sip

NEWSLETTER

society for invertebrate pathology

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BANFF HOSTS OVER 330 PARTICIPANTS

The 30th Annual Meeting of the Society for Invertebrate Pathology was held at the Banff Centre for Conferences, Banff, Alberta, Canada, August 24-29, 1997. There were 392 registrants, including 57 students and 61 companions, from 28 countries.

The scientific program consisted of the Founder's Lecture and 10 symposia covering a wide range of basic and applied invertebrate pathology, 22 contributed paper sessions and two poster sessions. As well, the Bacteria, Microbial Control, Microsporidia and Virus Divisions each sponsored workshops.

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Deadline for the next Newsletter is January 15, 1998.

Of the 296 scientific papers accepted, 48 were symposia papers, 145 were contributed papers and 105 were posters. The symposia and oral contributed papers were scheduled in a series of sessions on Monday through Friday morning with a maximum of three concurrent sessions.

The annual business meeting was held on Thursday morning and was well attended. The business meeting was preceded by a special presentation on the SIP web site.

Student Awards:

There were 40 presentations, 28 oral and 12 poster, entered in the student competition.

Don't Forget to Pay Your Dues for 1998

Dues notices for 1998 were mailed out by FASEB last month. 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 FASEB will cease handling our membership services in early 1998. **The next issue of the Newsletter will be sent only to paid up members.** If you haven't yet received your 1998 notice or have misplaced it, please contact FASEB as soon as possible EMAIL staff@dues.faseb.org.

Five awards were presented for the following **oral presentations**:

Jennifer Altre, Attachment and germination of virulent and avirulent *Paecilomyces fumosoroseus* isolates on diamondback moth larvae. Co-author: John Vandenberg (USDA-ARS, U.S. Plant, Soil & Nutrition Lab, Ithaca, NY)

Stephen Garczynski, Potential roles of midgut glycolipids in *Bt* toxin action. Co-author: M.S. Adang (University of Georgia, Athens, Georgia, USA)

Catherine A. Hill, A *Bacillus thuringiensis* louse toxin. Co-author: D.E. Pinnock (University of Adelaide, Department of Crop Protection, Waite Campus, Glen Osmond, Australia)

Kelli Hoover, Influence of induced plant oxidative enzymes on the efficacy of baculoviruses. Co-authors: M.J. Stout, B.D. Hammock and S.S. Duffey (Department of Entomology and Department of Environmental Toxicology, University of California at Davis, Davis, California, USA)

Peter J. Isaacson, Fungicidal compounds produced by the symbiotic bacteria of entomopathogenic nematodes. Co-authors: J. Li and J.M. Webster (Department of Biological Sciences, Simon Fraser University, Burnaby, British Columbia, Canada)

Two awards were presented for the following **posters**:

Vishna Devi Nadaraiah, Structure-function studies of the *Bacillus thuringiensis* CryICa δ-endotoxin. Co-authors: N. Crickmore, E. Bone and D. Ellar (University of Cambridge, Department of Biochemistry, Cambridge, UK)

Makiko Sakurai, Characterization of temperature-sensitive mutants of *Bombyx mori* nucleopolyhedrosis. Co-authors: M. Shikata, Y. Sano, Y. Hashimoto and T. Matsumoto (Department of Applied Biology, Kyoto Institute of Technology, Sakyo-Ku, Kyoto, 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 January 15, 1998.

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 completness. 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.

Students receive their prizes at the awards ceremony

The Students Awards Committee was chaired by Wayne Gardner and the judges were Mary Barbercheck, Bruce Carlton, Norm Dubois, Ross Halliday, Elizabeth Gordon, Michael McGuire, Bill Moar, Roberto Periera, Naomi Pye, Eliane Quintela, Ian Smith and Doug Streett.

Congratulations to all of the students for their excellent contributions.

Social Events: The meetings started with a mixer held at the Max Bell Foyer on Sunday evening. On Monday, 26 companions visited the Columbia Icefields. They were lucky to view a black bear on their way back on the bus. On Tuesday evening, delegates attending the Division of Bacteria sponsored Workshop were treated to a wine and cheese reception, hosted by the National Research Council of Canada's Biotechnology Research Institute in Montreal, while 13 companions toured the world-famous Banff Springs Hotel.

On Wednesday, the 5-K race and a picnic lunch were held at the Nordic Centre, Kananaskis Provincial Park, site of the 1988 Winter Olympic Games Nordic events. Afterwards, registrants were taken to Lake Louise where they had the opportunity to stroll around the lake and visit the Chateau. In the evening, a Western Style BBQ was held at the Brewster Donut Tent where 400 delegates and their families enjoyed a beef and salmon dinner, were entertained by local Native Dancers, and danced the night away to polkas, line and square dances.

The Banquet took place at the Banff Centre Dining Hall, where delegates were greeted by Sergeant Peterson of the Royal Canadian Mounted Police. After enjoying a fine meal of pheasant, awards were presented to the Founder's Lecturer, Student Competition and 5-K race winners. Special presentations were made to Earl Weidner for the best-used SIP T-shirt, Ross Halliday for winning his golf tournament and to Chris Payne for being the most enthusiastic square dancer! After the awards presentation ceremony, delegates danced the evening away to the music provided by the band T-4.

5-k first prize winners at awards ceremony in Banff

5-K Race Winners: 59 members officially participated in the race. Winners were:

FIRST PLACE:

Runner under 35 - male		
	Victor Perez Juarez	27:48
Runner under 35 - female		
	Susanne Vestergaard	29:55
Runner over 35 - male		
	Urs Tuor	27:11
Runner over 35 - female		
	Leellen Solter	36:06
Tied	walker - male	
	Ted Andreadis	46:05
	James Becnel	46:05
Walker - female		
	Peggy Andreadis	42:39
First across the finish line with a walking stick		
	Albert Pye	untimed

SECOND PLACE:

Runner under 35 - male		
	Gernot Hoch	28:28

Runner under 35 female
Alison Mowbray 30:47
Runner over 35 - male
Earl Weidner 27:12
Runner over 35 - female
Mary Barbercheck 37:07
Walker - male
Roy Bateman 47:46
Walker - female
Lucy Anderson 49:17

THIRD PLACE:

Runner under 35 - male
Takuji Noma 29:20
Runner under 35 female
Rosalind Barrington Leigh 33:29
Runner over 35 - male
Paul Jarrett 28:01
Runner over 35 - female
Eleanor Groden 40:31
Walker - male
Mickey McGuire 48:11
Walker - female
Michelle Stephenson 52:44

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

Agriculture & Agri-Food Canada, Research Branch
Lethbridge Research Centre
Pacific Agri-Food Research Centre
Saskatoon Research Centre
Abbott Laboratories
AgraQuest
AgrEvo
American Cyanamid
Becker Microbial Products
Big Rock Brewery
BioLogic
Biotechnology Research Institute (NRC)
Canadian Airlines International
Ecogen
E.I. Dupont
EcoScience
Mission Hill Wines
Monsanto (Ceregen)
Mycogen
Mycotech
Novartis
Ricerca
Thermo Trilogy
University of Alberta (Dept. of Biological Sciences)
Université de Montréal (Group de recherche en transport membranaire)

Additional funding for the Division of Bacteria sponsored Symposium was provided by the following:

Abbott Laboratories
FMC Corporation
Monsanto
Pioneer

Appreciation is extended to the staff of the Banff Centre, our sponsors, and to the members of our Program Committee.

Mark S. Goettel, Chair, SIP Banff '97 Organizing Committee

Jim Harper presents Kees van Frankenhuyzen with Founder's Lecturer Award at Banff

VIIth International Colloquium on Invertebrate Pathology and Microbial Control and IVth International Conference on *Bacillus thuringiensis*, Therme International Hotel Sapporo, Sapporo, Hokkaido, Japan, August 23-28, 1998.

