (383 members), Microsporidia (104), Viruses (181), and Bacteria (195). The two new ones under development are for Fungi and Nematodes.

Management Services. Effective April 1, 1998, with approval of the Council, I awarded our contract for management services to Ms. Margaret Johnson, a SIP member residing at Gainesville, Florida. Ms Johnson will hold the title of Executive Secretary, and will be responsible for the day-to-day management of SIP services. Her initial contract is for a period of five years, and provides for an annual salary of \$7,200 plus expenses.

Prior to awarding the contract to Ms Johnson, the Council considered bids from the American Mosquito Control Association and Allen Management Services. At the last minute, AMCA withdrew its offer, and the bid for similar services from Allen Press was \$6,000 more per year than Ms. Johnson's. Her reasonable bid

and demonstrated experience in maintaining several of the Society's databases made the Council's decision straightforward. Ms Johnson will be at the Sapporo Council meeting to provide an overview of her services.

New Committee. To advise the Society on electronic communications and databases, I appointed a new committee with the tentative title "Database and Website Committee." This committee is being chaired by David Onstad, and has as its current members Ms. M. Johnson (Executive Secretary), Jimmy Becnel (Membership Committee Chair), Mark Goettel (Newsletter Editor), and Richard Humber. Additional members will be added as needed by incoming president Jeurg Huber. The initial mandate I gave the committee is to decide what types of databases the Society should maintain and what types of information and data should be available on the SIP Website.

Constitution and Bylaws. John Vandenberg chaired a committee over the past few years that took on the arduous task of revising the SIP Constitution and Bylaws. We did not get a chance to review these last year owing to a lack of time at the Council meeting, and because John could not be present. However, John will be attending the Sapporo meeting to guide us through the recommendations, and I am hoping we can make decisions regarding these, as well as decisions on some more recent additions suggested for new sections.

I look forward to seeing you all in Sapporo.

Respectfully submitted
Brian Federici
August, 1998

Treasurer's Report

The financial statements for the Society for the fiscal year ended April 30, 1998 are enclosed in Exhibits A (balance sheet), B (revenue and expenses), C (board designated funds), and D (accompanying notes).

Our Treasury is in very good shape with total assets of \$151,416 (Exhibit A). The majority of our assets are currently invested in four certificate of deposits totaling \$102,693 (Note 2, Exhibit D).

Exhibit A

Liabilities:	1997	1998
Accounts Payable	\$6,451	\$8,413
Subscriptions Payable	1,243	0
Total Liabilities	7,694	8,413
Fund Balance:		
Beginning of the Year	154,135	139,073
Current Year Net Income	(15,062)	3,930
End of the Year	139,073	143,003
Total	\$146,767	\$151,416

The Society experienced a \$3,930 gain in 1998 revenues compared to a \$15,062 loss recognized for the fiscal year ended April 30, 1997. By examining the statement of revenue and expense (Exhibit B), it is evident that the net loss of \$15,062 in 1997 can be attributed to the fact that the 1996 Cordoba meeting held during the fiscal year ended April 30, 1997 experienced a loss of \$5,060. By contrast, the society's most recent meeting, held in Banff in 1997, realized a net gain of \$20,861. The success of the Banff meeting when compared to the Cordoba meeting is the primary reason that the society realized an overall net profit for the fiscal year ended April 30, 1998.

The activity of the Board Designated Funds (Divisional and Endowment) is shown in Exhibit C. In addition, I have listed the fund balances in the table below. These figures are the cumulative net incomes for all existing board designated funds from inception through April 30, 1998.

4/30/98 Fund Balances

General and Administrative	\$123,810
Virology	524
Bacteria	464
Microsporidia	1,473
Microbial Control	9,841
Endowment	<u>6,891</u>
Total (See Exhibit A)	\$143,003

As we plan ahead, the most notable item is the society's current fund balance of \$143,003. This number represents the society's approximate net worth and is the most telling number on the face of the financial statements. Considering that the society has total operating expenses of approximately \$50,000 in any one year, a fund balance of \$143,003 should be an adequate cushion to support the society through potential hard times.

Barring any unforeseen losses or catastrophic events, it appears that the society is in sound financial health with a level of fund balance to support the society for many years to come. However, as I indicated last year, it is important to recognize that annual membership dues (\$23,600 in 1998, Exhibit D) only covers approximately half of our annual operating expenses.

Respectfully submitted,

Theodore G. Andreadis

Treasurer

October 19, 1998 July 20, 1998

EXHIBIT B.

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE STATEMENT OF ACTIVITY
FOR THE PERIODS ENDED MAY 1, THROUGH APRIL 31, 1998 AND 1997

	<u>1998 Activity</u>			
		Board		
	General	Designated	Total	Total
<u>REVENUE</u>	<u>Fund</u>	<u>Funds</u>	<u>1998</u>	<u>1997</u>
		<u>(Schedule 1)</u>		
Slide Sales	\$2,065	\$0	\$2,065	\$0
Membership Dues (Note 1)	22,172	1,488	23,660	26,085
Annual Meeting Income	20,861	0	20,861	0
Contributions	1,285	282	1,567	641
Credit Card Handling Fees	44	0	44	92
Publication Handling Fees	333	0	333	492
Interest (Note 2)	5,848	543	6,391	6,860
Miscellaneous Income	514	0	514	237
Total Revenue	53,122	2,313	55,435	34,407
 <u>EXPENSE</u>				
Mailing of Dues Notices and Other	2,732	47	2,779	2,716
Program and Abstracts	7,165	0	7,165	13,643
Newsletter	10,679	0	10,679	9,330
Directory	3,285	0	3,285	0
Travel	0	1,000	1,000	1,623
Net Seed Money- Cordoba Meeting	0	0	0	5,060
Supplies and Duplicating	1,675	0	1,675	868
Supplies for Slide Production	7,283	0	7,283	0
Accounting Services	3,300	0	3,300	3,100
Secretariat	5,100	0	5,100	3,300
Dues Processing Fees (Note 3)	6,251	0	6,251	5,638
Telephone	152	0	152	201
Contracted Services (Note 4)	0	0	0	1,325
Awards	500	0	500	500
Credit Card Charges	1,372	0	1,372	1,340
Miscellaneous	964	0	964	825
Total Expense	50,458	1,047	51,505	49,469
Net Revenue Before Fund Transfers	2,664	1,266	3,930	(15,062)
Endowment Fund Transfer	240	(240)	0	0
Net Revenue After Fund Transfers	\$2,904	\$1,026	\$3,930	(\$15,062)

EXHIBIT C.

**SOCIETY FOR INVERTEBRATE PATHOLOGY BOARD DESIGNATED FUND REVENUE
AND EXPENSE
FOR THE PERIOD ENDED MAY 1, THROUGH APRIL 31, 1998**

Schedule 1

<u>REVENUE</u>	1998 Board Designated					<u>Total</u>
	<u>Virology</u>	<u>Bacteria</u>	<u>Microsporida</u>	<u>Microbial Control</u>	<u>Endowment</u>	
Membership Dues	\$264	\$222	\$310	\$692	\$0	\$1,488
Contributions	0	0	0	0	282	282
Interest Income	0	0	0	253	290	543
Total Revenue	264	222	310	945	572	2,313
<u>EXPENSE</u>						
Travel to Workshop	0	0	0	1,000	0	1,000
Addressing	0	0	47	0	0	47
Total Expense	0	0	47	1,000	0	1,047
Net Revenue Before Fund Transfers	264	222	263	(55)	572	1,266
Fund Transfers	0	0	0	0	(240)	(240)
Net Revenue After Fund Transfers	\$264	\$222	\$263	(\$55)	\$332	\$1,026

EXHIBIT D

SOCIETY FOR INVERTEBRATE PATHOLOGY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEARS ENDED APRIL 30, 1998 AND 1997

	<u>1997</u>	<u>1998</u>
Full Member (752@\$30; 693@\$30)	\$22,560	\$20,790
Student Member (127@\$15; 92@\$15)	1,905	1,380
Microsporidia Member (155@\$2; 155@\$2)	310	310
Virology (130@\$2; 132@\$2)	260	264
Bacteria (121@\$2; 111@\$2)	242	222
Microbial Member (372@\$2; 346@\$2)	744	692
Miscellaneous Prior Year Amounts	64	2
	<u>\$26,085</u>	<u>\$23,660</u>

Investments owned by SIP at April 30, 1998:

	CD #0768358035	CD #0768354404	CD #0768801231	CD #0768804931	Total
Society Operations:					
Cost	\$22,058	\$29,077	\$28,886	\$11,576	\$91,597
Maturity Date	10/6/1998	11/23/1998	11/20/1998	8/3/1998	-
Interest Rate	5.20%	5.20%	5.00%	5.00%	-
Endowment Fund:					
Cost	-	-	\$5,783	-	\$5,783
Maturity Date	-	-	11/20/1998	-	-
Interest Rate	-	-	5.00%	-	-
Microbial Control:					
Cost	-	-	-	\$5,313	\$5,313
Maturity Date	-	-	-	8/3/1998	-
Interest Rate	-	-	-	5.00%	-
Total Certificates	\$22,058	\$29,077	\$34,669	\$16,889	\$102,693

Year ended April 30, 1997:

1,095 members in database @ \$4.50=	\$4,927
106 optional journals @ \$1.30=	138
716 division dues @ \$.80=	573
Total	\$5,638

Year ended April 30, 1998:

1,145 members in database @ \$4.90=	\$5,610
102 optional journals @ \$1.30=	133
635 division dues @ \$.80=	508
Total	\$6,251

"Contracted Services" incurred for the fiscal year ended April 30, 1997 consisted of design work done on the membership brochure.

COMMITTEE REPORTS

Report of the Meetings Board Committee

The Meetings Board Committee, consisting of Just M. Vlak (chair) and Yoshifumi Hashimoto and Mike J. Adang (members-at-large), selects and nominates sites for the annual meetings of the SIP, and seeks approval of these from the SIP Council. Furthermore, the Meetings Board Committee provides support to future organizers of annual meetings. The Meetings Board was very pleased with the organization of the 7th International Colloquium on Invertebrate Pathology and Microbial Control in Sapporo, Japan, this August and compliments Toshi Iizuka, as chairman, and his team for perfect organization of this meeting.

The 33rd SIP Annual Meeting in Mexico in the year 2000 was formally approved by the SIP Council and J.E. Ibarra was appointed as principle organizer. The nominations for Israel (34th SIP Annual meeting) and Brasil (International Colloquium) were approved by the Council. The 33rd Annual Meeting (Mexico) and ICIP2002 (Brasil) will be in conjunction with the International Colloquium on *Bacillus thuringiensis*. The committee is seeking a site to hold the 2004 meeting somewhere in Europe.

A listing of the upcoming meeting venues and dates is presented in the Business Minutes Meetings on page ** in this Newsletter.

The Divisions of SIP will have a prominent role in the organization of the scientific program. The Meetings Board Committee will maintain its policy of having an international spread of future SIP meetings to serve its membership around the world.

Just M. Vlak, Chair

Newsletter Report

Three issues of the Newsletter comprising a total of 132 pages were produced in the 1997-98 year. In addition to 88 pages of Newsletter text, there were 4 supplements comprising 44 pages. The first supplement provided slide atlas order forms and directory questionnaires and a second supplement

provided meeting information and registration packages. The third supplement was a Sapporo Meetings Program and the forth was a compilation by Mauro Martignoni of books published since 1981.

Text was prepared in Lethbridge and printed by FASEB in Maryland for the first 2 issues and in Gainesville for the last issue. Newsletters were mailed to U.S. members using the U.S. Postal Service and to other countries using Quick International.

We are grateful to all members who contributed material to the Newsletter this year, and encourage any member to send news of interest to the Society.

Financial Report, August 1997 - July 1998.

Total cost of Newsletter (3 issues): \$13,064

Cost per member based on 798 members: \$16.37

	Nov. Vol 29(3) (52 pp)	Feb. Vol 30(1) (28 pp)	June Vol30(2) (52 pp)*
Expenses at Lethbridge			
Desktop spec.	\$304	\$195	\$169
Stationary/Misc.	<u>66</u>	<u>75</u>	<u>127</u>
Lethbridge Total	370	270	296
Expenses at FASEB/Gainesville			
Printing	\$3,041	\$1,587	\$ 1,657
Processing	256	240	248
US Mailing	436	281	540
Intern'l Mailing	<u>1,178</u>	<u>722</u>	<u>1,942</u>
Total	4,911	2,830	4,387
TOTAL	\$5,281	\$3,100	\$4,683

* June issue was also sent to 182 delinquent members whose payments were in arrears.

Mailing: International mailing has generally improved, although problems still exist. For the October issue, a bulk mailing system for U.S. members will be used with considerable savings expected.

Printing: With the switch from FASEB to the new Executive Secretary in Gainesville, we have also changed printers, which has resulted in almost a 50%

reduction in printing costs. In addition, since the present printer uses printing from disk, we are able to reprint extra copies at minimal charge.

Respectively submitted,
Mark S. Goettel, Newsletter Editor
James J. Becnel, Assistant Newsletter Editor
July, 1998

Endowment Committee Report

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

Through personal contacts and postings, the committee has encouraged the scientific community to nominate colleagues for endowed membership. As a result 12 colleagues were selected for endowed membership in SIP for 1998: two from Mexico and one each from Italy, Romania, Poland, Czech Republic, Brazil, Jordan, Egypt, Malagasy Republic, Russia, and People's Republic of China.

Several of these persons have been endowed for two or even three years and there are several worthy recipients at large. The committee encourages all SIP members to nominate colleagues for endowed membership for 1999. Please e-mail your nomination(s) to <tadp@pop.tamu.edu>.

The committee believes that SIP needs to have the fund in something more lucrative than an interest account and to redouble efforts at generating new contributions.

Tad Poprawski, Chair, Stephen Wraight, Nguya Maniania

Report for the Founders' Lecture Committee

Dr. Kees van Frankenhuyzen presented the 1997 Founders' Lecture on August 25 at the 30th Annual

Meeting of the Society for Invertebrate Pathology held at the Banff Center for Conferences, Banff, Alberta, Canada. The lecture was presented during the Monday Plenary Session and honored two individuals as founders in the field of invertebrate pathology, Dr. Tom Angus and Dr. Art Heimpel.

Dr. van Frankenhuyzen is a member of the professional staff at the Forest Pest Management Institute at Sault Ste. Marie, Ontario where both Drs. Heimpel and Angus began their careers. Dr. Frankenhuyzen, in fact, worked under Dr. Angus' direction before Tom's retirement. Dr. van Frankenhuyzen gave a very professional and humorous presentation on the role both honorees played in the early development of *Bacillus thuringiensis* as a microbial pesticide and on the impact their work had on the establishment of applied microbial control as a viable discipline. He then presented an insight into the more recent advances being made through his own work and that of others in the area of microbial control of forest insect pests.

At the Thursday night banquet, Dr. van Frankenhuyzen was presented a check for \$500.00 US and a beautifully engraved and framed certificate. A second certificate was presented in absentia to Dr. Tom Angus, who is now living in Sault Ste. Marie. As in all previous years, the preparation of these certificates was handled by Dr. John Briggs of Columbus, Ohio.

Jim Harper asked all the members present to submit nominees for honoree and lecturer for consideration by future Founders' Lecture Committees. He stated that a request to the entire SIP membership would be placed in the Newsletter as well. The committee has received a number of excellent suggestions and would like to have additional recommendations.

The Committee members selected Dr. Karl Maramorosch of Rutgers University in New Brunswick, New Jersey as the 1998 honoree. Dr. Maramorosch's work on invertebrate cell culture, and its use in studying host pathogen interactions at the cellular level, has allowed advances to be made in many invertebrate pathology research laboratories around the world. Dr. Maramorosch is equally well known for the impact his many edited textbooks and

reference books have had in invertebrate pathology and in virology.

The Lecturer selected for 1998 is Dr. Jun Mitsuhashi, currently at Tokyo University of Agriculture. Dr. Mitsuhashi was working with Dr. Maramorosch at the time that they made important discoveries on improved cell culture media. These improvements allowed him to establish many permanent invertebrate cell lines. During his career he has made many key contributions to invertebrate cell culture and its use in elucidating host/pathogen interactions. The Founders' lecture will be given by Dr. Mitsuhashi at the Opening Plenary Session of the XXXI Annual Meeting of the Society for Invertebrate Pathology, the VIIth International Colloquium on Invertebrate Pathology and Microbial Control, and the IVth International Conference on *Bacillus thuringiensis* at Sapporo, Hokkaido, Japan on August 24, 1998.

1997-98 Founders' Lecture Committee,
Richard Daoust
David Ellar
Tony Sweeney
Jim Harper, Chair

Membership Committee Report

Composition of SIP Membership: This has been a year of transition and we have unresolved discrepancies on membership statistics. The current information available from FASEB indicated a decrease of approximately 7% in overall SIP membership during the past 12 months (see table and chart for breakdown by country and region). Currently, there are 798 members worldwide representing approximately 50 countries. Slightly more than 50% of the members are from outside North America (US, Canada and Mexico); the largest increase in membership was from Australasia with a 21% increase. There was a decrease in all other regions with particularly large erosion of the North American and Western European base.

There are currently 4 Divisions within the SIP and these remain very popular with the membership (see attached chart) with many members belonging to

several divisions. The largest division is Microbial Control followed by Bacteria, Virology and Microsporidia.

Activities during 1997/98:

W. Gelernter and J. Becnel collaborated to develop information for a Society brochure which included sections on History, Objectives, Advantages and Benefits and a number of suggested Mission statements. The project is near completion.

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

Suggested activities for 1998/99:

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

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

Continue to promote increased participation in the annual meetings (the society's number one fundraiser) 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. Consider designating? Country? contacts to help recruit new members.

The Membership Committee: The Membership Committee for 1997/98 consists of Jorge Ibarra, Robert Anderson, Lerry Lacey and James Becnel.

Submitted by James J. Becnel: July 1998

LOCATION	1994	1995	1996	1997	1998	%change
AUSTRIA	3	4	3	4	3	
BELGIUM	6	7	9	8	5	
DENMARK	5	4	7	7	6	
FINLAND	4	4	3	3	2	
FRANCE	43	35	42	37	25	
GREECE	1	1	1	1	1	
IRELAND	2	2	3	3	2	
ITALY	8	16	12	12	10	
NETHERLANDS	10	10	10	15	13	
NORWAY			2	2	2	
PORTUGAL	7	9	7	7	6	
SPAIN	6	8	19	13	8	
SWEDEN	9	7	9	8	7	
SWITZERLAND	8	5	4	7	8	
UNITED KINGDOM	67	66	83	83	81	
GERMANY	11	16	19	17	18	
W. EUROPE	190	194	233	227	197	-15%
UNITED STATES	380	382	357	343	308	-11%
CANADA	49	48	57	63	54	-17%
BULGARIA	0	0	0	0	1	
CZECHOSLOVAKIA	3	5	3	4	3	
HUNGARY	1	7	7	0	0	
POLAND	1	2	3	4	3	
FORMER USSR	1	1	4	5	5	
EASTERN EUROPE	6	15	17	13	11	-18%
EGYPT	4	7	7	5	3	
ISRAEL	11	11	11	12	13	
JORDAN	1	2	2	2	2	
KENYA	2	1	2	3	3	
MADAGASCAR			1	1	0	
NIGER	2	1	0	1	0	
PAKISTAN				1	0	
SOUTH AFRICA	3	4	4	3	3	
WEST AFRICA			3	3	2	
TURKEY	2	2	3	2	1	
ETHIOPIA	0	2	1	0	0	
MID. EAST/AFRICA	25	30	34	33	27	-22%
AUSTRALIA	27	24	29	25	28	
B. SOLOMON IS.	1	1	1	1	0	
CHINA	10	11	11	11	10	
FRENCH POLYNESIA	1	0	0	0	0	
INDIA	1	3	3	3	3	
INDONESIA	1	1	1	1	0	
JAPAN	46	45	49	51	86	
MAURITIUS	1	0	0	0	0	
NEW CALEDONIA				1	1	
NEW ZEALAND	10	9	10	9	5	
PHILLIPINES	3	3	3	3	3	
REUNION	1	0	0	0	0	
W. SAMOA	0	0	0	0	0	
SINGAPORE	4	5	0	1	0	
S. KOREA	2	1	0	0	0	
SRI LANKA	1	0	1	1	1	
KOREA	0	1	3	3	3	
TAIWAN	3	6	14	8	10	
THAILAND	4	3	2	4	5	
AUSTRALASIA	116	113	127	122	155	21%
ARGENTINA	5	5	7	6	7	
BRAZIL	12	15	18	23	22	
COLOMBIA	1	1	1	3	1	
COSTA RICA	2	0	2	2	1	
DOMINICAN REP.	1	1	1	1	1	
MEXICO	8	16	17	16	12	
PERU			1	1	1	
VENEZUELA	1	1	1	1	0	
WEST INDIES				1	1	
S. AMERICA	30	39	48	54	46	-17%
TOTAL ALL	796	821	873	855	798	-7%

Division	Number of Members
Microsporidia	104
Microbial Control	383
Virology	181
Bacteria	195
Total	863

Publications Board Report (1998)

Carol Reinisch has decided to withdraw as Editor-in-Chief of JIP in order to focus her efforts on research. She worked hard and successfully to speed up the review process, enhance the cover, and generally improve the quality of the journal. Brian Federici has been chosen as the new Editor-in-Chief, and officially took over on 1 July 1998. We wish him all the best in his new role! He is considering possible changes in policy, Editorial Board organization, etc., and is working on these ideas with Chuck Crumly *et al.* at Academic Press.

Issues such as the possibility of supplemental issues of JIP have been temporarily put on hold until Brian gets settled in. However, there has been interest expressed by some in having supplemental issues on certain aspects of Bt and/or comparative immunology. The Publications Board plans to follow up on these ideas as soon as possible.

Robert S. Anderson, Chair
Publications Committee

AWARDS

Dr. Harry Kaya, Chair, Department of Nematology, UC-Davis, has been awarded the **1998 C. W. Woodworth Award for the ESA Pacific Branch**. This award annually recognizes a person in the Pacific Branch of the ESA who has made outstanding contributions to entomology during the past decade. Noted as an international leader for the discipline of insect nematology, Dr. Kaya's research has had a tremendous impact on the field of insect pathology and the use of entomopathogenic nematodes in biological control. His work has been a highly interactive balance of basic and applied research, and has ranged from ecological studies to provide answers to "why

nematodes work effectively in some sites or times, yet not others", to how stressors impact the practical utilization of beneficial nematodes. His publication record exceeds 150 referred articles and his 1993 textbook on Insect Pathology, co-authored with Dr. Yoshinori Tanada, is destined to be a classic.



Harry Kaya and James Campbell proudly display their Awards

The **1998 John Henry Comstock Award** for an outstanding graduate student in the Pacific Branch of the Entomological Society of America, went to **Mr. James Campbell**. Mr. Campbell is currently working on a Ph.D. with Dr. Harry Kaya at UC-Davis studying the adaptive value of jumping behavior in entomopathogenic nematodes. He has shown that the frequency of jumping varies between populations and that jumpers respond to host cues, suggesting that this behavior is adapted for host finding. Mr. Campbell completed his B.S. in Biology and M.S. in Entomology at Rutgers University in 1986 and 1997, respectively.

Dr. Yoshinori Tanada, Emeritus Professor of Entomology at the University of California at Berkeley, has been awarded the **Hawaiian Entomological Society's 1998 Lifetime Excellence in Entomology Award**. Dr. Tanada began his career in Hawaii in 1945

and has been a member of the Society for roughly 5 decades. After obtaining his Ph.D. from UC-Berkeley under Dr. Edward Steinhaus he returned to Hawaii and became that State's first insect pathologist. In 1956, he accepted a position as Insect Pathologist at UC-Berkeley where he continued his focus on insect viruses. His work on viruses established his reputation as one of the worlds most respected insect pathologists. Even after his retirement in 1987, he continued to make significant contributions, especially with the publication of a textbook, "Insect Pathology", co-authored with Dr. Harry Kaya. The Hawaiian Entomological Society has been proud of his distinguished career and was honored to give him their highest award.

PROPOSED CHANGES TO THE CONSTITUTION AND BYLAWS

The following is a draft of comprehensive changes in the SIP Constitution, By-Laws, and Division By-Laws. This draft is presented here for comment. A final draft will be presented to SIP members for approval by the following means: 1) Approval of changes in the Constitution requires a two-thirds majority by written ballot; 2) Approval of changes in the By-Laws requires a three-fifths majority by members attending the next Society business meeting. Comments on this draft should be directed to Brian Federici or John Vandenberg.

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CONSTITUTION

<u>ARTICLE I</u>	NAME
<u>ARTICLE II</u>	OBJECTIVES
<u>ARTICLE III</u>	MEMBERS
<u>ARTICLE IV</u>	OFFICERS
<u>ARTICLE V</u>	COUNCIL
<u>ARTICLE VI</u>	ORGANIZATION
<u>ARTICLE VII</u>	FINANCES AND TAXES
<u>ARTICLE VIII</u>	L A N G U A G E A N D INTERPRETATION
<u>ARTICLE IX</u>	AMENDMENTS

ARTICLE I. NAME

This association shall be known as the SOCIETY FOR INVERTEBRATE PATHOLOGY, hereinafter referred to as the SOCIETY.

ARTICLE II. OBJECTIVES

The SOCIETY has been formed and operates exclusively for scientific and educational purposes. The objectives of the SOCIETY shall be the following:

Section 1. The promotion of scientific knowledge of pathology of invertebrate animals and of related subjects through discussions, reports, and publications;

Section 2. The stimulation of scientific investigations and their applications;

Section 3. The planning, organization, and administration of projects for the advancement of scientific knowledge in invertebrate pathology;

Section 4. The improvement of education and of professional qualifications in invertebrate pathology;

Section 5. The promotion of international cooperation in achieving the above objectives.

ARTICLE III. MEMBERS

Section 1. Classes of Members. The SOCIETY shall consist of Full Members (including Charter Members and Founding Members), Student Members, Emeritus Members, Honorary Members, and Sustaining Members, who shall be nominated and elected as provided in the Bylaws.

Section 2. Full Members. Any person interested in the objectives of the SOCIETY and who holds a bachelor's degree from a recognized college or university, or who has had professional training and experience in invertebrate pathology, shall be eligible to become a Full Member.

A person who was elected as a Full Member and who paid dues for the first year of membership before January 1, 1969, for North American members, and January 1, 1971, for members in other parts of the world, is designated as a Charter Member.

A person who was elected as a Full Member and who paid dues for the first year of membership and contributed twenty-one dollars to the SOCIETY before January 1, 1969, for North American members, and January 1, 1971, for members in other parts of the world, is designated as a Founding Member.

Full Members (including Charter Members and Founding Members) are eligible to vote, to hold elective office, and to serve on committees of the SOCIETY.

Section 3. Student Members. Any student who does not hold a doctoral degree or equivalent, who is matriculated in a recognized college or university and who is interested in the objectives of the SOCIETY shall be eligible for election as a Student Member. Student Members **shall have the right to vote and serve on committees of the SOCIETY, but are not eligible to hold elective office.**

Section 4. Emeritus Members. A Full Member in good standing for at least 20 consecutive years, if retired from regular and remunerative professional work, shall be eligible to apply for emeritus status. Charter Members and Founding Members in good standing, if retired from regular and remunerative professional

work, shall be eligible to apply for emeritus status without regard to length of membership. Emeritus Members shall be exempt from the payment of membership dues and shall have all the rights of Full Members.

Section 5. Honorary Members. A person who has made superior contributions to invertebrate pathology or has served the SOCIETY long and with distinction, shall be eligible for nomination as an Honorary Member. Not more than three Honorary Members may be elected during any one year. Honorary membership is the highest recognition the SOCIETY can confer. Honorary Members shall be exempt from the payment of membership dues and meeting registration fees and shall have all the rights of Full Members.

Section 6. Sustaining Members. Any person, commercial company, or organization interested in supporting the objectives of the SOCIETY through an annual donation, shall be eligible to become a Sustaining Member. Sustaining Members shall have the right to vote, but are not eligible to hold elective office nor to serve on committees of the SOCIETY.

Section 7. Geographical Limits. There shall be no geographical restriction on membership.

ARTICLE IV. OFFICERS

Section 1. Elective Officers. The Elective Officers of the SOCIETY shall be a President, Vice President, Secretary, and Treasurer. Each officer shall serve for a term of two years, said term of office to take effect as provided in the Bylaws. With each succeeding term the Vice President's name shall appear on the ballot as the sole nominee for President. Nomination and election of Elective Officers shall be conducted as provided in the Bylaws. No Member may hold a major appointive position while serving a term as an Elective Officer.

Section 2. Duties of Elective Officers. The Elective Officers shall provide the principal leadership and exercise responsible authority within the SOCIETY; they are members of the Council, and of Committees as defined in the Constitution and Bylaws; they report annually to the membership. The general and specific duties of these officers shall be such as outlined in this Section, as prescribed elsewhere by the Constitution

and Bylaws of the SOCIETY, and as assigned by the Council.

The President provides primary leadership for the SOCIETY; presides at sessions of the Council and General Membership Meetings; appoints chairpersons of Committees, and interim elective officers; approves members of Committees; calls meetings of the Officers and of the Council; interprets policy and signs contracts and agreements; and makes other interim appointments and decisions as needed for the operation of the SOCIETY.

The Vice President provides secondary leadership for the SOCIETY; substitutes for the President when needed; prepares to serve as President; and develops the organization and activity tables for the ensuing biennium. A major responsibility of the Vice President shall be to examine critically the main activities of the SOCIETY and to recommend their continuance or discontinuance.

The Secretary is responsible for correspondence; prepares the agenda for sessions of the Council and for General Membership Meetings; prepares minutes of said meetings; and administers and coordinates operations of the SOCIETY cooperatively with the Executive Secretary. **Deletions here**

The Treasurer supervises all aspects of the SOCIETY's finances; provides leadership and works with elected and executive officers to prepare, review, and implement the annual budget; and approves major fiscal transactions.