Of all the major cities in Japan, Sapporo is geographically closest to both North America and Europe in terms of air routes, and it is very comfortable in August. The population of Sapporo is 1.7 million, making it Japan's fifth largest city. It is set amid the natural beauty of Hokkaido. Everything will be held at the Therme International Hotel

Sapporo, located 20 minutes from downtown. Therme has first-rate convention halls and facilities. It also features a hot spring and one of the world's largest water parks. Conference highlights will include a stimulating keynote lecture, topical symposia and presentations of papers and posters. We are preparing an exciting excursion to beautiful Shikotsu-Toya National Park. We look forward to seeing you in Sapporo in August 1998!

Sapporo lies about 800 km (500 miles) and 1170 km (725 miles) north of Tokyo and Osaka, and about one and a half and two hours away from Tokyo and Osaka by plane, respectively. Construction of this modern city began in 1869 and since that time has developed rapidly. Sapporo has become the key city of the north in the Japanese archipelago, and is now the administrative, educational, cultural, and economic center of Hokkaido.

Therme International Hotel Sapporo: The conference venue is located alongside the Barato River in northern Sapporo, in a convention and resort hotel ideal for those wanting longer stays. This world-class hotel is equipped with high-quality accommodation and convention facilities. As a post-conference treat, guests are welcome to retire to one of the world-largest German-style aqua amusement facilities for a well-deserved break.

Accommodation. Two classes of hotel accommodation will be available. The first class will be the Therme International Hotel Sapporo or equivalent (single room, one night: approx. US$100; twin: US $180). Second class hotel accommodations will be approximately US$70 (single room, one night). Final decisions on hotel rates should be made soon.

Travel to Sapporo. Most international flights arrive at New Tokyo International Airport (Narita) or Kansai International Airport (Osaka). Domestic flights are available to Sapporo (New Chitose Airport) from Tokyo International Airport (Haneda) which is two hours by bus from Narita. Two airli nes fly between Narita and Sapporo (New Chitose Airport). JAL provides one flight daily. ANA flies three times a week. Also, direct connections by domestic flights (about 8 flights daily) are available from Kansai International Airport to Sapporo (New Chitose Airport). It is also possible to travel directly to New Chitose Airport. There are daily flights to Sapporo from Seoul, South Korea and Honolulu, USA, and flights twice a week from Amsterdam, Guam, Hong Kong and Cairns, Australia.

Official Travel Agency

For reservations from the USA:
Kinki Nippon Tourist, San Francisco Branch
Japan Center, Kintetsu Bldg.
1737 Post Street, CA 94115 USA
Tel: 415-922-7171; Fax: 415-922-4101

For reservations from other countries:
Kinki Nippon Tourist, Sapporo Ekimae Branch
Shin Hokkaido Bldg., Nishi 4-chome, Kita 7-jo,
Kita-ku, Sapporo 060 Japan
Tel: +81-11-716-5522; Fax: +81-11-716-5503

Plenary Session and Symposia: The following is a tentative list:

Plenary session

1. Defence mechanism (S. Natori)
2. Registant mechanisms of *Bacillus thuringiensis* (D. Ellar)
3. Others (Up to date topics)

Symposia

1. *Bacillus thuringiensis* (A. Klier, D. Ellar, T. Iizuka and R. Sato)
   a) Function of receptor molecules in insecticidal activity of Bt toxin (S. Garczynski)
   b) Bt resistance mechanism and management strategies (J. Moar)
2. Entomovirus (S. Thiem and M. Kobayashi)
   a) Molecular aspects of host range
   b) Mass production of viral insecticides
   c) Novel approach to virus vector development
3. Insect cell cultures in pathological studies (K. Maramorsch and J. Mitsuhashi)
   a) Development of insect cell cultures with special reference to insect pathology. (K. Maramorsch)
   b) Contribution of insect cell cultures to microbial control of insect pests. (R. Granados)

c) Propagation of viruses in insect cell cultures. (T. Sato)
d) Propagation of microsporidians in insect cell cultures. (T. Kawarabata)

4. Immune system and defense mechanisms (H. Wago, M. Yamakawa and M. Ashida)
5. Symbiont microorganisms (H. Ishikawa and H. Noda)
6. Entomophilic nematodes (J. M. Webster, H. K. Kaya and N. Ishibashi)
   a) Ecophysiological survival strategies of nematodes. (H. K. Kaya and N. Ishibashi)
   b) Nematode-bacterial symbiotic relationships. (J. M. Webster and K. Futai)
   c) Advances in genetic improvement of nematode-bacterial complexes. (R. -U. Ehlers and E. Kondo)
7. Molecular biology associated with entomopathogens (M. Himeno, Y. Kanda and Y. Matsuura)
   a) Entomopathogens as genetic resources.
   b) Molecular breeding of invertebrate pathogens (including transgenic plants, microorganisums, bacteria fungus, virus etc.).
8. Fungi (D. W. Roberts, S. Shimizu and M. Shimazu)
   a) Biology and utilization of an entomogenous fungal genus *Cordyceps*.
   b) Molecular biology of entomopathogenic fungi.
9. Protoza (T. Kawarabata and S. Hayasaka)
   a) *Nosema bombycis* and silkworm pathogenic microsporidians.
10. Marine invertebrate pathology (D. V. Lightner and T. Sano)
    a) Diagnostic methods and promising preventive measures.
11. Microbial control of insect pests (L. Lacey and Y. Kunimi)
    a) Microbial control in integrated pest management of orchard pests. (L. Lacey)
    b) Microbial insecticides: Novelty or necessity. (W. Gelernter and H. Evans)
    c) Natural philosophy and measurement of horizontal transmission. (D. Onstad)

Call for Papers. **April 10** will be the deadline for receipt of abstracts for individual symposia, submitted papers, and poster presentations. Abstracts received after the deadline will not be printed. Details for abstract submission will be provided in the February Newsletter.

Social Events. A mixer will be held on Sunday evening from 7 to 9 p.m. in the restaurant of the Therme International Hotel Sapporo. Two different excursion choices will be available for Wednesday. One will be a climb up Mt. Tarumae. The climb should take about one hour and it should be no problem for most delegates. The view from the top of the mountain overlooks Lake Shikotsu. The second excursion will be to Noboribetsu Hot Spring. Delegates can enjoy the large bathing facility at the hot spring. A good hiking course, Jigoku-dani, is also near by. After the respective excursions, all delegates will be able to enjoy a hearty dinner at the Sapporo Beer Factory. A banquet will be held at the Therme International Hotel Sapporo on Thursday. The entertainment will include performances of traditional Japanese dance and taiko drumming.

Registration. Registration information will be available in the February Newsletter. Up to date information on the meetings can be obtained from our homepage: "**http://shin.agr.hokudai.ac.jp**"

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FROM THE PRESIDENT

We had an absolutely excellent meeting at Banff, both in terms of the setting, content, and social aspects. Attendance was very good, and the weather cooperated, making the meeting a rewarding experience all around. On behalf of the Society, I thank Mark, Martin, and their colleagues for doing an outstanding job.

The Council meeting at Banff provided an opportunity to review the current status of the Society. I have chosen, therefore, to devote the present column primarily to a synopsis of state of the Society as I see it.

Financial Status. Our financial status remains strong, with a current balance of $146,767.