Section 3. Vacated Office. In the event the office of the President is vacated between elections, it shall be filled by the Vice President. Vacancies occurring in other elective offices shall be filled as provided in the Bylaws.

Section 4. Executive Officers. The SOCIETY may employ an Executive Secretary and other Executive Officers for the management of the SOCIETY's operations. These officers shall be appointed by the Council and under the conditions as specified in the Bylaws. The Executive Secretary shall be a non-voting member of the Council. The Executive Secretary and

other Executive Officers may serve on committees, but without a vote.

ARTICLE V. COUNCIL

Section 1. Council Members. There shall be a Council composed of the following voting members: (i) the four elective Officers of the SOCIETY, (ii) the immediate Past President, and (iii) four Trustees elected from the membership at large. The term of a Trustee shall be four years, two such Trustees being elected each two years. Trustees shall assume office at the same time as the Elective Officers, as provided in the Bylaws. Vacancies occurring among Council Members other than the President shall be filled as provided in the Bylaws; the vacated office of the President shall be filled by the Vice President (ART. IV, Sec. 3).

The President, Vice President, Secretary, and Treasurer of the SOCIETY shall be the President, Vice President, Secretary, and Treasurer, respectively, of the Council.

The Executive Secretary and **Division Chairs** shall be ex officio members of the Council, having privileges of the floor but without the right to vote.

Section 2. Duties of the Council. The Council shall uphold the objectives of the SOCIETY (ART. II) and shall authorize policy matters. The Council shall be the legal representative of the SOCIETY and, as such, it shall have, hold, and administer all the property, funds, and affairs of the SOCIETY in trust for its uses, in conformity with the Constitution and Bylaws, and with the Act of Incorporation of the SOCIETY under the Statutes of the State of Maryland.

The Council may appoint Members of the SOCIETY to serve with any committee, council, congress, or convocation when the interests of the SOCIETY demand. It may negotiate agreements with institutions, individuals, or other societies, provided that when such agreements are of exceptional importance, as determined by a majority of the Council they shall be subject to the final decision of the SOCIETY at large.

ARTICLE VI. ORGANIZATION

TWO SECTIONS DELETED (Branches and Boards)

Section 1. Purpose. To accomplish its objectives, the SOCIETY shall be organized into the following groups and as further provided in the Bylaws:

Section 2. Divisions shall be professional groups organized by Members with common scientific interest in one of the disciplines of invertebrate pathology. A Division shall elect its own officers and may establish separate bylaws consistent with the Constitution and Bylaws of the SOCIETY and subject to the approval of the Council of the SOCIETY.

Section 3. Committees shall consist of Members appointed to a term of responsibility and delegated to aid in the management and activities of the SOCIETY. There shall be Standing Committees and Special Committees.

Section 4. Representatives shall consist of one or more Members appointed to serve a specified term and delegated to represent the SOCIETY in a special event or to act as liaison between the SOCIETY and another organization.

Section 5. An Archivist shall be appointed to serve as the keeper of the Archives, the records and historical materials relating to the SOCIETY.

ARTICLE VII. FINANCES AND TAXES

Section 1. Operations. The SOCIETY shall operate exclusively as a scientific and educational organization. No part of the net income of the SOCIETY shall inure to the benefit of, or be distributed to, its Elective officers or other private persons, except that reasonable compensation may be paid to Executive Officers and other employees for services rendered in the accomplishment of the objectives listed in ARTICLE II of the Constitution.

Section 2. Disposition of Assets. Upon dissolution of the SOCIETY, its assets shall be distributed exclusively to charitable, scientific, literary, or educational organizations which would then qualify under the provisions of United States Internal Revenue laws. **Distribution of assets shall be determined by a majority vote of the Council.**

Section 3. Taxes. The SOCIETY shall engage only in those activities permitted by a corporation exempt from Federal income tax under United States Internal Revenue laws.

ARTICLE VIII. LANGUAGE AND INTERPRETATION

Section 1. Official Language. The official language of the Constitution of the SOCIETY is English, in accordance with the Articles of Incorporation, State of Maryland, United States of America. The SOCIETY encourages translations of the Constitution, subject to approval by the Council.

Section 2. Interpretation. Interpretation of the intent or language of the Constitution shall be decided by a majority vote of the Council.

ARTICLE IX. AMENDMENTS

Section 1. Proposal. Any proposal for amendment to the Constitution, not in conflict with the Articles of Incorporation of the SOCIETY, shall first be submitted in writing to the Secretary of the SOCIETY over the signature of at least four members of the Council or at least five percent of the Full Members of the SOCIETY.

Section 2. Review. Such an amendment shall be reviewed by the Council within a year of its proposal. Amendment proposals may be modified by the Council only to clarify obscure language or to facilitate carrying out the intent of the proposed amendment. Once reviewed, the proposed amendment or a modification of the proposed amendment, together with the recommendations of the Council, shall be published and submitted to the Full Members of the SOCIETY for mail vote as provided in the Bylaws. In the event the Council is opposed to the proposed amendment, supporting comments of the group originating the amendment shall also be included.

Section 3. Ratification and Adoption. The amendment shall be declared adopted if it is ratified by two-thirds of the voting Members who return ballots within the prescribed time, and shall become effective when it is declared adopted.

BYLAWS**BRANCHES and BOARDS DELETED AND
SECTIONS RE-NUMBERED**

<u>ARTICLE I</u>	MEMBERS
<u>ARTICLE II</u>	ELECTIVE OFFICERS
<u>ARTICLE III</u>	EXECUTIVE OFFICERS
<u>ARTICLE IV</u>	COUNCIL
<u>ARTICLE V</u>	DIVISIONS
<u>ARTICLE VI</u>	COMMITTEES
<u>ARTICLE VII</u>	REPRESENTATIVES
<u>ARTICLE VIII</u>	ARCHIVES
<u>ARTICLE IX</u>	MEETINGS
<u>ARTICLE X</u>	FINANCES
<u>ARTICLE XI</u>	PUBLICATIONS AND COMMUNICATIONS
<u>ARTICLE XII</u>	PARLIAMENTARY PRACTICES
<u>ARTICLE XIII</u>	LANGUAGE AND INTERPRETATION
<u>ARTICLE XIV</u>	AMENDMENTS

ARTICLE I. MEMBERS

Section 1. Full Members. A person who qualifies under the Constitution (CONSTIT. ART. III, Sec. 2), who has been certified by the Treasurer of the SOCIETY, shall become a Full Member upon payment of dues for the first year of membership. Each Full Member in good standing shall be entitled to the privileges so listed in the Constitution and in the Bylaws of the SOCIETY, and as further specified by the Council.

Section 2. Student Members. A student who qualifies under the Constitution (CONSTIT. ART. III, Sec. 3), whose bona fide status as a student has been certified by the Chairperson or equivalent of the student's major department in the college or university in which such student is enrolled, and who has been certified by the Treasurer of the SOCIETY, shall become a Student Member upon payment of dues. Student membership must be renewed annually, and student status certification must be submitted annually to the Treasurer along with dues payment.

Section 3. Emeritus Members. A Full Member who qualifies under the Constitution (CONSTIT. ART. III, Sec. 4), who has made application to the Treasurer of the SOCIETY, and whose qualifications for Emeritus status shall have been certified by the Treasurer, shall be considered so nominated. If the nomination is approved by a majority of the Membership Committee, such Full Member shall be declared elected an Emeritus Member of the SOCIETY.

Section 4. Honorary Members. The nomination of a person who qualifies for Honorary Membership under the Constitution (CONSTIT. ART. III, Sec. 5) may be proposed in writing to the Secretary of the SOCIETY. The following information shall be included in the nomination proposal: (a) A letter signed by at least ten Full Members; (b) A curriculum vitae of the nominee; (c) A list of the nominee's scientific publications; (d) A statement summarizing the nominee's superior contributions to invertebrate pathology and/or the nominee's distinguished service to the SOCIETY. The Secretary shall review the information and transmit it to the Council. Duly proposed candidates shall be considered by the Council and shall be declared nominated upon receiving the endorsement of four-fifths of the Council members voting. If more than three names have been proposed, they shall be ranked in priority by the Council. **The names of up to three nominees** shall be placed on the biennial ballot along with nominations for Officers and for Trustees. A nominee for Honorary Membership shall be declared elected if **affirmed by at least two-thirds of the votes cast.**

Section 5. Sustaining Members. A person, commercial company, or organization eligible under the Constitution (CONSTIT. ART. III, Sec. 6), who has

applied in due form, who has paid the first year's sustaining dues (as stipulated by the Council), and who has been certified by the Treasurer, shall be declared elected a sustaining Member of the SOCIETY.

Section 6. Resignation. Members in good financial standing have the right to resign.

Section 7. Members in Arrears for Dues. A member shall become delinquent upon failure to pay dues within the calendar year. A written notice shall be sent to a person in arrears for dues at least two months before any further action in the matter is taken. No member in arrears for dues shall receive the publications of the SOCIETY or benefit from special subscription rates to journals arranged by the SOCIETY until all arrears shall have been paid. Having failed to pay dues for one calendar year, delinquent members shall be dropped from the membership list and shall be so notified by the Membership Committee, in writing. Reinstatement shall be by the procedure for new members (this Article, Sec. 1).

Section 8. Removal from Membership. The SOCIETY has the right to terminate the membership of any member for due cause, but except for nonpayment of dues (this Article, Sec. 7), the accused shall be entitled to answer the charges in writing. Charges may be considered only as to conduct which in any wise tends to injure the SOCIETY, affects its reputation adversely, or is inimical to, or destructive of, the **objectives** of the SOCIETY. Charges must be presented in writing to the President by five or more Full Members with a full statement of the evidence on which the charges are based. The President shall ask the accused to answer the charges in writing. The charges and the answer by the accused shall be reviewed by the Council. The Council shall decide whether the accusations shall be dropped without further action; whether additional information is needed; whether the accused shall be allowed to resign from membership; or whether the accused shall be removed from membership. Removal from membership requires approval by two-thirds of the Council Members voting. The Secretary shall notify the accused of the Council's decision in writing.

ARTICLE II. ELECTIVE OFFICERS

Section 1. Nominations. The Nominating Committee shall make one nomination for President (the Vice President then in office), and one or more nominations each for Vice President, Secretary, and Treasurer. To facilitate operation of the SOCIETY as a corporation exempted from Federal income tax under United States Internal Revenue laws (CONSTIT. ART. VII, Sec. 3, and Articles of Incorporation, State of Maryland, United States of America), nominees for Treasurer shall be citizens of the United States of America. On or before the first day of **October of the year preceding that** in which officers are to be elected, the Nominating Committee shall certify these Nominations to the Secretary. **On or before the first day of January of the year in which officers are to be elected, the Nominating Committee shall provide a brief biographical sketch of each nominee to the Secretary.** Additional nominations for office may be made, but such nominations shall be valid only if presented **to the Secretary on or before the first day of January of the year in which officers are to be elected. Such nominations must be** in a petition form over the signatures of at least ten members in good standing, **accompanied by a brief biographical sketch of the nominee. All nominations will be announced, with biographical sketches, in the SIP Newsletter.**

Section 2. Elections. The Secretary shall send, no later than the first day of **March**, a ballot bearing all valid nominations for office (whether made by the Nominating Committee or by petition) to all members of the SOCIETY. The ballot shall also include nominations for Trustees (ART. IV, Sec. 1) and, if any, for Honorary Membership (ART. 1, Sec. 4).

Each member shall vote for or against each of the candidates on the ballot and shall transmit it properly sealed for secrecy to the Secretary. To be counted, the sealed unmarked ballot envelope must be placed in an outer envelope, marked with the name and address of the voting member. Ballots must be received by the Secretary on or before the **date announced by the Secretary in the SIP Newsletter.**

The Secretary shall reject ballots from members who are in arrears one year or more in payment of dues, shall deliver all valid sealed ballots to Tellers appointed by the President to take charge of the election, and shall report to the Council upon ballots rejected. The Tellers

shall count the ballots and report the results to the Secretary, who shall first notify each nominee and then announce the results in the next available issue of SIP Newsletter.

The candidates who receive the highest number of votes for the offices of Vice President, Secretary, and Treasurer, respectively, shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of office. Each officer shall serve for a term of two years, said term of office to take effect at the close of the General Membership Meeting which immediately follows the election. The term of the Secretary or the Treasurer may be renewed, but no person shall serve for more than four consecutive years in one office. The term of the President or Vice President may not be renewed. Any member who has completed one or more terms as an Elective Officer of the SOCIETY can be nominated again for additional non-consecutive terms of office (this Article, Sec. 1).

Section 4. Vacancies. In the event the office of the President is vacated between elections, it shall be filled by the Vice President (CONSTIT. ART. IV, Sec. 3). At the next election, the President pro tempore shall appear on the ballot as the sole nominee for President. Vacancies occurring in other elective offices shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

ARTICLE III. EXECUTIVE OFFICERS

The Executive Officers (CONSTIT. ART. IV, Sec. 4) shall carry out duties as prescribed in written Job descriptions and at a salary agreed to by each of these persons and the Secretary, as approved by the Council of the SOCIETY.

ARTICLE IV. COUNCIL

Section 1. Nominations. The Nominating Committee (Art. VI, Sec. 4a) shall make two or more **nominations for the two available Trustee positions** (CONSTIT. ART. V, Sec. 1). On or before the first day of **October of the year preceeding that** in which officers are to be

elected, the Nominating Committee shall certify these Nominations to the Secretary. **On or before the first day of January of the year in which officers are to be elected, the Nominating Committee shall provide a brief biographical sketch of each nominee to the Secretary.** Additional nominations for Trustee may be made, but such nominations shall be valid only if presented to the Secretary **on or before the first day of January of the year in which officers are to be elected. Such nominations must be** in a petition form over the signatures of at least ten members in good standing, **accompanied by a brief biographical sketch of the nominee. All nominations will be announced, with biographical sketches, in the SIP Newsletter.**

Section 2. Elections. The names of the nominees for Trustees shall appear on the same ballot with nominees for Elective Officers. The balloting shall be by the same procedure as described in ART. II, Sec. 2. The two candidates for Trustees who receive the highest number of votes shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of Office. The term of a Trustee shall be four years, two such Trustees to be elected each two years. The term of a Trustee may be renewed, but no Trustee shall serve for more than two consecutive terms. Trustees shall assume office at the same time as Elective Officers (ART. II, Sec. 3).

Section 4. Vacancies. Vacancies between Elections occurring among the Trustees shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

If the Past President is unable to continue to serve as an ex officio member of the Council, the office shall be filled for the remainder of the term by the most recent available former President.

Section 5. Transaction of Business. The Council shall hold at least one meeting annually. Two-thirds of the total voting membership of the Council shall constitute a quorum of the Council for the transaction of business in assembly. The President may invite additional persons to attend a Council Meeting, as needed, but

without the privilege of voting. When, at the discretion of the President, the Council transacts **business by mail, telephone or electronic means**, two-thirds of the total voting membership of the Council shall constitute a quorum, provided that a reasonable time is allowed for the participation of the Councilors in the business under consideration. **The President may require hard copy signature by Council members by mail as a follow-up to items of business conducted by telephone or electronic means.** Any member of the Council who finds it impossible to attend Council Meetings shall be authorized to appoint a proxy to represent him or her with full voting privileges.

In the event of grave emergency, the President may suspend the annual meeting of the Council and the Council shall transact the necessary business by mail, as provided above.

Section 6. Indemnity. The Officers and Members of the Council, individually and collectively, shall be indemnified and held harmless by the SOCIETY in any action alleging injury or damage, direct or consequential, arising out of the performance of their duties, whether or not they are an Officer or Council Member at the time the allegation or allegations are brought forward; except in such cases wherein the Officers or Council Members are adjudged guilty of willful misfeasance or malfeasance in the performance of their duties.

THE ARTICLE CONCERNING BRANCHES HAS BEEN DELETED AND SUBSEQUENT SECTIONS RENUMBERED

ARTICLE V. DIVISIONS

Section 1. Supervision. The Council shall exercise supervision of the Divisions (CONSTIT. ART. VI, Sec. 2) through the Secretary.

Section 2. Establishment. Divisions may be established by the Council in response to a request signed by at least 20 members of the SOCIETY in good standing and with common scientific interests. The petitioners shall show that no less than 20 members of the SOCIETY would choose to become divisional members as soon as the Council approves the establishment of the Division. The Secretary shall

prepare a report upon said request and submit it to the Council, along with the request.

Section 3. Membership. Membership in a Division shall be restricted to Members of the SOCIETY. A member may indicate annually one or more preferred divisional affiliations on an appropriate form included with the annual dues notice, and thereby may vote for the officers of the Division or Divisions specified. Membership in a Division shall remain effective until the member fails to pay or chooses not to pay annual dues for that Division. **A member may hold only one elected office in any capacity within the society of division.**

A Division shall consist of at least 20 members.

Section 4. Administration. Divisions shall elect their own officers and committees, may assess dues additional to the normal dues of the SOCIETY, may collect and manage their additional funds, and may make rules for their government, provided that all their acts and rules shall not be inconsistent with the Constitution and Bylaws of the SOCIETY. The Bylaws of each Division shall be subject to the approval of the Council.

Section 5. Annual Meeting Program Committee Membership. The Chairperson of each Division or a duly appointed divisional Representative, shall be a Member of the Program Committee (ART. VI, Sec. 4, c).

Section 6. Reports to the Secretary. The Chairperson of each Division shall transmit to the Secretary of the SOCIETY a report which contains the names of all its officers and members of standing committees within three weeks of their election or appointment, and shall also promptly notify the Secretary of any changes that may have taken place among said officials.

Section 7. Termination. A Division failing to maintain for two successive years a minimum of 20 members in good standing shall automatically forfeit its title and rights as a Division of the SOCIETY.

The Council may dissolve a Division when said Division shall fail to be supported by the interests of its members in the subject or subjects for the consideration

of which it was organized, or when the developments of science and the interests of the SOCIETY require the reapportionment of subjects.

Section 8. Publications. A Division may sponsor publication of scientific communications. The Division Chairperson must notify the President of the Society and the Chairperson of the Publications Committee of the Division's intent to publish such communication. Such publications shall then be coordinated with the Publications Committee of the Society.

Section 9. By-Laws for Divisions. Divisions shall adhere to the By-Laws of the Society and shall adhere to the SIP BY-LAWS FOR DIVISIONS (hereinafter referred to as the Division By-Laws).

THE ARTICLE CONCERNING BOARDS HAS BEEN DELETED AND SUBSEQUENT SECTIONS RENUMBERED. PORTIONS OF THE FORMER ARTICLE HAVE BEEN MOVED TO THE ARTICLE ON COMMITTEES.

ARTICLE VI. COMMITTEES

Section 1. Appointment and Terms of Office. The President shall appoint Standing Committees as delineated in this Article. In addition, Special Committees may be appointed or reappointed at any time by the President, with or without approval by the Council, as the occasion arises. (sentence deleted) All committee appointments shall be made for a term coincident with that of the President unless otherwise provided in this Article. No individual may serve on the same Standing Committee for more than four consecutive years.

Section 2. Functions. Standing Committees aid in the management of the SOCIETY. Specific functions of the Standing Committees are given in Section 4 of this Article. Special Committees may be ad hoc or continuous. They perform special functions that aid in conducting SOCIETY business or in reaching the objectives of the SOCIETY as defined in CONSTIT. ART. II.

Section 3. Reports to Council. Chairpersons of the Standing and Special Committees shall report in writing to the Council through the Secretary in advance of the Annual Meeting unless specifically excused by the President.

Section 4. Standing Committees.

(a) A **Nominating Committee** shall be appointed by the President during the first month of office. The Committee shall consist of a Chairperson, appointed by the President (with information to but without approval by the Council), two or more Members appointed by the President and not Officers as defined in CONSTIT. ART. IV, Sec. 1, and the immediate Past President. The Nominating Committee shall make the nominations specified in ART. II, Sec. 1, and ART. IV, Sec. 1 of the Bylaws, and such other nominations as shall be ordered by the President or the Council.

(b) A **Membership Committee** shall consist of the Treasurer of the SOCIETY and two or more additional Members to be appointed by the President. The Committee Chairperson shall be appointed by the President (with information to but without approval by the Council). This Committee shall pass on the eligibility of candidates for election as Full Members, Student Members, Emeritus Members, and sustaining Members of the SOCIETY (ART. 1). The Membership Committee shall also aid in recruitment of new Members and advise the Council on Membership matters.

(c) An **Annual Meeting Program Committee** (hereinafter referred to as the Program Committee) shall consist of one or more members resident in the area where the specific Annual Meeting is to be held, and the Chairperson (or a duly appointed Representative) of each Division of the SOCIETY (ART. V, Sec. 5). The Chairperson of the Program Committee shall be selected by the President from a list of nominees submitted by the Meetings Committee (ART. VI, Sec. 4,e), and shall be appointed by the President, subject to approval by the Council, at least one year prior to the Annual Meeting for which the Committee will serve. The Program Committee shall have the ultimate responsibility for the organization and details of the pertinent Annual Meeting. It shall accept submitted papers according to **rules established**

by the Program Committee, subject to review by the President, it shall develop a program, and shall make the necessary physical arrangements. It shall cooperate with the Meetings Committee, if possible prior to one year before, in determining the content of scientific sessions of that Annual Meeting. The Program Committee shall serve until the conclusion of business generated by the specific Annual Meeting for which it was appointed.

(d) A Publications Committee shall be appointed by the President during the first month in office. The committee shall consist of the Committee Chairperson, the President, Vice-President and Treasurer of the SOCIETY and the Editor of each SOCIETY publication. The SOCIETY may publish scientific communications as monographs or as periodicals when necessary or desirable to further the objectives of the SOCIETY (CONSTIT. ART. II). The planning, organization, and administration of publications shall be governed by the Publications Committee. The Publications Committee shall coordinate the editorial policies of all publications of the SOCIETY, and shall advise the Council on all matters relating to publication.

(e) A Meetings Committee shall consist of a Committee Chairperson, appointed by the President, with approval by the Council, and two Members, nominated by the Committee Chairperson and appointed by the President, with approval by the Council. One of the two Members shall have been Chairperson of one of the most recent three past Program Committees (ART. VI, Sec.4, c].

The promotion of scientific knowledge of pathology of invertebrates and of related subjects through discussions and reports (CONSTIT. ART. II) is a primary objective of the SOCIETY and it shall be governed by the Meetings Committee. Specific duties of the Meetings Committee shall be to generate suggestions for sites for the SOCIETY's Annual Meetings; to investigate the feasibility and desirability of holding Meetings at these sites; to recommend to the Council preferred Meeting sites three to four years in advance; to suggest timely themes for the Annual Meeting in balance with the strengths and interests of the host Institution. The

Committee shall strive to maintain an international balance in choosing sites for the SOCIETY's Annual Meetings.

For each approved Annual Meeting site, the Meetings Committee shall submit to the President a list of one or more nominees for the Chair of the Program Committee. The Committee shall work closely with each appointed Program Committee in planning particular aspects of the Annual Meeting. The ultimate responsibility for the organization and details of each Annual Meeting rests with the respective Program Committee. Conferences and Symposia other than those at Annual Meetings shall be coordinated by the Meetings Committee and ad hoc committees appointed for these particular events.

Section 5. Special Committees. Special Committees serve for finite or indefinite periods. A Committee whose period of service can reasonably be expected to extend through more than one presidential term shall be appointed by the President, with approval by the Council, and need for its continuance shall be reviewed by the Council at least every fourth year following its appointment. Chairpersons and other Members of Special Committees shall serve at the pleasure of the Council and there is no limit to the length of time each may serve.

(a) A Tellers Committee shall be an ad hoc committee consisting of two or more Members, but not the Society Secretary, appointed by the President to take charge of elections. The Tellers Committee shall receive, rule on, count, and report on the balloting in the biennial Elections and in such other elections as the Council may direct (ART. I, Sec. 4; ART. II, Sec. 2).

(b) An Auditors Committee shall be an ad hoc committee consisting of two Members, but not the Society Treasurer, appointed by the President prior to each Annual Meeting. The Committee shall perform an annual audit of the Treasurer's accounts and certify their accuracy to the Council.

(c) Other Special Committees shall be appointed as necessary and their charges and responsibilities shall be clearly defined in writing by the President, subject to approval by the Council.

ARTICLE VII. REPRESENTATIVES

Section 1. Appointment and Terms of Office. Representatives shall be appointed or reappointed by the President (with information to but without approval by the Council). All appointments of Representatives who act as liaison between the SOCIETY and another organization shall be made for a term coincident with that of the President, except that when expedient or necessary, a Representative for a special event may be appointed by a President whose term expires before the event is to take place. During the first month of office the President shall review the need for continuance of the Representatives appointed by the previous President and shall reappoint, **appoint anew or terminate** those necessary for conduct of SOCIETY business. No member shall serve as the same Representative for more than ten consecutive years.

Section 2. Functions. The charges to and responsibilities of Representatives (CONSTIT. ART. VI, Sec. 6) shall be clearly defined in writing at the time of appointment. These documents shall be placed in the permanent files of the SOCIETY, for future reference and use.

ARTICLE VIII. ARCHIVES

Section 1. Purposes. The Archives (CONSTIT. ART. VI, Sec. 5) shall be maintained at appropriate locations for the collection, preservation, and display of historical materials relating to the SOCIETY. The Archives shall serve as repository of documents pertinent to the founding and governance of the SOCIETY, including **presidential correspondence, meeting reports and minutes**. Books, reprints, photographs, films, disks, and tapes pertaining to the SOCIETY's activities shall be included in the archival collection.

Section 2. Archivist. An Archivist shall be appointed by the President, subject to approval by the Council, and shall serve for an indefinite term of office, at the pleasure of the Council. The Archivist's performance shall be reviewed by the Council at least every fourth year.

The Archivist shall be responsible for the proper preservation and safety of the historical materials; shall

appropriately catalog the documents, books, and other items in the repository; and shall make these items available to qualified individuals for scholarly research.

ARTICLE IX. MEETINGS

Section 1. Annual Meeting.

(a) Once each year there shall be a general meeting of the SOCIETY for the presentation and discussion of scientific advances, for exhibits, and for the transaction of the SOCIETY's business. This shall be known as the Annual Meeting. At approximately four-year intervals the Annual Meeting will be held in conjunction with the International Colloquium on **Invertebrate Pathology and Microbial Control**. In the event of grave emergency, the Council may suspend an Annual Meeting and the SOCIETY may transact the necessary business by mail, as hereinafter provided.

(b) The place and time for an Annual Meeting shall be studied a sufficient number of years in advance by the Meetings Committee (ART. VI, Sec. 4,e), and a recommendation shall be made by the Committee Chairperson to the Council.

(c) The Program Committee (ART. VI, Sec. 4,c) shall have the ultimate responsibility for the organization, and details of the pertinent Annual Meeting

(d) Submission of papers for the Annual Meeting is governed by rules established by the Program Committee. **A FEW SENTENCES DELETED HERE**

(e) The Council shall **approve** registration fees for Annual Meetings. There shall be a fee for members, a fee for student members, and a fee for nonmembers.

(f) Commercial exhibits may be accepted at Annual Meetings if consistent with the objectives of the SOCIETY and subject to regulation by the Meetings Committee and Program Committee.

Section 2. General Membership Meeting.

(a) During each Annual Meeting there shall be a General Membership Meeting presided over by the President of the SOCIETY, to provide members an opportunity to hear reports, to discuss governance of

the SOCIETY, and to participate in any other aspect of SOCIETY affairs.

(b) At any General Membership Meeting, five percent of the members in good financial standing shall constitute a quorum for the consideration of business. Business of exceptional importance, as determined by a majority of the members present and voting or by a majority of the Council, shall be subject to the final decision of the SOCIETY at large, by mail vote.

(c) In the transaction of business by mail (other than elections of Officers, Trustees, and Honorary Members, and ratification of constitutional amendments, which are provided for separately elsewhere in the Constitution and Bylaws), thirty percent of the membership shall constitute a quorum, provided that a reasonable time is allowed for the participation of the members in the business under consideration.

Section 3. Special Meetings. Special meetings may be called at the discretion of the Council. Special meetings (such as Conferences and Symposia other than those at Annual Meetings) shall be coordinated as specified in ART. VI, Sec. 7,e, or as directed by Council.

ARTICLE X. FINANCES

Section 1. Annual Budget. The Treasurer shall prepare annually an operations budget, in two parts: the present fiscal year (ending **March 31**), and the coming fiscal year (**from April 1 to March 31 of the following year**). The Treasurer shall submit the budget to the Council, for approval, 30 days prior to the Council's annual meeting.

Section 2. Annual Audit. The accounts of the SOCIETY shall be audited annually (or more frequently if so directed by the Council) by an Auditing Committee (ART. VI, Sec. 5,b). This audit shall be reviewed and approved by the Council.

Section 3. Annual Membership Dues. Annual dues for Full Members and Student Members shall be reviewed periodically by the Treasurer and by the Council. A recommendation to change annual dues for one or both classes of members is subject to approval by majority vote of the Council. **If the recommendation is approved, the Council shall submit to the SOCIETY**

for approval at the annual business meeting, by simple majority vote, the proposed annual dues for Full Members and Student Members.

Section 4. Sustaining Dues. The amount of the annual donation by Sustaining Members shall be specified by the Council.

Section 5. Registration Fees. The Council, in consultation with the Program Committee and the Treasurer, shall **approve** Registration fees for Annual Meetings (ART. IX, Sec. 1,e).

Section 6. Salaries. The salaries to be paid to Executive officers, if any, shall be determined by the Council (ART. III).

Section 7. Nonpayment of Dues. **The Treasurer shall ensure that a written notice is sent to persons in arrears for dues at least two months before any further action is taken.** Having failed to pay dues within 40 days from the date of mailing of such notice, delinquent members shall cease to benefit from the privileges of SOCIETY membership. Further actions are specified in ART. 1, Sec. 7.

Section 8. Contracts. The Council shall contract for fulfillment of any purpose determined by the SOCIETY, if consistent with the Articles of Incorporation of the SOCIETY, the Constitution, and Bylaws.