However, this is a decrease of approximately $15,000 over our 1996 balance, and resulted from a combination of factors including higher FASEB fees and higher mailing costs for the Newsletter and Abstracts. In general, analysis of the 1997 budget indicates that our dues are not covering the combined costs for production and mailing of the Newsletter and Abstracts, and FASEB management. This raises the possibility of increasing our dues or reducing our costs. While the Council decided not to raise dues in the next year, it is possible an increase will be needed in the near future.

Membership. Membership remains strong, with more than 850 dues-paying members for 1997. This is a slight decrease (2%) from 1996, but Jimmy Becnel, Membership Committee Chair, is implementing strategies to keep the Society growing at a moderate rate. Many members continue to express the view that they like the Society because of its moderate size and concomitant collegiality, especially evident at our annual meetings.. Thus, our objective is not to grow much larger, at least in the near future.

Annual Meetings. Comments about the overall quality of the 1996 Cordoba meeting have been very positive. Paid registrations for the Banff meeting were over 300, and thus it appears this will be another very successful meeting for SIP. Planning for the meeting next year in Sapporo is well underway. This will be an International Colloquium, and will be combined with the International Conference on *Bacillus thuringiensis*. Thus, attendance should be in the 500-plus range. However, the costs for this meeting will be higher in comparison to previous meetings, but certainly the value will be there, as you will see in upcoming Newsletters. The Council voted to have the 1999 annual meeting in California, and I am currently negotiating the final location, which will be either the University of California, San Diego, or the University of California, Irvine. For the year 2000, the site will be Guanajuarato, Mexico, and planning is already in progress.

Divisions. We now have four divisions. These are Microbial Control (342 members), Microsporida (79), Viruses (126), and Bacteria (120), the latter two initiated last year. At the Banff Council meeting the Bylaws for the new divisions on viruses and bacteria were formally approved.

FASEB Management. I had several conversations with the staff at FASEB over the past year regarding their management fees. While the service they have provided SIP has been very good in the past, their recent fee increases on a percentage basis have been substantial, averaging more than 20% for 1997, and 1998. FASEB proved to be inflexible on their fee structure, and thus the Council and Society membership present at the business meeting voted to discontinue our relationship with FASEB. I am currently negotiating with other potential service providers to assume our management in 1998 .

Constitution & Bylaws. The Constitution and Bylaws are in the process of being revised by a committee under the chairmanship of John Vandenberg. Phase I, which deals primarily with changes in the existing Constitution and Bylaws, is now complete. Phase II, the development, where needed, of new provisions in the Constitution and Bylaws, is currently underway, and should be ready for Council and Society action my mid-1998.

As I noted above, the Society is in very good shape, largely as a result of the previous administrations. Though some minor problems have arisen, primarily financial, we are in a position to move forward and strengthen our current status by taking the appropriate actions decided upon at the Council Meeting in Banff.

Brian Federici

LETTER TO THE EDITOR

Report On Sapporo 1998 Conference Facility

In April I visited Dr. Toshi Iizuka, Hokkaido University, who will host the VIIth International Colloquium on Invertebrate Pathology and Microbial Control in 1998. He asked me to tell SIP members about the meeting facility in Sapporo. When you

read this report, you may think that it is too early to talk about the 1998 meeting. But, it is a good idea to plan ahead, because August is the busiest and most expensive season to travel to Japan, in particular to Sapporo.

Sapporo is on the northern major island of Japan called Hokkaido. In Japanese, Hokkaido means north-sea region. Since it is hot and unbearably humid in summer in the southern islands of Japan, many people spend their summer vacation in this northern island to enjoy its cool, dry climate. If you fly, it takes only one hour from Tokyo while a train trip would take some 12 hours.

You have probably heard numerous people say that it is very expensive to travel within Japan. I was one of those who believed the story and have been shy of visiting Dr. Iizuka. In fact, a few years ago when I travelled to Sapporo to see his laboratory for the first time, it cost me $400 to make a short round trip flight to Sapporo from Tokyo. At that time, I paid only $600 to buy a round-trip United Airlines ticket to Tokyo from San Francisco. My mistake was I bought tickets in two separate segments. This time, I found that Japanese airlines offer a 50% discount if you buy a domestic ticket in conjunction with an international ticket. For those who are in the US and Canada and interested in getting a discount airfare, we would recommend to contact Kintetsu International Express in San Francisco at 1-800-541-1754, E-mail: sales@sfo.kintetsu.com. Please mention that you are looking for a discount ticket to Sapporo.

I flew from Tokyo to Sapporo on Japan Airlines. Since Sapporo is a major destination for air travelers, all three Japanese airlines, Japan Airlines, All Nippon Airways, and Japan Air Systems use brand new, wide body equipment, such as Boeing 747-400 and 777. My flight was too short for a movie but showed a front view during take off and landing through a camera equipped under the cockpit. After about one hour, I arrived at the new Sapporo International Airport.

While I was in Sapporo, I stayed at the hotel where we will meet in 1998. It is a resort hotel called Therme (pronounced Ta-Ru-Mae) International Hotel with a lot of amenities. The hotel building has a huge atrium and there are several restaurants with different specialties.

For those who enjoy swimming, this hotel is worth visiting. Attached to the hotel is a big amusement park with a number of huge indoor and outdoor swimming pools and water slides. When I visited, there was still some snow left on the ground. Nevertheless, I saw many people in outdoor pools. Yes, pools are heated so that you can enjoy swimming even in the snow. You will not get snow in August, but I am sure that you can enjoy all those pools and water slides.

To go to the hotel from the airport, there is a limited direct bus service. It may be more convenient to take a rapid train service from the airport to Sapporo for about $10. From Sapporo station, you can take a taxi or bus.

I hope this report helps with your plans to Sapporo. If you have any questions, feel free to contact me or Dr. Iizuka.

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BUSINESS MEETING MINUTES AUGUST 28, 1997, BANFF, ALBERTA, CANADA

The SIP Business Meeting was convened at 11:25 by President Federici. Approximately 100 members were present. Summaries of the reports are provided below.

REPORTS

In his **President's Report**, Brian Federici provided an overview of SIP's activities over the last year. The Society remains strong with a growing international membership, but our financial status has

taken a slight downturn, which we must correct as soon as possible. In addition, he would like to encourage the Divisions to take on more responsibilities in regards to the annual meeting Program Committee.

Last year's business meeting minutes were approved.

- SIP financial balance is about $150,000, but expenses have been rather high this year, see Treasurer's report below. FASEB will be discussed later in the meeting.
- Membership remains stable at more than 850 members.
- SIP now has four Divisions - Microbial Control, Microsporidia, Viruses and Bacteria.
- Future meeting sites are one of the more important issues today.
- Publications via Academic Press and Journal of Invertebrate Pathology are possible. Supplementary issues can be published at $100/page, which could be financed by the following formula - Acad. Press : Author : SIP at 1:1:1. For example, a 100 page edition would cost SIP $3,300. Symposium chairs should consider this opportunity, even for this year.
- The SIP web site was highlighted by Peg Johnson before this business meeting. Many questions surround the use of this new technology, such as, should the newsletter be placed on-line? The President will form a standing committee to deal with the various issues.

Ted Andreadis presented the **Treasurer's Report**. Our total assets have declined from $161,930 to $147,767 over the last year. Approximately 80% of our assets are currently invested in four certificate of deposits (CDs), totaling $111,925. Our assets also include $6,000 that has been advanced for the Banff meeting. An analysis of our yearly expenses and revenues projects a $15,000 shortfall annually, as long as the annual meetings break even each year. Half of this cost shortage will be generated by the interest from our CDs. While our balance is healthy, a dues increase may be required.