ARTICLE XI. PUBLICATIONS AND COMMUNICATIONS

Section 1. Types of Publications and Communications. The SOCIETY may publish scientific Communications as monographs or periodicals when necessary or desirable to further the objectives of the SOCIETY. It may publish books or sponsor their publication.

Any Branch, Division, or Committee of the SOCIETY may publish or produce a report or series of reports, provided that such publication or communication shall have been approved as directed in Sec. 5 of this Article.

Any Branch or Division of the SOCIETY may produce a periodical newsletter or like communication for its

membership subject to approval as directed in Sec. 5 of this Article.

Each publication of the SOCIETY shall be organized with an Editor or with an Editorial Board consisting of several editors and an Editor-in Chief. The Editor or Editor-in-Chief of each SOCIETY publication shall be a voting member of the Publications Committee (ART. VI, Sec. 4,d).

Section 2. Methods of Publication. The SOCIETY may engage commercial publishers or may itself act as the publisher and separately undertake copyright, preparation, manufacture, and distribution of its publications.

Section 3. Distribution of Publications and Communications. Publications and reports of the SOCIETY shall be made available to members of the SOCIETY and to the public and at such prices as provided in the Bylaws and/or as approved by the Council.

Section 4. Responsibilities for Statements. No member of the SOCIETY shall publish or otherwise release any SOCIETY-related report or recommendation or make any public statement purporting to express the opinion of any Committee of the SOCIETY on any issue within the jurisdiction of the SOCIETY without the prior approval of the Council. The SOCIETY shall not be responsible for statements or opinions made by groups or individual persons nor for statements in the SOCIETY's publications unless such statements or opinions have the specific approval of the Council.

Section 5. Publications Committee Functions. The Publications Committee (ART. VI, Sec. 4,d) shall coordinate the editorial policies of all the publications of the SOCIETY. Any books, reports, or proceedings based on material presented at any Meeting, Colloquium, or Workshop sponsored or cosponsored by the SOCIETY shall be approved by the Publications Committee and authorized by the Council before their publication. The Publications Committee shall determine that proper credit is given to the SOCIETY in such books and reports.

PARAGRAPH DELETED HERE

(on need for approval of division publications by the publication committee)

The Publications Committee shall advise the Council on the prices to members and to the public of all books, monographs, and periodicals published or sponsored by the SOCIETY.

At the President's request, the Publications Committee shall prepare lists of nominees for Editor or Editor-in-Chief of publications of the SOCIETY, to be appointed by the President.

Section 6. SIP Newsletter.

(a) Purpose. SIP Newsletter shall be published periodically to communicate current news and information about the SOCIETY and science. It shall not be considered a publication for the dissemination of research results or for the purpose of establishing scientific priority.

(b) The Editor of SIP Newsletter shall be responsible for collation, editing, production, and distribution of SIP Newsletter. The Editor shall be appointed or reappointed by the President, with approval by the Council, within one month of the President's installation in office. The President may request a list of nominees from the Publications Committee (this Article, Sec. 5). The Editor of SIP Newsletter shall serve for a term coincident with that of the President. If a vacancy occurs, it shall be filled for the remainder of the term by appointment by the President.

(c) The Editor of SIP Newsletter shall be a voting member of the Publications Committee (ART. VI, Sec. 4,d).

(d) Regional and Divisional Correspondents shall communicate to the Editor of SIP Newsletter newsworthy items from areas of the world where SOCIETY members are known to reside. Regional Correspondents are appointed by the SIP Newsletter Editor and shall serve for a term coincident with that of the Editor. Regional Correspondents may be reappointed but no Correspondent shall serve for more than ten consecutive years.

(e) The editorial policy of SIP Newsletter shall be determined by the Publications Committee.

(f) SIP Newsletter shall be distributed to all members of the SOCIETY and it shall be available to the public by subscription.

Section 7. Proceedings and Abstracts of Annual Meetings and Colloquia. The Chairperson of each Annual Meeting shall ensure the Society's publication of a Program and Abstracts of the Meeting. The Chairperson of each International Colloquium shall ensure the Society's publication of a Program, Abstracts, and Proceedings of the Colloquium.

Section 8. Electronic Publications. {THIS SECTION IS BEING DRAFTED AND WILL BE INCLUDED IN A FUTURE NEWSLETTER}

ARTICLE XII. PARLIAMENTARY PRACTICES

General Membership Meetings and meetings of the Council and of Committees shall be conducted in accordance with Robert's Rules of Order (Revised) in all cases to which such rules apply, except when inconsistent with the Constitution or Bylaws of the SOCIETY and any special rules of order the SOCIETY may adopt.

ARTICLE XIII. LANGUAGE AND INTERPRETATION

Section 1. Official Language. The official language of the Bylaws of the SOCIETY is English, in accordance with the Articles of Incorporation, State of Maryland, United States of America. The SOCIETY encourages translations of the Bylaws, subjects to approval by the Council.

Section 2. Interpretation. Interpretation of the intent or language of the Bylaws shall be decided by a majority vote of the Council.

ARTICLE XIV. AMENDMENTS

Section 1. Proposal. Any ten members of the SOCIETY may prepare in writing an amendment to the Bylaws, as may be necessary for the proper government of the

SOCIETY and not in conflict with its Constitution. Such a proposal shall be submitted to the Secretary at least four months before the next General Membership Meeting, so the item can be considered by the Council before such Membership Meeting.

Section 2. Review. Any proposed change in the Bylaws, or addition thereto, shall require the affirmative vote of a majority of the Council present and voting at a meeting, or of a majority of the Council voting by mail, before submission of the proposal to the membership.

Section 3. Posting. The proposal, if approved by the Council, and the Council's recommendation must be posted and publicized to the membership for at least 24 hours before the General Membership Meeting.

Section 4. Adoption. The proposed change in the Bylaws shall be adopted when and if approved by a three-fifths vote of Members present and voting at a General Membership Meeting.

BY-LAWS FOR DIVISIONS

ARTICLE I. NAME

This group shall be known as the DIVISION OF (Subject Matter) of THE SOCIETY FOR INVERTEBRATE PATHOLOGY (hereinafter referred to as the DIVISION).

In this context, (Subject Matter) refers to the study of the basic and applied biology of (Subject Matter) associated with invertebrates, with the aim of using knowledge of this biology to (a) understand interactions with invertebrates, (b) control pest and vector populations of invertebrates, and/or to prevent or cure diseases of invertebrates caused by these pathogens or parasites.

ARTICLE II. OBJECTIVES OF DIVISION

The objectives of the DIVISION shall be:

1. To promote scientific knowledge of the type of pathogens or parasites through discussions, reports and publications.

2. To stimulate worldwide interaction among scientists who have special interests in the study of the types of pathogens or parasites associated with invertebrates through the organization of workshops and symposia at the annual meeting of the SOCIETY, as well as to provide assistance in the organization of international meetings.

3. To provide an organizational structure through which problems and matters relevant to the study of the types of pathogens or parasites associated with invertebrates may be presented for discussion and action among interested scientists.

4. To provide an organized body of expertise which can be readily identified and accessed by persons or organizations within or outside the SOCIETY who are in need of knowledge or consultation on the subject of the types of pathogens or parasites as defined in ARTICLE I.

ARTICLE III. MEMBERSHIP AND FINANCES

Any member of the SOCIETY FOR INVERTEBRATE PATHOLOGY who has a special interest in the subject matter shall be eligible for membership in the DIVISION.

Membership in the DIVISION shall be contingent upon payment of an annual fee in addition to the annual SOCIETY dues. The annual fee shall be set by majority vote of the DIVISION'S Executive Committee.

ARTICLE IV. OFFICERS AND EXECUTIVE COMMITTEE

1. A Chairperson-Elect and a Secretary-Treasurer shall be elected biannually by ballot at a session of the DIVISION held during the Annual Meeting of the SOCIETY. Officers shall take office at the close of the meeting at which they shall have been elected.

2. The Chairperson-Elect will become Chair at the end of his/her two-year term.

3. The Executive Committee shall consist of the Chairperson, Chairperson-Elect, Secretary-Treasurer plus two other Division Members-at-Large to be elected in like manner. However, to provide continuity

in leadership, one of the Members-at-Large of the first slate of officers shall be elected for a one year term only and that office will be refilled for a *two-year term* after the first year. Thereafter, one Member-at-Large will be selected for a two-year term at each Annual Session. To provide further continuity in leadership, the Chairperson and Secretary-Treasurer immediately retiring shall be ex-officio members of the Executive Committee for a two-year term.

4. Nomination for Officers and member of the Executive Committee must be published in the DIVISION membership for at least twenty-four hours before submission for vote at the Annual session of the DIVISION.

5. The duties of the Officers and the Executive Committee with the aid of such other committees as are appointed by the Chair, shall be to conduct the affairs of the DIVISION, within the framework of the Constitution and Bylaws of the SOCIETY, according to these Bylaws and to the expressed wishes of the DIVISION members present at the Annual Session.

6. The Organizational Committee, selected on a specific date at an Annual Meeting of the SOCIETY, shall serve until the first officers of the DIVISION are elected at the next Annual Session.

ARTICLE V. WORKING GROUPS

1. When desirable for facilitating the activities of the DIVISION, Working Groups may be formed with the approval of the Council of the SOCIETY. The subject matter and scope of such Working Groups shall be defined by the Executive Committee of the DIVISION.

2. Officers of each divisional Working Group shall be, at a minimum, a Chairperson, a Chairperson-Elect and a Secretary-Treasurer. They shall be elected and replaced in the same manner and serve the same terms as the corresponding officers of the DIVISION.

3. The Executive Committee of the DIVISION shall submit in writing to the Council of the SOCIETY a proposal for the formation of each Working Group. The date of the Council approval shall be the effective date of organization of the Working Group.

ARTICLE VI. EFFECTIVE DATE OF ORGANIZATION

The date of the Council's approval of these Bylaws shall be the effective date of the organization of this DIVISION.

ARTICLE VII. TERMINATION OF THE DIVISION

1. A majority of DIVISION members voting, as determined by a mail ballot, may recommend to the Council of the SOCIETY that the DIVISION be terminated.

2. The DIVISION shall automatically become dissolved when it consists of less than 10 members in good standing.

3. Upon dissolution of the DIVISION, any assets after payment of debts and encumbrances shall be transferred to the Treasurer of the SOCIETY FOR INVERTEBRATE PATHOLOGY to become the property of the SOCIETY.

ARTICLE VIII. AMENDMENTS OF THESE BYLAWS

1. An amendment may be proposed by the Executive Committee or by a majority of the members present and voting at an Annual Meeting.

2. The proposed amendment shall be printed promptly and sent to all members of the DIVISION, together with a letter ballot. The Secretary shall canvas the ballots returned to him/her within 60 days from the date of mailing of the ballot and the proposed amendment shall be considered adopted if it receives the approval of two-thirds of the members voting.

3. The amendment shall become effective immediately after ratification by the council of the SOCIETY.

MEMBERS ON THE MOVE

Doug Inglis has moved to Mississippi State University where he is an Assistant Professor in the Department of Entomology & Plant Pathology. Previously he completed a PhD degree at Simon Fraser University

and the Lethbridge Research Centre where he studied *Beauveria bassiana* in grasshopper control followed by a brief post-doctoral position with the Potato Program at the Lethbridge Research Centre. At Mississippi State, Doug will be developing a research program on microbial control of pests of cotton and other crops. Doug's new address is:

Department of Entomology & Plant Pathology
PO Box 9775, Mississippi State, MS 39762
Tel: (601)-325-9322
Fax: (601) 325-8837
E-mail: dinglis@entomology.msstate.edu.

Moving?

Please prepare a paragraph including information about past and present postings, new address, telephone, fax and E-mail address and send to your Newsletter Editor for inclusion in the Members on the Move section in the next issue of the Newsletter.

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

Catherine Hill completed a PhD at the University of Adelaide in South Australia in December of last year, where she studied a *Bt* toxin effective against lice. In April of this year, she relocated to the US to undertake a Post-doctoral Fellowship with Elanco Animal Health, a division of Eli Lilly and Company. She is still working in an entomological field and is involved in novel chemo-therapeutic target identification and characterisation in animal ecto-parasites. Catherine's new address is:

Elanco Animal Health,
A Division of Eli Lilly and Company,
2001 West Main Street,
PO Box 708,
Greenfield, Indiana, 46140, USA
Tel: (317) 277 0826
Fax: (317) 277 4522
E-mail: HILL_CATHERINE_A@LILLY.COM

Jeff Lord has taken an Insect Pathologist position with the US Department of Agriculture at the Grain Marketing and Production Research Center in Manhattan, Kansas. He recently worked in field research and development with Mycotech Corporation in Butte, Montana. Prior positions were with EcoScience Corp in Massachusetts, USDA-ARS in Gainesville, Florida, and Boyce Thompson Institute, Ithaca, NY. His work at USGMRL will encompass diverse aspects of pathology in insect pests of stored grain. Jeff's new address is:

USGMRL, USDA-ARS
1515 College Ave, Manhattan, KS 66502
Tel: (785) 776-2705
Fax: (785) 537-5584
E-mail: lord@usgmrl.ksu.edu

Pasco Avery has recently moved back to the States and is working with **Stephan Wraight** as a temporary research technician at the USDA, ARS Plant, Soil and Nutrition Laboratory in Ithaca, NY., while writing up his dissertation. His present project is screening *Beauveria bassiana* and *Paecilomyces fumosoroseus* strains against the diamondback moth, corn borer, fall armyworm and the corn earworm. He was previously teaching biology and International Baccalaureate Environmental Systems at the American Community School in Hillingdon, London and finishing his Ph. D. research at Birkbeck College, University of London on a part-time basis. Pasco's new address is:

USDA, ARS,
U.S. Plant, Soil & Nutrition Laboratory
Tower Road, Ithaca, NY 14853, USA
Tel: (work): 607-255-7744; (home): 607-266-7922
E-mail: pba2@cornell.edu
Fax: 607-255-1132

PUBLICATIONS

Invertebrate Cell Culture - Novel Directions and Biotechnology Applications
Editors: Karl Maramorosch and Jun Mitsuhashi

This edited volume comprising 33 chapters, divided into 9 sections, includes contributions by some of the best known experts in the field. The book will provide

readers with a well balanced cross-section of current developments, focusing attention on such topics as the biochemistry and physiology of cultured invertebrate cells, aspects of virus infection, novel cultivation methods, assays of viruses affecting shrimp and insect cells, engineering of invertebrate cells for the production of baculovirus pesticides, application of microgravity to *in vitro* cell cultivation and other aspects of biotechnology. The large body of information brings into sharp focus the significant achievements accomplished recently in laboratories in Africa, America, Europe, and Asia. The information in this book will be of value for many years to those who desire an overview of the state of the art.

Year of publication: 1997
ISBN: 1-57808-011-8
Size & Format: c. 308 pp; 8" x 11"; hardbound
Price: \$US 109.00

Contents:

- ☐ Novel developments in insect cell culture
- ☐ Physiology of cultured insect cells
- ☐ Action of physiologically active substances on cultured insect cells
- ☐ Advances in culture technologies
- ☐ Replication of insect viruses in insect cell cultures
- ☐ Development of biopesticides and assessment of their safety
- ☐ Protein production by means of baculovirus expression vectors
- ☐ Marine invertebrate tissue culture
- ☐ Culture of endoparasites *in vitro*

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

Insect Viruses and Pest Management

editors: Hugh Evans, Forestry Commission, Surrey, Philip Entwistle, NERC Virology Unit, Oxford, UK and Norman Crook

An essential guidebook, providing a comprehensive overview of insect viruses and pest management. Section One of this volume explores the rationale

behind the employment of insect pathogenic viruses in pest control and documents the assessment of biological activity, the ecology of baculoviruses, control strategies, virus production and formulation, and the conduct and recording of field control trials.

Section Two comprises an authoritative global survey of current practice, R & D, and up-to-date technical studies of insect viruses and their application in pest management. This unique survey was compiled with the assistance of a panel of world-wide experts and will prove an invaluable data source.

Building on the key topics discussed in Section One, easy-to-follow, practical protocols are presented in the third section, including detailed accounts of standard operating procedures for working with insects, isolation, propagation (*in vivo* and *in vitro*), purification, characterisation and enumeration of viruses, suggestions for good laboratory layout and design, mass reproduction methods, formulation and quality control.

The importance of external environmental factors concerning virus survival and efficacy is also not forgotten, and in the final section the effect of solar radiation and the relationship between virus and plant surfaces are discussed.

Indispensable reading for all professionals and students interested in insect virology and pest control, this book is a unique all-in-one reference manual.

Contents:

- ❑ **Basic Principles:** Rationale for the Use of Microbial Pesticides * Characteristics of Insect Pathogenic Viruses * Assessment of Biological Activity * The Ecology of Baculoviruses in Insect Hosts * Control Strategies * Virus Production * Formulation * Spray Application of Baculoviruses * Conduct and Recording of Field Control Trials * Future Developments
- ❑ **World Survey:** A World Survey of Virus Control of Insect Pests * Western Europe * Eastern Europe and the Former Soviet Union * Indian Subcontinent * South-east Asia

and the Western Pacific * People's Republic of China * Japan * Africa, the Near and Middle East * Australasia * North America * Central America and the Caribbean * South America

- ❑ **Practical Techniques:** General Laboratory Practice * Working with the Host * Working with the Virus * Enumeration of Virus * Cell Culture * Mass Production, Product Formulation and Quality Control * Spray Application * Registration Requirements

- ❑ **Environmental Factors Influencing Viral Survival :** Solar Radiation, with Emphasis on the Ultraviolet * Plant Surfaces

ISBN: 0471 96878 1 620pp April, 1998 £100.00

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E-mail: customer@wiley.co.uk

Please include your postal delivery address.

Microbial Control of Pests and Plant Diseases. 1970-80. Ed. H.D. Burges. 1981. Academic Press, London, 949 pp.

This book is still in print and available from:

Harcourt Brace & Company

24-28 Oval Road

London, NW1 7DX, UK

The 1998 Biopesticides Manual by L.G. Copping. 1998. British Crop Protection Council, Farnham

380pp. ISBN 1 901396 26 6.

This is the first edition of a new series which has been written as a sister volume to the 'Pesticide Manual', now in its 11th edition, by the same publisher. It has five sections:

1. Natural products

2. Pheromones
3. Microorganisms and nematodes
4. Predators and parasites
5. Genes

Each entry covers 1-4 pages, major subheadings for an entry typically including nomenclature, source, production, target pests (or plant diseases), target crops, biological activity, key references, commercialization (listing commercial products), application, product specifications, compatibility, mammalian toxicity, environmental impact and non-target toxicity.

The book is timed to be available on November 16, 1998, the start of 'The 1998 Brighton Conference, Pests & Diseases' at Brighton UK. I copy-edited the manuscript and concluded that it is an exceptionally useful summary.

H.D. Burges

Formulation of Microbial Biopesticides, Beneficial Microorganisms, Nematodes and Seed Treatments. edited by H.D. Burges, 1998. Kluwer Academic Publishers, Dordrecht, 412pp. ISBN 0 412 62520 2

This book appeared on the shelf earlier than expected on 17 September, 1998. That is the good news. The bad news is that Kluwer, who took over Chapman & Hall, have a different pricing policy and have increased the price to \$US 305.00 (£ 192.00). Details appeared in the June 1998 Newsletter.

Proceedings, VIIth International Colloquium on Invertebrate Pathology and Microbial Control, IVth International Conference on *Bacillus thuringiensis* Sapporo, Japan

The proceedings are available from the SIP Office for the price of \$U.S. 12.00 to cover the cost of shipping and handling. See Suppl.1 of this Newsletter for an order form.

POSITIONS AVAILABLE

Doctoral/Masters Research Assistantship available in the Departments of Entomology or Microbiology, University of Massachusetts-Amherst

To work on modeling the fate of genetically engineered baculoviruses. A research assistantship (\$12,500 per year) is available starting Jan. 1, 1999 to study risk assessment of the release of genetically engineered baculoviruses. The objectives of this work is to develop a mathematical model to predict the fate of engineered baculoviruses released into the environment for use as insect pest control agents. This project involves measuring properties of the *Autographa californica* nucleopolyhedrovirus expressing the insect-specific scorpion toxin (AcNPV AaIT) that contribute to its fitness and transmission rate, incorporation of this information into a model to predict the fate of the virus in the field and finally, performing field tests to validate the predictions of the model. The methods used in this project include a combination of mathematical modeling, laboratory observations, molecular diagnostics and field experiments.

Interested students should contact:

Dr. John P. Burand or Dr. Joseph S. Elkinton
Department of Entomology
University of Massachusetts- Amherst
Amherst, MA 01003
Tel: (413) 545-2283
Fax: (513) 545-2115
E-mail: jburand@microbio.umass.edu
elkinton@ent.umass.edu

Postdoctoral Position

Available to join a laboratory studying disease mechanisms in honey bees. Candidate would identify viruses associated with honey bees and their parasitic mites, obtain nucleic acid sequence data for these viruses, and develop diagnostic molecular tools for use in epidemiological studies of virus/mite/bee associations. Candidate should possess experience in molecular techniques appropriate for studying RNA viruses and have excellent communication skills. Send curriculum vitae and names of three references to:

Dr. Scott Camazine
Department of Entomology
Penn State University
501 ASI Building,
University Park, PA 16802.
E-mail: smc14@psu.edu.

Penn State is an affirmative action, equal opportunity university.

Director of Research and Development for *Bacillus thuringiensis* based products

AEF Global, a new biotechnology enterprise with the mandate to develop, produce and market microbial pest control products is seeking the services of a director. The successful candidate has extensive knowledge and experience in the development and production of Bt based biopesticides, including

- ▶ physiology and biochemistry of *Bacillus thuringiensis*
- ▶ large scale fermentation - process development and optimization
- ▶ recovery and downstream processing - production of high potency Bt materials suitable for manufacture of a variety of end use formulations
- ▶ Bt product standardization, quality control
- ▶ development and implementation of good manufacturing practices, quality assurance
- ▶ experience in leading diverse work teams in a commercial production environment

For further information and submission of resumes, contact:

M.-F. Lamarche
Director General
AEF GLOBAL INC.
855 Pépin Street
Sherbrooke, Quebec, Canada
J1L 2P8
Tel.: (819) 348-9461

Fax: (819) 348-9466
E-mail: aefglobal@qc.aira.com

Language Proficiency: English or French
Location: Sherbrooke, Quebec, Canada

Post Doctorate Position at The Entomology Research Laboratory, University of Vermont

We are seeking an **innovative, dynamic, enthusiastic** and **independent** insect pathologist or entomologist to join our scientific team as a post-doctoral researcher. Research will focus on the development of entomopathogenic fungi for Integrated Pest Management in greenhouse crops. At this time, our research priorities include thrips, whiteflies and aphids. Experience with these insects would be desirable and a strong motivation to solving practical problems in IPM is essential. This position also offers opportunities for international travel to work on collaborative research projects.

Surrounded by spectacular views of the Green Mountains and the Adirondacks in Burlington, Vermont, the Entomology Research Laboratory houses an active program with five senior scientists, supported by several research technicians, and graduate students. Our facilities are well-equipped with extensive lab facilities, environmental control equipment, greenhouses and insect-rearing rooms. Full computer and statistical support services are available.

The position is available for 2 years, starting January 1999. Salary and benefits package are commensurate with experience and in accordance with standard University of Vermont guidelines.

Send letter of application, resume and references to:

Dr. Bruce L. Parker or Dr. Michael Brownbridge
Entomology Research Laboratory
University of Vermont, P.O. Box 53400
Burlington, VT 05405-3400, USA
Tel: (802) 656-5440
Fax: (802) 658-7710
E-mail: bparker@zoo.uvm.edu or
mbrownbr@zoo.uvm.edu

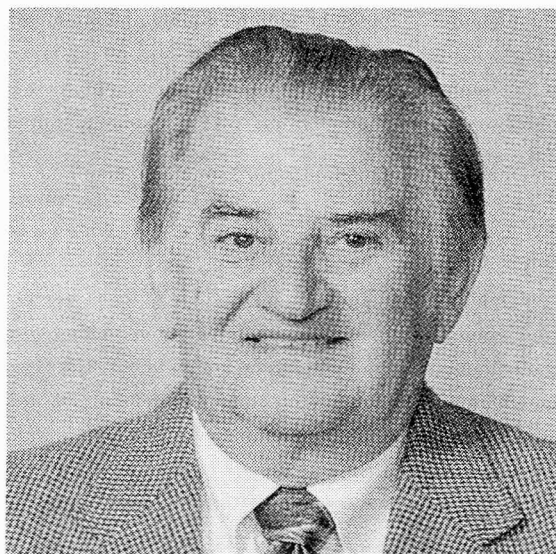
The University of Vermont is an Affirmative Action/Equal Opportunity Employer

Assistant Professor of Entomology, Tenure Track

Research (80%) in bacterial and/or viral mechanisms of action to further our understanding of pathogen mode of action and host specificity. Focus on invertebrate pathogens as model systems; interest in incorporating pathogens into IPM systems for pest control. Teaching (20%) participation in team taught undergraduate courses and co-development of graduate course in invertebrate pathogens and mechanisms. Ph.D. in Biological Sciences with special expertise in bacterial and/or viral mechanisms of action and interest in invertebrate pathogens. Applicants should submit letter of application, resume, academic transcripts, statement of research interests, names and addresses of five professional references to:

Dr. James L. Frazier, Head,
Department of Entomology
501 ASI Building
Box I
Penn State University
University Park, PA. 16802, USA

Closing Date: January 15, 1999. Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

MEMBER NEWS

Peter P. Sikorowski Retires

Peter Sikorowski has retired from the Department of Entomology and Plant Pathology at Mississippi State University after 29 years of service. Peter began his education in 1947 at the Polish Humanistic Liceum in Lo'bee, Germany and was then admitted to Der Universitat Koln. In 1950 he moved to the United States, and received his B.S. in Forestry from Utah State University in 1951.

He subsequently completed his M.S. in Plant Pathology from Oregon State University in 1959 and his Ph.D. from Washington State University in Insect Pathology in 1964. From 1963 to 1968, he conducted research on pathology of mosquitoes at the University of California, Berkeley, and in 1968 joined the Department of Entomology at Mississippi State University.

Peter has enjoyed a very productive career and he has published more than 100 refereed manuscripts and numerous book chapters. His long and successful career has focused on a variety of research areas including microbial control of mosquitoes, fire ants, boll weevils, pecan weevils, tobacco budworm, corn earworm, and southern pine beetle.

Peter is recognized as an expert on cytoplasmic polyhedrosis virus and on the role of insect pathogens in mass-reared insects. He is the recipient of the USDA Certificate of Appreciation, Mississippi Entomological Association Research Award, and the First Mississippi Corporation Award for Outstanding Experiment Station Worker. Peter has been the major advisor for many M.S. and Ph.D. students at Mississippi State University, and he has taught many students in his Insect Pathology course over the years, who have enjoyed his practical and hands-on teaching style.

In 1998, Peter was awarded Professor Emeritus status in the Department of Entomology and Plant Pathology, and he continues to work mornings. He can be reached at:

Department of Entomology & Plant Pathology
Mississippi State, MS, 39762
Tel: (601) 325-2987
Fax: (601) 325-8837.

MICROBIAL CONTROL NEWS

A New Insecticidal Protein to Challenge the Bt Monopoly?

The most notable success of agricultural biotechnology so far has been the development of insect-resistant crops, which were planted on 10 million acres in 1997. These crops garnered \$300 million in benefits from increased productivity and cost-savings due to reduced pesticide use. The pest-fighting ability of these crops is powered by a handful of insecticidal genes isolated from a single bacterium, *Bacillus thuringiensis*. This precarious dependence on a sole source of pest resistance has led to fears that insects will eventually adapt to Bt genes. There is clear experimental evidence to validate such a concern (See July 1997 ISB News Report).

A new insecticidal toxin has been discovered that may challenge the Bt monopoly. A team of scientists from the University of Wisconsin-Madison, led by Richard ffrench-Constant and David Bowen, has discovered new toxins from a bacterium that may represent the "next generation of microbial insecticide" ^{1, 2}. The gram-negative bacterium *Photorhabdus luminescens* packs a considerable arsenal within its cell: toxins, antibiotics, antifungal compounds, lipases, proteases, and even light-producing genes. The bacteria thrive inside the gut of an insect-attacking nematode. When the nematode invades an insect host, it releases the bacteria into the insect's hemocoel. The bacteria then kill the insect, leaving a cadaver that glows in the dark. The nematodes then eat both the bacteria and insect carcass, with hundreds of nematodes eventually bursting out of a single insect victim.

Photorhabdus is a voracious pathogen. One bacterial cell can kill an insect," says Jerald Ensign of UW-Madison, who with then-graduate student Bowen, discovered the toxic potential of this bacterium which kills its host in 24 to 48 hours. Even picomolar quantities of *Photorhabdus* toxin can be lethal to many pests such as caterpillars, mealworms, and even cockroaches and ants.

The UW team isolated a toxic protein fraction from *Photorhabdus* and found that it had four protein components. When fed to tomato hornworm,

complexes A and D showed very high toxicity. Bowen, Michael Blackburn, and Thomas Rocheleau in the ffrench-Constant lab then probed an *E. coli* expression library of *Photorhabdus* genes with antisera raised against the toxin, and cloned the genes encoding the four proteins. Disappointingly, toxin proteins expressed in the *E. coli* system were not secreted and were not toxic. Deletion mutants of *Photorhabdus*, however, confirmed that *tca* and *tcd* genes encode orally active toxins. The mode of action of these toxins is not yet known and it also remains to be established that transgenic plants expressing these genes indeed become resistant to insects.

The response of the scientific community to the new toxin has been positive but cautious. Fred Gould of North Carolina State University, who studies the evolution of insect resistance to Bt, welcomes the new report. "Finding a totally new toxic protein is good news from the perspective of resistance management. If the two genes can be expressed together in engineered plants, this could be used advantageously." As these toxin proteins would be expressed inside the plant, there should be much less exposure of parasites and predators to them than there has been to conventionally sprayed insecticides, he adds.