SIP **membership** remains fairly stable according to James Becnel, with a slight decline of 2% over last year to 855 members. More than 50% of the membership are from outside North America. The increases in membership are from South America and Canada, up 11% and 10%, respectively. There was a decrease in membership in most other regions. Other activities for the membership committee included a final draft of the Society brochure, which will soon be printed. New members continue to be recruited via the SIP Web site.

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

- 1998, Sapporo, Japan, August 23-28, T. Iizuka
- 1999, California, USA, date pending, B. Federici & H. Kaya
- 2000, Guanajuato, Mexico, date pending , J. Ibarra
- 2001, Israel, tentative

The 1999 meeting was a very difficult decision since Israel had also submitted a meeting proposal. Over the last few years, SIP has tried to expand membership outside the USA with many recent meetings located outside the USA. The last USA meeting was in 1995. Consequently, delaying a USA meeting to 2001 or beyond was considered undesirable by the SIP Council and the California site was chosen.

Mark Goettel, meeting organizer for the **1997 Banff meeting**, reported that 325 registrants with 60 companions are attending. A total of 290 submissions - 45 symposium speakers, 136 oral presentations, 96 posters and 10 late submissions. Mark expects to return the $6,000 seed money to SIP and possibly a small $4,000 profit.

Toshihiko Iizuka reported that the 7th International Colloquium on Invertebrate Pathology and Microbial Control and the 4th International Conference on *Bt* will be held in **Sapporo, Japan from August 23-28, 1998**. Sapporo is located on the northern Japanese island of Hakkaido, with a pleasant climate with averages of 22°C for August. Accommodations will be provided at approximately $70 or $100 for a single or $180 for a double room. Contact Program

Chair Toshihiko Hukuhara at Tokyo University of Agriculture and Technology with any symposium ideas.

President Federici led the discussion surrounding our relationship with **FASEB**. As reported last year, the costs FASEB charges the Society have increased remarkably over the last couple of years ($10, 400 in 1996 to more than $17,000 in 1998). Specifically, the secretariat services have gone from $200 in 1996 to $7,200 for 1998, yet the Society does not utilize the majority of services that this cost covers. Negotiation with FASEB to reduce the charges has been unsuccessful. There is no doubt that SIP needs management help, especially for collection of membership dues, maintaining an accurate membership address list, financial management, and newsletter assembly/mailing. Brian presented a bid by the American Mosquito Control Association which totaled about $7,000, for a $10,000 yearly savings. Discussion focused on the various specific needs of the Society, such as the credit card use for membership dues payment, desire for long-term management services with stable personnel, and ensuring that a bid will not increase dramatically each year. Betty Davison made a motion to sever ties with FASEB in a reasonable time frame. David Ellar seconded the motion which was approved unanimously. Brian Federici then motioned that the council be allowed to choose another management service, using bids that provide a similar level of service that FASEB provided. Just Vlak seconded the motion which also was approved.

New Business

- A couple of new divisions have been proposed: Nematodes and Non-insect invertebrates. It was thought that new divisions might attract new members.
- Ann Hajek reported that 11 copies of the Microbial Control slide set are still available. Call Ann if you are interested.
- Wendy Gelernter displayed the new SIP brochure. Copies should be available by the end of this year,. Please call anyone on the Membership committee if you would like copies. She also had a sign-up list during the meeting.

Jim Harper motioned to adjourn the meeting at 12:30.

Sue MacIntosh, Secretary

DIVISION MINUTES

Microbial Control Division

1996-1997 OFFICERS

Ann E. Hajek, Chair
John Vandenberg, Chair-Elect
Lawrence Lacey, Secretary/Treasurer
Bonifacio Magalhães, Member-at-Large
Travis Glare, Member-at-Large
Jörgen Eilenberg, Member-at-Large

(Editor's note: an error was made in both the Banff Program and Abstracts and the 1997-1998 SIP Membership Directory, listing Jane Drummond and Ramon Georgis as members at large instead of Travis Glare and Bonifacio Magalhães. My apologies.)

The Microbial Control Division Meeting was held on August 25, 1997 at the Banff Centre, Banff, Alberta, and called to order by chair Ann Hajek at 7:35 pm with 139 members present. After chair Hajek summarized the minutes of the 1996 MCD meeting in Cordoba and the annual report of the Division, Wendy Gelernter moved that they be accepted. The move was seconded by Lindsey Flexner. The motion was unanimously accepted.

Under old business, chair Hajek announced that 12 sets of the MCD slide atlas were available for sale. Interested parties should contact Ann Hajek or John Vandenberg. Under new business, Ann reminded the members that the MCD sponsors a workshop and symposium at each annual meeting. The workshop this year, is "Statistical analysis of bioassay data" presented by Dr. John Fenlon. The symposium "Pathogen Interactions" is organized and convened by Harry Kaya.

Suggestions were solicited for topics for a workshop and symposium for the 1998 International

Colloquium on Invertebrate Pathology, to be held in Sapporo. Wendy Gelernter suggested the topic "Microbial Insecticides: Novelty or Necessity" and cited the successful conference on this topic held at the University of Warwick, Coventry, UK in April. Wendy Gelernter stated that 4 hours would be needed for the symposium and that she and Hugh Evans would be willing to serve as chairs. Denis Burges supported this suggestion. Wendy Gelernter wondered how symposia and workshop subjects were approved. The chair responded that subjects were solicited and, after members were given a suitable length of time, the executive committee chose subjects. She commented that, in fact, to her knowledge there were never enough subjects volunteered that it was necessary to choose among them. Chair Hajek solicited additional suggestions for the 1998 meeting.

The next item of new business was the recommendations of the committee composed of MCD members-at-large, Travis Glare, Bonifacio Magalhães (committee chair) and Jörgen Eilenberg, regarding the use of Division funds to support student travel to annual meetings. The move to support student travel had been approved at the Cordoba meeting. Travis glare presented the recommendations. The committee recommended that:

- each year 2 awards of $500 to assist students with financial difficulty to attend SIP meeting
- the student does not have to be a MCD member, but his or her subject should pertain to microbial control
- the student should be 1st or 2nd author on the paper or poster to be presented at the meeting. The student should present the paper or poster
- application deadline will be Dec. 15
- selections will be made by February 15
- recipient will only receive the award if they attend the meeting

Considering that the Division takes in approximately $700/year and the awards would cost $1000/year it would be necessary to deficit spend in order to give two awards. Taking into account current MCD reserves, the division could absorb -$300 per year for over 20 years. Dr. Glare offered two alternative options to the two $500 awards: only one $500 award or 2 awards at $350 each. Chair Hajek called for discussion. Ken Fry suggested that MCD funds be invested. Chris Lomer asked if registration fees could be waived. Bill Moar asked the deadline could be pushed back from December. Wendy Gelernter suggested more flexibility was needed. Two awards might not allow other MCD funded activity. She also asked if money would be refunded if the student didn't attend the meeting. Roberto Pereira asked why students did not have to be MCD members. Wendy Gelernter asked if funds would have to be returned if the student didn't attend the meeting. Ray Akhurst asked how presentations can be judged as a criterion for selection. Travis Glare stated that the purpose of the award would be to encourage students to attend the annual meeting that couldn't otherwise come.

Chris Payne motioned that we accept the option of two $500 awards per year and review the program after 5 years. The motion was seconded by Bill Moar. 61 members voted to approve the motion, 1 against and 6 abstained. Motion carried.

Other New Business

Richard Humber suggested a Division on Fungi. Steve Booth thought it would fraction sessions. Denis Burges suggested the idea be brought up at the SIP general business meeting.

Wendy Gelernter suggested that the MCD meeting should be scheduled at a time when no other business meetings or sessions were held. Brian Federici mentioned that a limited number of nights are available, but exception should be made for MCD. Wendy Gelernter suggested a return to the working lunch meeting. Another suggestion was to hold other division meetings at lunch and MCD in the evening.

Ann Hajek stated that the nominations for MCD officers had been posted for 24 hours prior to the meeting. Lerry Lacey and Bonifacio Magalhães had been nominated for chair-elect and secretary, respectively. Judith Pell, Carlos Lange, Roberto Pereira, Lindsey Flexner and Ole Skovmand were nominated as members-at-large. Nominees that were present were asked to leave the room during voting. Pell and Pereira were elected as members-at-large replacing Travis Glare and Bonifacio Magalhães . Lacey and Magalhães were elected as chair-elect and secretary. John Vandenberg, the current chair-elect will become the MCD chair at the close of this year's meeting.

On behalf of several scientists that are producing a training video on the use of nematodes in microbial control, Harry Kaya requested up to $2000 from MCD to support production of the video. Funding from the USDA-SARE ($30,000) is already in hand. The script committee is composed of H. Kaya, R. Gaugler, L. Lebeck, M. Klein, R. Nimitz and D. Shetlar. The training film is part of a two year project that includes the video, a poster and web site. 250 copies of the video would be supplied free to extension agents. For MCDs contribution we would have the opportunity to make copies for sale. Following discussion by D. Pinnock, S. Wraight, R. Pereira and L. Lacey, chair Hajek called for a motion. Steffan Jaronski moved that MCD support the video. Travis Glare seconded the motion. The vote was 13 for, 16 against. Motion failed.

Temple Bowen moved to adjourn the meeting, Steffan Jaronski seconded the motion. Motion carried unanimously. The meeting was adjourned at 8:15 pm.

Lawrence A. Lacey
Secretary

MCD officers for 1997-1999

John Vandenberg, chair
Lawrence Lacey, chair-elect
Bonifacio Magalhães, secretary
Ann Hajek, past chair
Judith Pell, member-at-large
Roberto Pereira, member-at-large
Jörgen Eilenberg member-at-large (1996-1998)

Division on Microsporidia

The annual business meeting of the Division on Microsporidia was held on August 25, 1997 at the SIP Annual Meeting. Sixteen members were present. No elections were held this year but an ad hoc committee will be selected to make nominations for the positions of vice-chair, secretary-treasurer, and two trustees for the 1998-2000 term. Nominations will also be accepted by mail or e-mail addressed to Dr. Lee Solter, Chair, or Andreas Linde, Vice-chair (addresses below). Elections will be held at the 1998 Sapporo SIP meeting.

Wayne Brooks presented amendments to the Division by-laws which will closely reflect the by-laws of the society. These changes are meant to clarify election procedures and terms for Division officers. The changes were discussed by the members in attendance and a decision will be made by mail ballot sent to the entire membership.

The Division treasury balance was reported to be $1,210.00. We have been unable to obtain an accurate list of Division members. James Becnel will contact FASEB to attempt to obtain an updated and complete list of members.

The Division sponsored a symposium and a workshop at the Banff meeting. The symposium "Physiological Ecology of Microsporidia" was organized by Lisa Carloye and Albert Undeen. The workshop, "Microsporidia- Current Status as a Biological Control Agent" was organized by Andreas Linde. The members agreed that the symposium proposed by Hidetoshi Iwano and Ren Ishihara on silkworm microsporidia is an excellent choice for the 1998 SIP meeting. Andreas Linde will propose and organize a Division workshop for the 1998 meeting.

Peg Johnson requested that any information members would like to have added to the SIP Homepage be sent to her at e-mail address:
pjohnson@gainesville.usda.ufl.edu

Any business items for the Division on Microsporidia may be addressed to the following:

Dr. Lee Solter
Illinois Natural History Survey
163 NRB, 607 E. Peabody Dr.
Champaign, IL 61820
Fax: 217-333-6784
E-mail: l-solter@uiuc.edu

Dr. Andreas Linde
Fachhochschule Eberswalde
Alfred-Moeller-Str. 1
16225 Eberswalde, Germany
Fax: Germany - 3334 - 65 428
E-mail: alinde@fh-eberswalde.de

CANDIDATES FOR OFFICES

(Ballots will be sent out to members in early 1998)

PRESIDENT

Juerg Huber

Education: M.S. (Biology) 1967, Swiss Federal Institute of Technology, Zurich (ETHZ); PhD. (Insect Pathology) 1973, Department of Entomology, ETHZ

Born: 1944

Experience: Research Scientist, Federal Biological Research Centre for Agriculture and Forestry, Institute of Biological Control, Darmstadt, F.R. Germany, 1973-1991; Director of Institute of Biological Control, Darmstadt, F.R. Germany, 1991-present.

Membership: Society for Invertebrate Pathology (Chair, Local Organizing Committee, 25th Annual Meeting, Heidleberg, 1992); Swiss Entomological Society; German Society for Phytomedicine; International Organization for Biological Control (Treasurer, West Palaearctic Regional Section (IOBC/WPRS), 1989 - present; Convener, IOBC/WPRS Working Group on Insect Pathogens and Insect Parasitic Nematodes, 1989-1991).

Interests: Practical use of viruses for control of insect pests in agriculture and forestry; production, registration and commercialization of microbial and viral pesticides.

VICE PRESIDENT

Terry L. Couch

Education: A.B., 1965, Franklin and Marshall College; M.S., 1968, Penn State, University Park; Ph.D., 1970, Penn State, University Park

Experience: Senior Research Entomologist, Abbott Laboratories, 1970-1975. Section Head and Associate Research Fellow, Abbott Laboratories, 1975-1983. Manager of Agricultural Research, Abbott Laboratories, 1983. Director of Research and

Development, Pet Chemicals, Inc. (Division of Colgate-Palmolive), 1983-1986. President, Becker Microbial Products, Inc. 1986- Present.

Society for Invertebrate Pathology: Member since 1970; Trustee; Member of Microbial Control Division since creation of the section.

Membership and activities in other professional societies: Entomology Society of America 1970 to present; Board Certified Entomologist, 1983-Present; Member of Microbial Control Division of the ESA; American Mosquito Control Division 1986-Present; American Association for the Advancement of Science 1980-Present; Sigma Xi, 1975-Present; Florida Mosquito Control Association 1993-Present; Florida Entomological Society, 1983-Present.

Interests: Research and development of microbial pesticides including their production, formulation and application. The practical application of biotechnological techniques to improve microbial pesticide formulations and their field performance.

VICE PRESIDENT

James D. Harper

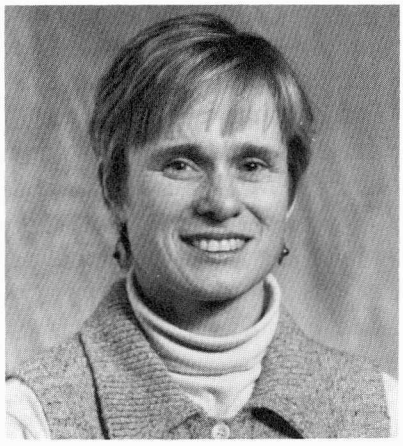
Education: B. S. 1964 (University of Illinois); S. 1965 (University of Illinois); Ph.D. 1969 (Ore State University).