Bruce Tabashnik of the University of Arizona, also a Bt-resistance researcher, says that the new discovery is very exciting but notes that "much work will be needed to determine the practical value of these new toxins. Knowledge of their spectrum of toxicity against insects and other organisms will be essential. Also, it remains to be seen if these toxins are insecticidal when expressed in plants, particularly in light of their lack of toxicity when expressed in *E. coli*. In the meantime, we must use Bt wisely -- both to prolong its efficacy and to establish methods for delaying pest resistance that can be applied to new toxins."

Rick Roush of the University of Adelaide in Australia says, "We definitely need alternative toxins to Bt and the *Photorhabdus* toxins may be good candidates. However, there is also a need to temper some of the enthusiasm because *Photorhabdus* toxins are much more poorly known than Bt toxins and because they have broader activities, safety testing must be very extensive before they are used in transgenic crops." He further adds, "It is important to remember that in spite of how well Bt toxins had been characterized by the

mid-1980s, it was more than ten years from the production of the first Bt transgenic plant to the commercial introduction of Bt crops in 1996. *Photorhabdus* toxins may eventually help us to manage resistance to Bt toxins, but for at least the next ten years, we need to be planning to manage Bt resistance without them." Neal Stewart of the University of North Carolina at Greensboro concurs, and says that the broad-spectrum activity of *Photorhabdus* could have numerous ecological effects from food web interactions to decreasing beneficial insect populations. Its effects will need to be tested empirically."

In response, French-Constant agrees that further work is necessary but points out that *Photorhabdus* is one of the only viable alternatives to Bt out there." The UW group is trying to boost the secretion of the Pht toxin and also testing its safety on humans and wildlife ². The *Photorhabdus* technology has been licensed to the Indianapolis-based Dow AgroSciences.

1. Bowen, D., T. Rocheleau, M. Blackburn, O. Andreev, E. Golubeva, R. Bhartia, and R. French-Constant. 1998. Insecticidal toxins from the bacterium *Photorhabdus luminescens*. *Science* 280:2129-2132.

2. Strauss, E. 1998. Possible new weapon for insect control. *Science* 280:2050.

C. S. Prakash
Center for Plant Biotechnology Research
Tuskegee University
prakash@tusk.edu

(Reprinted from ISB News Report)

Novartis Makes Major Move in Agbiotech

Not to be left out of the recent flurry of agbiotech corporate activity, Novartis announced the planned investment of \$600 million over the next ten years to fund one of the largest initiatives in plant genomics. The first step will be the creation of the Novartis Agricultural Discovery Institute (NADI), which will be one of the largest single research endeavors dedicated to agricultural genomics research and development. Located in San Diego, California, the main campus of NADI will have a team of about 180 researchers in 50 laboratories.

NADI researchers will apply genomics technologies to the development of improved plant traits, new methods for crop protection, and new animal health products. NADI will focus on matching genes with traits, primarily through the production and exploitation of gene and protein databases, supported by tools for protein function and structure analyses, and engineering. Initially, NADI will explore plants, fungi, bacteria, viruses, nematodes, and insects, including some model systems

NADI will be a cornerstone of Novartis' biotechnology research, designed to allow cooperation between other Novartis groups including Crop Protection and Seeds. It will work in tandem with the Novartis Agribusiness Biotech Research facility at Research Triangle Park, North Carolina, and with numerous Novartis research stations worldwide. The placement of NADI near the recently announced Novartis pharmaceuticals genomics institute (Novartis Institute for Functional Genomics), which is being built in La Jolla, has the goal of optimizing cross-business synergies in genomics research in both agribusiness and in pharmaceuticals.

The planned investment begins with an initial phase involving \$250 million, to be used in part for the establishment and operation of the NADI, a wholly-owned entity of the Novartis Research Foundation. Approximately \$50 million will go towards the building of NADI, with another \$55 million anticipated for annual operating budget. Building is scheduled to begin in 1998, with completion anticipated in 1999.

Sources

1. Novartis announces \$600 million investment in agricultural genomics. Novartis home page (<http://www.novartis.com>), July 1998.

2. Welch, M., Novartis Earmarks \$600 million for agricultural genomics. *BioWorld Today*, Vol. 9, No. 140, July 23, 1998, pp. 1,6.

William O. Bullock
Institute for Biotechnology Information, LLC
Research Triangle Park, NC
<http://www.biotechinfo.com>

(Reprinted from ISB News Report)

ANNOUNCEMENTS

SIP Nominations Committee Seeks Input

SIP President Juerg Huber has appointed a new Nominating Committee, composed of Bob Granados, Toshi Iizuka, Isabelle Thiery and Wendy Gelernter (chair). The role of the committee is to prepare a slate of nominees for SIP Vice-President, Secretary, Treasurer and Trustees (2 positions) for election in 2000. The slate will be announced at the SIP meetings in Irvine, CA in August, 1999.

We are interested in your input on nominees for these positions. Please send your suggestions to:

Wendy Gelernter
PACE Consulting
1267 Diamond St.
San Diego, CA 92109 USA
E-mail: Gelernt@pace-ptri.com

SIP Brochures Now Available

Your newsletter contains a copy of the new SIP brochure, which we hope will aid our efforts to expand the Society's membership. If you are interested in distributing these brochures at scientific meetings, classes, laboratories or wherever potential new SIP members may lurk, please contact SIP Executive Secretary Peg Johnson (address on page 2) and let her know how many brochures you'll need, and where to ship them.

FUTURE MEETINGS AND WORKSHOPS

International Conference on Emerging Technologies for Integrated Pest Management: Concepts, Research, and Implementation, North Raleigh Hilton, Raleigh, North Carolina, USA, March 8-10, 1999

Today throughout much of the world, IPM is the prevailing paradigm for crop protection. Recently, however, the National Research Council (NRC), in a report titled "Ecologically Based Pest Management: New Solutions for a New Century," expressed concern

that a focus on pesticides and individual pests continues to dominate IPM. The NRC has called for a shift in the IPM paradigm away from managing components or individual organisms to an approach that examines processes, flows and relationships among organisms, an approach that is based on new knowledge and employs new methods to study, monitor and evaluate pest management tools.

During the last decade, there have been numerous scientific and technological advances that have tremendous potential for refocusing and advancing IPM along the lines called for by the NRC. These advances have the potential to alter the trajectory of IPM and to dramatically advance the practice of ecologically based pest management. The development and synthesis of new information, the formulation of new concepts, and increased interdisciplinary collaboration will be required to accomplish this. This conference is intended to facilitate the development and adoption of key emerging pest management technologies in a way that will optimize their contribution to the advancement of ecologically based pest management.

Program updates as well as other information related to the conference can be found at the conference web site: <http://ipmwww.ncsu.edu/ipmconference/>.

The registration fee for the conference is \$200. The deadline for early registration is December 15, 1998. The registration fee after December 15th is \$250. For more information contact Turner Sutton (turner_sutton@ncsu.edu) or George Kennedy (george_kennedy@ncsu.edu) or write :

International Conference on Emerging Technologies
c/o NC State University
Department of Plant Pathology
Box 7616
Raleigh, NC 27695-7616, USA

7th European Meeting in the IOBC/WPRS Working Group "Insect Pathogens and Insect Parasitic Nematodes" and COST Action 819 "Entomopathogenic Nematodes", University of Agricultural Sciences, BOKU, Vienna, Austria, March 22-26, 1999

General Theme: "Capturing the Potential of Biological Control"

"Subgroup Fungi" (B. Papierok) will focus on the special topic "Soil as a Reservoir for Entomopathogenic Fungi".

"Subgroup Nematodes" (R.U. Ehlers) together with COST 819 (N. Boemare) will focus on the special topic "Toxic Metabolites of Nematode-Bacteria Complexes". This as well as other COST 819 Working Group Meetings will be held jointly with sessions of the "Subgroup Nematodes".

Workshop I "Identification of Entomopathogenic Fungi" organized by Bernard Papierok and Siegfried Keller will focus on *Entomophthorales* and *Deuteromycetes* (with basic information on *Ascomycetes* of the Genus *Cordyceps*), respectively.

Workshop II will focus on "Identification of pathogens in bark beetles and locusts" (organized by Rudolf Wegensteiner and Regina Kleepies).

Furthermore, a workshop and discussion on the special topic "Microsporidia in *Lymantria dispar*" will be organized. Please contact Gernot Hock directly to get further information (hoch@ento.boku.ac.at).

COST Working Groups together with the IOBC/WPRS Subgroups will also organize the workshop and discussion on "Integrating Pathogens in Insect Biocontrol".

For more information, contact:

Rudolf Wegensteiner
Institute of Forest Entomology, Forest Pathology and Forest Protection
University BOKU Vienna
Hasenauerstrasse 38, 1190 Vienna, Austria
Tel: 43-1-3195539-30
Fax: 43-1-3195539-97
E-mail: wegenst@ento.boku.ac.at

Joint Annual Meeting of the Entomological Society of Saskatchewan and the Entomological Society of Canada, Saskatoon, Saskatchewan, Canada, Sept. 26-29, 1999

"Managing the Millennium Bug" will be the theme of the next ESC Annual Meeting to be held in conjunction with the ESS fall meeting. Two symposia have been

selected to represent this theme; Pest Forecasting (O. Olfert, organizer) and Biotechnology and Pest Control Initiatives (G. Khachatourians, organizer). Several workshops will also be organized; some suggested themes include Lygus (B. Footit), Internet Resources for Entomologists and Prairie Ecosystem Biodiversity but we are actively soliciting additional proposals (C. Gillott, program coordinator).

The meeting will take place at the Radisson, a full service luxury hotel overlooking the park and river valley with an indoor resort complex with two three-story water slides. It is situated only blocks from the downtown core on the shores of the scenic South Saskatchewan river with direct access to over 300 acres of riverbank parklands and well-developed trail systems. History comes alive at many exceptional museums such as the Western Development Museum and its popular main street 1910 Boomtown. Six thousand years of habitation can be explored at Wanuskewin Heritage Park.

For more information please contact:

Dr. Dwayne Hegedus, Organizing Committee Chair
Agriculture and Agri-Food Canada
107 Science Place
Saskatoon, SK, S7N 0X2, Canada
E-mail: hegedusd@em.agr.ca
or
Dr. Cedric Gillott
Department of Biology
University of Saskatchewan
112 Science Place, Saskatoon SK, S7N 5E2
E-mail: gillott@duke.usask.ca

**The 3rd Pacific Rim Conference on Biotechnology of *Bacillus thuringiensis*.
Wuhan, P.R. China, October 4-8, 1999**

Wuhan, the capital of Hubei Province, is one of the six largest cities in China. It is located at the junction of the Yangtze River and the Han River. Wuhan is a famous cultural city with a history of 3,500 years. This area was home to Chu State which can rival the Greek Civilization in the west in culture. And with its favourable geographical position, Wuhan was also the second largest center of commerce and trade in the late 19th century.

The city covers an area of 8,467 square kilometers with a population of about seven million. As it is located in the central part of China, Wuhan is an important pivot of transportation and communications in the country. With highly concentrated industries in different categories, the state pays much attention to the development of this key industrial base. With a prosperous market and a sound financial system, Wuhan is the biggest center of domestic and international trade of central China; with advanced technology and a wealth of human resources, Wuhan is also an educational center with more than 40 universities and 100 science and technology research institutes.

Wuhan is the microbial insecticides center of China. It is also the center of research, development and production of *Bacillus thuringiensis*.

We look forward to seeing you in Wuhan next year in 1999.

Key topics of the conference

All papers selected by the conference will focus on the following aspects, including:

1. the isolation, screening, and characterization of new strains;
2. novel genes and toxins;
3. the expression and regulation of genes and the improvement of strains;
4. the structure, function and mode of action of toxins;
5. transgenic plants containing *Bacillus thuringiensis* toxin genes;
6. research on resistance and its management;
7. production, safety, and registration;
8. application.

Language

The official language of the conference will be English.

Activities

1. A training course of "Biotechnology of *Bacillus thuringiensis*" will be held before the conference for about two weeks.

2. A tour to the famous scenic spot -- the Three Gorges on the Yangtze River in Hubei Province will be organized after the conference.
3. A tour to the Yellow Crane Tower & the East Lake.

For more information, please contact:

Prof. Yu Ziniu, Chairman, Local Organizing Committee
Department of Microbial Science & Technology
Huazhong Agricultural University
Lab of Insecticide Microbiology
Hubei Wuhan 430070, People's Republic of China
Tel: 86 27 7396030
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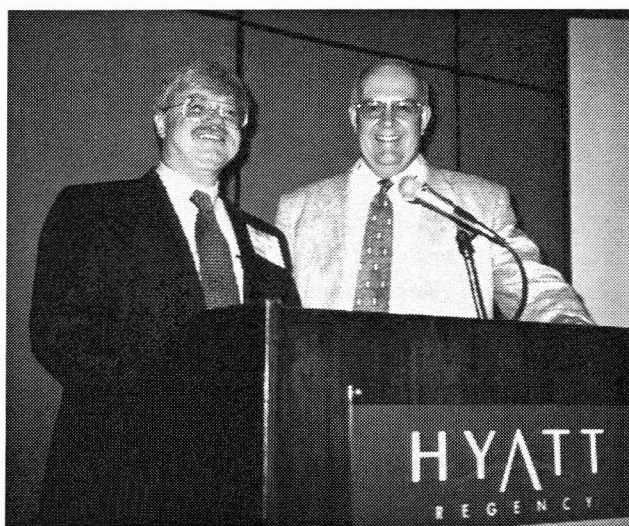
PAST MEETINGS

Alternative Paradigms for Commercializing Biocontrol Workshop, New Brunswick, New Jersey, May 31-June 2, 1998

This Workshop addressed the need for a new paradigm for biopesticides that emphasizes their strengths, as distinct from the current paradigm, which has been to try to make biological control agents chemical analogues, an approach that tends to emphasize their weaknesses. The chemical model for commercializing biocontrol emphasizes major crops and cheap, stable products that are easy to scale-up and use. Biological agents fit this model poorly: a new paradigm is needed rooted in biological realities.

The Workshop was designed to identify potential opportunities, understand how to develop enterprises that implement and deliver biocontrol, recommend new research directions, and identify potential partnerships. The 110 participants, representing four continents, provided a challenging interdisciplinary mix of expertise, including regulators, researchers, extension, industry, environmentalists, and growers to fulfill their charge to "think different."

Many speakers were from "outside the box" of biocontrol (e.g., the food industry, which meets similar difficulties in marketing highly perishable products) and served to stimulate discussion during the breakouts



Randy Gaugler and Dean Bruce Carlton kick off the workshop

sessions. Breakout participants were tasked with identifying novel opportunities for commercializing biological control that would have potential for development in the next ten years.

Using these opportunities as a starting point, participants identified key legal, financial/business, scientific/technological, and education/communication issues that might play a role in promoting or constraining commercialization, as well as suggestions for resolving obstacles. A key theme that ran through the recommendations was the concept of grower cooperatives playing a more central role in product registration and distribution, grower training, and political action. The Workshop identified a key bottleneck for developing a new paradigm to be the dearth of viable, small-scale, local businesses to supply biocontrol products.