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

Membership: Charter Member 1967, Society f Invertebrate Pathology: Auditing Committee 198 Treasurer 1980-82; Chair, Nominating Committ 1982-84 and 1990-1992; Chair, Organization Committee for Microbial Control Division 1979-8 Chair, Microbial Control Division 1981-83, membe 1981-present; Editorial Board, Journal of Invertebrat Pathology 1980-82; Chair, Publications Committee 1985-1989; Student Contest Judging Team 1988 Chair 1994. Chair, Program Committee (Asheville 1993; Local Arrangements Committee (Asheville 1993; Founder's Lecture Committee, 1994-present Chair 1995-present. Entomological Society o America: Secretary Section C 1985-86, Chair-elec 1986-87, Chair 1987-88; Program Committee 1986-88; Publications Committee 1990-1993. Southeastern Branch ESA: Student Awards Committee 4 years (Chair 1 year); Publicity Committee 1984; Program Committee 1986-90; Chair, Local Arrangements Committee 1982, 1997. Florida Entomological Society, Georgia Entomological Society, North Carolina Entomological Society, International Organization of Biological Control; Sigma Xi; Gamma Sigma Delta, XI Sigma PI.

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

SECRETARY



Ann E. Hajek

Education: B.S. (Conservation of Natural Resources) 1974, University of California at Berkeley; M.S. (Entomology) 1980, University of California at Berkeley; Ph.D. (Entomology) 1984, University of California at Berkeley.

Experience: Research Affiliate and Research Entomologist, USDA, ARS, Plant Protection Research Unit, Ithaca , New York, 1985 - 1990; Research Associate and Senior Research Associate, Boyce Thompson Institute, 1990 - 1994; Assistant Professor (specializing in invertebrate pathology research and teaching courses in invertebrate pathology and biological control), Cornell University, 1994 - present.

Memberships and Professional Activities: Member, Society for Invertebrate Pathology and Microbial Control Division (since ; Chair (1995-1997) and Secretary/Treasurer (1989-1993) SIP Microbial Control Division; Organized development of basic invertebrate pathology slide atlas for SIP, 1997; Assisted with development of microbial control slide atlas for SIP MCD, 1992; Member SIP nominating committee, 1995; SIP student poster judge, 1996; Member Entomological Society of America, since 1979; Student paper judge, Eastern Branch Entomological Society of America, 1995; Member southeastern regional project S-240; Member IOBC; Member New York Entomological Society; Member Sigma Xi; Member American Association for the Advancement of Science; USDA Competitive Grants Review Panel, 1993; Member Cornell University Faculty Senate, beginning 1997; Associate Editor BioControl (new name for Entomophaga), beginning 1997; Lecturer for Latin American Course on Microbial Control in Argentina, 1996.

Interests: Basic and applied biology and epizootiology of insect pathogenic fungi (with present emphasis on Entomophthorales), viruses, and nematodes; general insect pathology.

SECRETARY

Michael R. McGuire

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

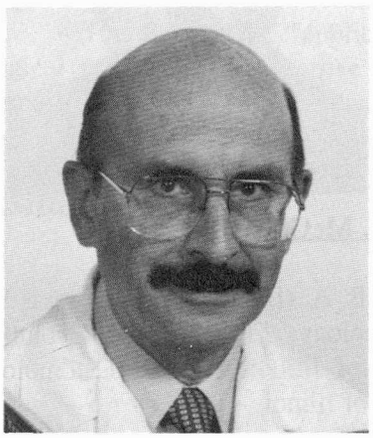
Experience: Research Assistant, Illinois Natural History Survey, Champaign, IL 1979-1985; Research Microbiologist, USDA-ARS, Bozeman, MT 1985-1987. Research Entomologist, USDA-ARS, Bozeman, MT 1987-1988; Research Entomologist USDA-ARS, Peoria, IL 1988-1994; Supervisory Research Entomologist and Research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

Membership: Society for Invertebrate Pathology 1983-present; chair-elect, chair, past chair, Division

of Microbial Control 1990-1995; member new initiatives committee, 1995-present; co-editor Microbial Control Slide Atlas. Entomological Society of America 1982-present; chair-elect, chair, past chair subsection Ce (Microbial Control Division) 1992-1995; member nominating committee, symposium selection committee, Section C 1994. S-265 Regional Technical Committee (Development and Integration of Entomopathogens into Pest Management Systems) 1988-present; chair bacteria subcommittee 1991-1997. American Association for the Advancement of Science 1997-present.

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

TRUSTEE (2 to be elected)



David J. Ellar

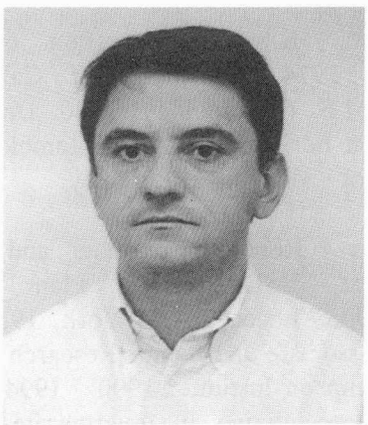
Education: B.Sc., 1963 Leeds University; Ph.D., Syracuse University, 1967; M.A., University of Cambridge, 1968; Sc.D. University of Cambridge, 1988.

Experience: Postdoctoral Research Fellow, New York University School of Medicine, 1967-1968. University Lectureship, Department of Biochemistry, University of Cambridge, 1968-1993. 1993-present, University Reader in Microbial Biochemistry, University of Cambridge. Fellow and College lecturer in Biochemistry, Gonville and Caius College, Cambridge, 1968-present.

Memberships: Fellow Royal Entomological Societ Member, Society for Invertebrate Pathology sin 1981; Member, Society for General Microbiolog American Society for Microbiology, Biochemic Society, Tissue Culture Association; Associa Editor, Journal of Invertebrate Pathology; Editori Board Member, FEM Microbiol. Reviews.

Interests: Molecular basis of bacterial pathogenes of insects, especially the structure and mode of actio of *Bacillus thuringiensis* δ-endotoxins and the role c toxin receptors.

TRUSTEE



Roger Frutos

Education: M.Sc. (Parasitology and Pathology) 1984, University of Montpellier II; Ph.D. (Biological Sciences - Pathology) 1988, University of Montpellier II.

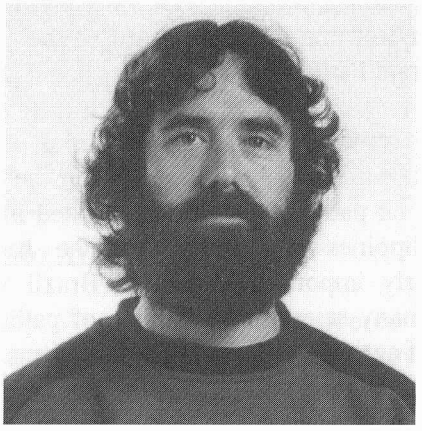
Experience: Postdoctoral fellow, University of California, Riverside, 1988-1991. Research scientist, CIRAD, Montpellier, France, 1991-1993. Research scientist - Head of laboratory, Genetic Engineering and Molecular Pathology (IGEPAM), CIRAD, Montpellier, France, since 1993.

Membership: Society for Invertebrate Pathology, American Society for Microbiology.

Interests: Microbial pathogens of invertebrates, particularly *Bacillus thuringiensis* toxin genes. Mode of action and structure-function relationships in *B.*

thuringiensis toxins. Application of *B. thuringiensis* in developing countries. Genetic engineering of tropical crops for insect resistance.

TRUSTEE



Travis R. Glare

Education: B.Sc (Biology) 1981, Australian National University (ANU); Grad. Dip. Sc. (Insect Pathology) 1984, ANU; Ph.D (Insect Pathology) 1989, ANU.

Experience: Technical Assistant, Research School of Biological Sciences, Australian National University, Canberra (1982-84); Research Assistant, Department of Entomology, University of Queensland, Brisbane, Australia (1985); Contract Scientist, DSIR Plant Protection, New Zealand, Christchurch, New Zealand (1989); Scientist, Ministry of Agriculture and Fisheries Technology, Christchurch, New Zealand (1989-1992); Scientist, AgResearch (New Zealand Pastoral Agriculture Research Institute), Christchurch, New Zealand (1992-); Honorary Fellow, Department of Microbiology, University of Otago, Dunedin, New Zealand.

Membership: Society of Invertebrate Pathology (1985-); 'Member at Large', Microbial Control Division, Society for Invertebrate Pathology (1995-1996); Australian Entomological Society (1986-1994); New Zealand Plant Protection Society (1993-); Editorial Board, Journal of Invertebrate Pathology (1991-1993).

Interests: General insect pathology, isolation and identification of insect pathogens, histopathology of disease, application of molecular techniques to identification, tracking and improvement of microbial pathogens, strain selection, use of fungi and bacteria in biocontrol of insects.

TRUSTEE

Leellen F. Solter

Education: B.S. (Zoology) 1976, California State Polytechnic University; M.A. (Biology), Montclair State University; Ph.D. (Entomology), University of Illinois at Urbana-Champaign.

Experience: Research Scientist, Illinois Natural History Survey, 1988-1997; Assistant Professional Scientist, Illinois Natural History Survey, Sept. 1997-present.

Memberships: Society for Invertebrate Pathology member since 1989; Vice-chair, Division on Microsporidia, 1994-1996. Chair, Division on Microsporidia, 1996-1998; Society of Protozoology, 1993-present, Entomological Society of America, 1992 to present; Phi Kappa Phi National Honor Society, 1987-present; Sigma Xi, the Scientific Research Society, 1994 - present.

Interests: Research in insect pathology, especially microsporidia and viral pathogens as biological control agents of lepidopteran pests. Current research focuses on the tissue level host specificity of

microsporidia under consideration for release as biological control agents of the gypsy moth.

CANDIDATES FOR HONORARY MEMBERSHIP

Honorary membership is the highest honor the Society can bestow. Persons are nominated by petition containing signatures of at least 10 members in good standing. These petitions, along with documentation of the accomplishments of the member and his or her contributions to the Society, are presented to Council for approval. If approved, they are presented to the membership for vote.

Dr. Donald W. Roberts

Dr. Donald W. Roberts has been nominated for honorary member of the Society for Invertebrate Pathology. Dr. Roberts has recently retired from 31 years at the Boyce Thompson Institute at Cornell University, where he was Insect Pathologist and Coordinator of the Insect Pathology Resource Center. Dr. Roberts has moved to Logan, Utah, where he will continue research at Utah State University.

Dr. Roberts received the Bachelor's degree from Brigham Young University, the Master's degree from Iowa State University, and the PhD from the University of California at Berkeley. He completed a Postdoctoral Fellowship at the ETH in Zurich, Switzerland.

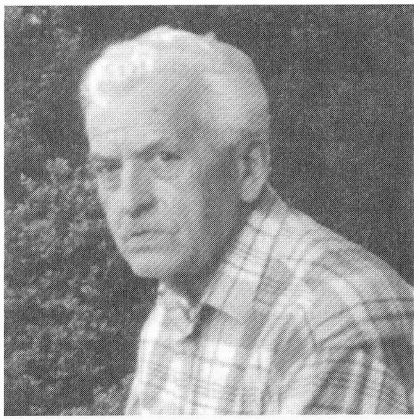
Dr. Roberts research interests in entomopathogenic fungi, fungal toxins, mole biology of fungi, insect poxviruses, pathogene medically important arthropods, and micr control of insects with particular applicatio developing nations. He is the author of over scientific publications on a wide variety of topics has served on the editorial board of the Journ Invertebrate Pathology.

Those of us who know Dr. Roberts think of him man who was always on the road on the behal invertebrate pathology. He has worked in Nige the Philippines and India, and he has hac particularly important impact in Brazil where trained many scientists in the use of pathogens control of agricultural pests. These students, many whom also studied with him at the Boyce Thomp Institute, have gone on to become leading scientist Brazil.

Because of his great contributions, Dr. Roberts w designated an Honorary Member of t Entomological Society of Brazil, an honor which h been awarded to few researchers. He has also be active in the very successful Siconbiol meetings Brazil. He has been awarded the L.O. Howa Distinguished Achievement Award from th Entomological Society of America and was chosen t deliver the SIP Founders' Memorial Lecture i Cordoba, Spain. In addition he has served on th World Health Organization Scientific Working Grou on Biological Control of Diseases Vectors and on UN advisory committees.

Dr. Roberts has served the Society for Invertebrate Pathology in many capacities, including Program Chair and Meetings Board Chair, Vice President and President (1988-1990), and as Ad-Hoc Treasurer in 1990-91.

Dr. Roberts' nomination was accompanied by 30 letters of support from SIP members from the USA, Brazil, Australia, Japan, France and England.



Dr. Jaroslav Weiser

Dr. Jaroslav Weiser has to be considered as one of the most active founders of the field of invertebrate pathology as well as of the Society for Invertebrate Pathology. As an author of over 300 research publications and several books, he made outstanding contributions to several fields, including fundamental and applied studies of protozoa, nematodes, viruses, fungi, rickettsia, and bacteria. Dr. Weiser's name is well associated with discoveries and descriptions of over 100 new microorganisms among which are numerous microsporidians and gregarines, the well known nematode, *Neoaplectana carpocapsae*, and many rickettsia, bacteria, fungi and entomopoxviruses of Diptera, Lepidoptera and Coleoptera. It may be also noted that he authored the original taxonomic schemes for Microsporida, Entomophthorales and Viruses, and proposed several new orders, families and genera of insect viruses such as Steinhausiavirus and Vagoiavirus.

Through his outstanding organizational skills, Dr. Weiser has also made important contributions to the international community of insect and invertebrate pathology, and to the Society of Invertebrate Pathology. As early as 1958 he was the organizer of the First International Conference on Insect Pathology and Biological Control (Prague, Czechoslovakia), which was the starting point of subsequent colloquia on invertebrate pathology every four years. The Prague conference in 1958 was the first East-West meeting at which Dr. E.A. Steinhaus, for the first time, proposed the idea of the Society of Invertebrate Pathology. Dr. Weiser served as the SIP President during 1978-1980, and on the 20th anniversary of the above mentioned first conference, in September of 1978, he organized the International Colloquium on Invertebrate Pathology and the 11th Annual Meeting of the SIP in Prague. Dr. Weiser worked within the boundaries of the "iron curtain," with all its concomitant difficulties, yet still was able to make many important contributions to our field, demonstrating so well his outstanding ability as a researcher and the strength of his personality.

Dr. Weiser was born on January 13, 1929 in Prague (Czech Republic) where he attended high school and where in 1947 he obtained a Ph.D. (Parasitology) at the Charles University. Later, he recieved the Dr. of Science degree in biology in 1960 from the same university. During 1947-51, he worked as an Assistant Professor of Parasitology at the Charles University and during 1951-53 as a chief of the Parasitology Department at the Institute of Biology. In 1954, he moved to the Institute of Entomology of Czechoslovak Academy of Sciences where he established an internationally known Department of Insect Pathology. He was Head of this Department until retirement in 1988.

Apart from his numerous domestic activities within the Academy of Sciences, to which he was elected in 1968, Dr. Weiser was and still is very active internationally. From a long list of various activities, the following are particularly noteworthy: Membership of the Steering Committee, Biological Control of Vectors, WHO/World Bank/UNDP Special Programme; 1968-89 - Chairman, Permanent Commission for Microbial Pest Control IOBC/EPRS; 1975-88 Head, WHO collaborating Center for Vector Pathology; 1969-70 Visiting Professor, Department, Simon Fraser University, Canada.