In the closing address "Where do we go from here," Dr. Jeffrey Waage discussed "bending" the paradigm, principally via education. The need for training in biocontrol was a recurrent message throughout the meeting. He also emphasized a vision for biological control which focuses on self-perpetuating low-cost systems with local /or regional processes and grower participation, all within a strong ecological context.

Follow up for the Workshop will be provided by the co-organizers: Rutgers University and the Experiment Station Committee on Policy – Working Group on Biological Control (ESCAP-WGBC). The

Rutgers co-organizers are preparing a document for distribution that presents the Workshop's discussions and recommendations, and a list of participants. The document will be accessible via the Internet at:

<http://www-rci.rutgers.edu/~insects/biopesticides.htm>.

Action steps were identified specific to government, universities, industry, and growers. Rutgers has already taken steps to implement one of the action steps identified for universities: to establish Biological Control Working Groups at the state level to improve communication. ESCOP-WGBC will also follow-up actions suggested at the Workshop, beginning with the need for a national assessment of current technologies and technology needs in biocontrol. ESCOP-WGBC will further serve as an advocate to further streamline the regulatory environment for biopesticides by establishing a broad dialog with the appropriate federal agencies.

Randy Gaugler
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OECD Workshop, Sustainable Pest Management, "Safe Utilization of New Organisms", Montreal, Quebec, Canada, September 27 - 30, 1998

The Organization for Economic Cooperation and Development (OECD) Cooperative Research Program: Biological Resource Management for Sustainable Agriculture Systems jointly organises workshops each year in different countries to facilitate international collaboration, joint projects and OECD concerted approaches for sustainable agricultural systems.

In 1998, the Management Committee of the OECD Programme granted support to Canada's proposal for a workshop dealing with the safe utilization of new organisms, to discuss research needs and opportunities from a regulatory, industrial and scientist's perspective. The workshop was held near Montreal, Quebec, and focussed on the safe use of biocontrol organisms for Sustainable Pest Management with 48 delegates participating from 13 countries.



SIP Members at the OECD Workshop: M. Goettel, R. Cibulsky, R. U. Ehlers, J.-L. Schwartz, S. Keller, M. Klein, R. Leprade, J.-C. Cote, T. Jackson, H. Hokkanen, K. Jones, J. Baum, B. Broadbent and L. Solter.

The workshop was divided into 5 sessions: Policy regulations for registration of microbial organisms; Research challenges and needs for safe use of microbial organisms - an industrial perspective; Research challenges and needs for safe use of microbial organisms; Research needs for safe use of arthropods; and Research challenges for safe use of transgenic organisms. The session on Research challenges and needs for safe use of microbial organisms was organized by Jean-Charles Côté and Mark Goettel and presentations were given by Jacques Boisvert, Trevor Jackson, Siegfried Keller, Keith Jones, Harry Evans and Leellen Solter. Papers on transgenic microorganisms were presented by James Baum, Ivan Gard, Laszlo Hornok and Mike Klein.

The workshop culminated with open discussions and recommendations. Proceedings of the workshop will be published and details will be made available in the SIP Newsletter as soon as they are available.

Mark Goettel
Lethbridge Research Centre

ON THE WEB

B.A.D. for Bugs: a relational database on insecticidal activity of *Bacillus thuringiensis* toxin proteins is now on-line!

The ongoing discovery of new Bt toxin genes and rapid accumulation of information on their insecticidal activities has prompted us to construct a relational

database on Bt toxin specificity in order to make this information accessible in a searchable format.

The BioAssay Database was first announced at the 1997 SIP meeting in Banff with the promise to have it online by year's end. Although this took a bit more time than we anticipated, the database is now available and can be accessed through our web site (<http://www.glfrc.forestry.ca/english/res/bactpa.html>).

In its current form, the database includes published data on insecticidal activity of toxins that are listed by the Bt delta-endotoxin nomenclature committee (http://www.biols.susx.ac.uk/Home/Neil_Crickmore/Bt/toxins.html). The database is limited to spore-free preparations of crystal proteins or toxins that were bioassayed individually (i.e. cloned gene products or toxins purified from single gene strains). Genetically altered toxin proteins are not included (with the exception of minor modifications to enhance gene expression or protein stability, e.g. cry9Ca1).

The database links effective dose estimates for the toxin proteins with information on various factors which may affect toxicity. Those factors include the host used for toxin gene expression, how the protein inclusions were purified, if and how the toxins were activated, solubilized or purified, the method used for toxin protein quantification, the species and stage of the insects that were bioassayed, the type of bioassay used, general bioassay conditions, and the parameter used to assess toxicity. You can find a full description of the database categories on our web site.

The information was integrated into four main tables (reference, toxin preparation, insect, and bioassay), using Microsoft Access 97. The tables were then published on the Internet by using Dataspot (Mercado Software Inc). This software allows you, the end-user, to make plain language queries and follow hypertext links in your quest to retrieve the desired information, the same way one uses a Web search engine. A short tutorial on how to use the database has been provided on our web site to get you started.

The database will be updated regularly as new information gets published. We make the commitment to maintain the database as a service to researchers, industry and regulatory agencies around the world. In return, you can help by:

- * sending us preprints of your publications
- * making available your unpublished toxin specificity data; please see our web site for instructions
- * citing our web site whenever you use it to extract information for publications. The correct format for doing so is:

van Frankenhuyzen, K. and C. Nystrom
"The *Bacillus thuringiensis* toxin specificity database"
(1998)
<http://www.glfc.forestry.ca/english/res/bactpa.html>
(date site accessed)

The database in its current form is a prototype which we intend to fine tune and modify in response to user feedback. So please let us know about any problems, errors, or inaccuracies you encounter and how you would like to see it improved.

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***Bacillus thuringiensis* Crystal Structure Explained for Beginners**

The elucidation of the 3-dimensional structure of the *Bacillus thuringiensis tenebrionis* Cry3Aa3 toxin by Li *et al.* in 1991 represented an important breakthrough in our ability to understand the mechanism of action of *B. thuringiensis* crystal toxins. Such structural information can, however, be difficult for a general audience to appreciate. As a result, Colin Berry has designed a web-based tutorial to allow the visualisation of the *B. thuringiensis tenebrionis* toxin, so that users can take part in a "hands-on" exploration of its molecular structure.

The tutorial displays the structure with an accompanying text that highlights key features with reference to the proposed mechanism of action of the toxin. Buttons within the text alter the display to show these individual features in detail whilst other preset options allow further manipulation of the image to

make the tutorial a fully interactive experience. Only by manipulating the molecule in this way is it possible to visualise how the important elements of the toxin sequence interrelate in the structure.

The tutorial is intended as a general introduction to the important characteristics of toxin structure and will be a useful guide to anyone who wishes to gain an insight into *B. thuringiensis* mechanism of action. It can be found as part of Dr Berry's web site at:
<http://www.cf.ac.uk/uwc/biosi/staff/berry/chime/rcentral.html>

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Full-text Journal Articles on the Internet

The information superhighway has done much lately to divert traffic away from the campus library. Many scientists and students visit the virtual library right on their desktops to read scientific papers in their favorite journals. Most publishers are racing to place their journals on the Internet where one can not only read complete scientific articles but also jump to cited papers in the title, connect to the nucleic acid or protein databases, and even e-mail the authors instantly. The awesome power of the Internet thus goes beyond providing simple electronic access of published text to pack more punch in journal reading.

The most innovative and thoughtful effort in placing scientific journals on the Internet is from Stanford University, called HighWire Press (<http://highwire.stanford.edu/>). To reduce exploding journal costs and to make use of the communication opportunity provided by the Internet, HighWire has teamed up with many non-profit journal publishers such as scientific societies and universities to provide electronic access to journals such as:

Science (<http://www.sciencemag.org/>)

While at the HighWire site, be sure to visit their section on "Tips for Better Browsing" (<http://highwire.stanford.edu/tips/>) for some very useful

advice such as increasing the font size and viewable area on your browser and how to stop those distracting spinning graphics.

The commercial publishing houses also provide electronic access to their journals but the price of such access can be steep. However, if your library has a subscription to the print version of a particular journal, you may be able to access the electronic version at no cost. Elsevier, which publishes *Biofutur*, *Biotechnology Advances*, *Trends in Biotechnology*, and other journals of interest to biotechnology has perhaps the best site with access to nearly 1000 journals (<http://www.sciencedirect.com>). The Springer site (<http://link.springer.de/>) lets you read journals such as *Plant Cell Reports*, *Theoretical and Applied Genetics*, *Crop Science*, *Applied Microbiology & Biotechnology*, and *Molecular & General Genetics*. The Academic Press journals are available at <http://www.idealibrary.com/> while the Kluwer site (<http://www.wkap.nl>) has *Plant Molecular Biology*, *Plant Molecular Biology Reporter*, and *Molecular Breeding* although their *Transgenic Research* and *Euphytica* are not yet on the Internet.

Most journals now offer their papers in both HTML and PDF versions. The PDF version lets you print the journal article in exactly the same format as the original print version and requires that your computer has the Adobe Acrobat software, which can be downloaded for free at:

<http://www.adobe.com/prodindex/acrobat/readstep.html>.

By using a color inkjet printer and glossy paper, one can print scientific papers identical to the original reprints right in your office complete with graphics and half-tone photographs. The HTML format is intended for desktop viewing and offers additional features such as hyperlinks within a title to tables and figures (which could be zoomed up), and to other cited and related papers through the Medline database.

Some very high-impact biotechnology journals from the Nature group (<http://www.nature.com/>) including *Nature Biotechnology* (<http://biotech.nature.com/>) offer TOC, abstracts, and news articles on their sites, but do not yet provide full texts of journal articles on the Internet.

Biotechnology is a highly information-intensive science and the availability of scholarly journals now on the Internet has democratized access to scientific information. Hopefully this access will become more affordable for individual academic users as the number of such users increases over time.

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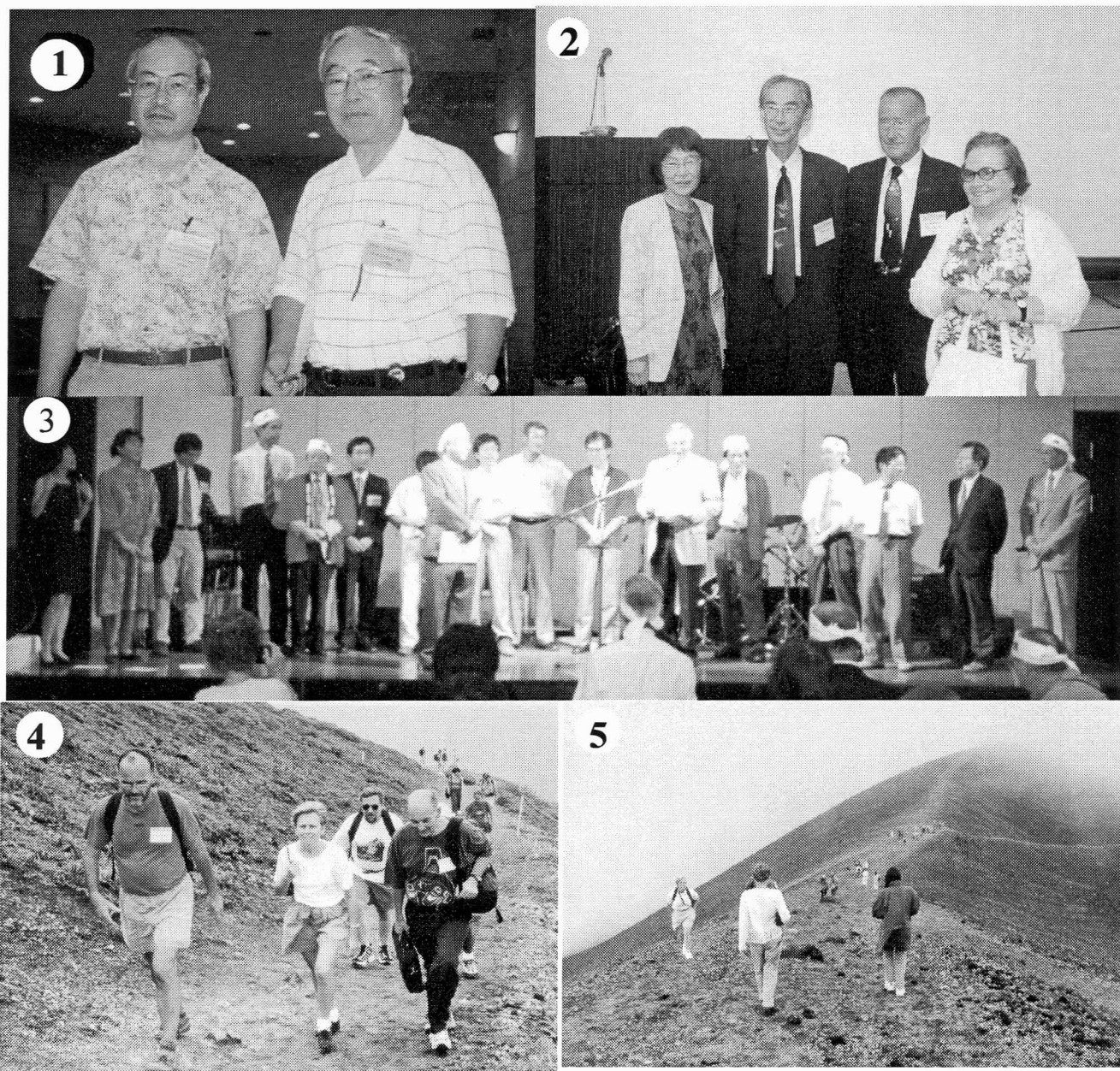
(Reprinted from ISB News Report)

EDITOR'S NOTES

Many thanks to all those who contributed to this issue of the Newsletter. Special thanks to Toshi Iizuka, Liga Jankevica, Peter Krell, Andrew Rath, and Don Roberts for providing photos of the Sapporo meetings. Karen Toohey did the typing, Allison Goettel helped with photos from Sapporo layout and Peg Johnson arranged for the printing and distribution.

This issue has been delayed due to the inclusion of the suggested changes to the Constitution and Bylaws. **If you receive this Newsletter after 20 December, we'd like to hear from you.** Thanks.

Deadline for next issue. Please submit all material by **January 15, 1999**, for publication in the February, 1999 issue.



1. Organizing Committee Co-chair, Takeshi Kawarabata and Chair, Toshihiko Iizuka; 2. Dr. & Mrs. Jun Mitsuhashi and Dr. & Mrs. Karl Maramorosch; 3. The Organizing Committee; 4. The long climb up Mount Tamurae; 5. Along the volcano rim...made it at last.

Photos from Sapporo



6. "Hello, Japan Volcano Monitoring Service? What do you mean Mt. Tamurae is about to erupt?"; 7. The SIP 5-K Olympians at Makomanai Olympic Park; 8. The gents soak their aching muscles in the hot spring baths at the Shikotsu Kanko Hotel; 9. And the ladies do the same, just on the other side of the bamboo fence; 10. Samantha Jarrold and the SIPer's at a local Karaoke Bar; 11; Strange things happening late at night at one of Sapporo's hottest night clubs!

Photos from Sapporo