Among the many honors and awards given to Dr. Weiser in recognition of his achievements are the above mentioned election to the very prestigious Czechoslovak Academy of Sciences in 1968, and in 1982 Honorary Membership and the Richard Leuckart Medal from the German Society of Parasitology. In addition, in 1971 he was honored with Gregor Mendel Golden Medal for research on biocontrol, and in 1989 with J.E. Purkynje Golden

Medal for work on Cyclosporin A. He also received several Czech State awards and prizes in recognition of his role in malaria eradication in Slovakia, for development of biopesticides based on *Bacillus thuringiensis* and *Beauveria bassiana* , and for development of the immunosuppressive pharmaceutic Cyclosporin A.

Dr. Weiser is the author of several well known textbooks including "Modern Insecticides" (1951), "Medical Entomology" (1952), "Diseases of Insects" (1966), "Microbial Control of Insect Pests" (1972), "Atlas of Insect Diseases" (1969 and 1977), "Parasitic Nematodes of Insects" (1988), and "Biological Control of Vectors" (1991). He also contributed chapters to 9 multi-authored books, including the well known "Insect Pathology: An Advanced Treatise," edited by Edward A. Steinhaus.

ANNUAL REPORTS

Treasurer's Report

The financial statement for the Society for the period ended May 1 through April 30, 1997 are enclosed in Exhibits A, B, C, and D. Our Treasury remains in good shape but our total assets have declined from $161,930 in 1996 to $146,767 in 1997 (Exhibit A). The majority (80%) of our assets are currently invested in four certificate of deposits totalling $111,925 (Note 2, Exhibit D). Our assets also include $6,000 that has been advanced for the Banff Meeting.

Revenues (Exhibit B) for the fiscal year totalled $34,407, most of which came from membership dues ($26,085). Our expenses totalled $49,469, representing a $15,062 loss. This loss can be attributed to, (1) increased costs associated with the Cordoba meeting, (program and abstracts = $4,000, net seed money = $5,000, travel = $800); (2) increased management fees by FASEB (secretariat = $2,500, dues processing = $900) (Note 4, Exhibit D); and (3) the membership brochure ($1,340).

The activity and balances of the Board designated funds (Divisional and Endowment) are shown in Exhibit C. These total $18,167.

An analysis of our recurring expenses, (excluding annual meetings and assuming no further increases by FASEB), shows an average annual operating budget of approximately $40,000. Based on our current membership (752 full and 127 student) we can anticipate an annual income of $24,465 (does not include Division dues). Assuming that our annual meetings break even, then we can expect to operate at about a $15,000 deficit. Approximately half of this deficit can be recovered from interest on our CD's, however, our expenses will still exceed our income unless additional funds are generated from the annual meeting or sales of the new slide atlas (cost = $7,346, anticipated sales 250 @ $60.00 = $15,000).

While we are in no imminent danger, the Council may wish to consider a small increase in membership dues ($5.00 increase in full and student = $4,395; $10.00 increase =$8,790).

Respectfully submitted,

Theodore G. Andreadis
Treasurer
August 19, 1997

Division of Microbial Control Report - 1997

1996 Annual Meeting: The annual meeting of the Division was held in Cordoba, Spain in conjunction with the 29th Annual Meeting of the Society for Invertebrate Pathology. Initially, 57 members were present but this increased to 75 as the meeting progressed. The minutes from the 1995 meeting and the 1995 Annual Report were summarized and approved by the members. Ideas for future symposia and workshops were solicited. It was announced that a few more copies of the Microbial Control Division slide set were still available. Brian Melin, Carlos Lange, and Jorgen Eilenberg had previously been nominated for the member-at-large position. Jorgen Eilenberg was elected.

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE BALANCE SHEET
AT APRIL 30, 1997 AND 1996

Exhibit A

	1997 Activity			
ASSETS	General Operations	Board Designated Funds	1997 Total	1996 Total
Cash- Checking Account	$18,623	$7,422	$26,045	$76,256
Accrued Interest Receivable	2,119	177	2,296	551
Certificates of Deposit	101,357	10,568	111,925	77,863
Advances for Future Meetings	6,000	0	6,000	5,600
Other Assets	501	0	501	1,660
Total Assets	$128,600	$18,167	$146,767	$161,930
LIABILITIES AND FUND BALANCE				
Liabilities:				
Accounts Payable	$6,451	$0	$6,451	$4,752
Subscriptions Payable	1,243	0	1,243	3,043
Total Liabilities	7,694	0	7,694	7,795
Fund Balance:				
Fund Balance- Beginning of the Year	138,291	15,844	154,135	128,751
Current Year Net Income	(17,385)	2,323	(15,062)	25,384
Fund Balance- End of the Year	120,906	18,167	139,073	154,135
Total Liabilities and Fund Balance	$128,600	$18,167	$146,767	$161,930

SOCIETY FOR INVERTEBRATE PATHOLOGY
COMPARATIVE STATEMENT OF REVENUE AND EXPENSE
FOR THE PERIODS ENDED MAY 1, THROUGH APRIL 31, 1997 AND 1996

Exhibit B

	1997 Activity			
REVENUE	General Fund	Board Designated Funds (Schedule 1)	Total 1997	Total 1996
Slide Sales	$0	$0	$0	$50
Membership Dues (Note 1)	24,529	1,556	26,085	25,120
Annual Meeting Income	0	0	0	28,493
Contributions	300	341	641	624
Credit Card Handling Fees	92	0	92	666
Publication Handling Fees	492	0	492	261
Proceeding Sales	71	0	71	377
Interest (Note 2)	6,388	472	6,860	3,990
Miscellaneous Income	166	0	166	5
Total Revenue	32,038	2,369	34,407	59,586
EXPENSE				
Mailing of Dues Notices and Other	2,671	45	2,716	2,880
Program and Abstracts (Note 3)	13,643	0	10,232	5,962
Newsletter	9,330	0	9,330	10,108
Directory	0	0	0	2,025
Travel	1,623	0	1,623	857
Net Seed Money- Cordoba Meeting	5,060	0	5,060	0
Supplies and Duplicating	868	0	868	1,813
Accounting Services	3,100	0	3,100	3,000
Secretariat	3,300	0	3,300	800
Dues Processing Fees (Note 4)	5,638	0	5,638	4,752
Telephone	201	0	201	178
Contracted Services (Note 5)	1,325	0	1,325	0
Awards	500	0	500	0
Credit Card Charges	1,340	0	1,340	1,215
Miscellaneous	825	0	825	612
Total Expense	49,424	45	49,469	34,202
Net Revenue Before Fund Transfers	(17,386)	2,324	(15,062)	25,384
Endowment Fund Transfer	240	(240)	0	0
Net Revenue After Fund Transfers	($17,146)	$2,084	($15,062)	$25,384

SOCIETY FOR INVERTEBRATE PATHOLOGY
BOARD DESIGNATED FUND REVENUE AND EXPENSE
FOR THE PERIOD ENDED MAY 1, THROUGH APRIL 31, 1997

Schedule 1

Exhibit C

	1997 Board Designated Funds					
REVENUE	Virology	Bacteria	Microsporida	Microbial Control	Endowment	Total
Membership Dues	$260	$242	$310	$744	$0	$1,556
Contributions	0	0	0	0	341	341
Interest Income	0	0	0	118	354	472
Total Revenue	260	242	310	862	695	2,369
EXPENSE						0
Mailing	0	0	45	0	0	45
Total Expense	0	0	45	0	0	45
Net Revenue Before Fund Transfers	260	242	265	862	695	2,324
Fund Transfers	0	0	0	0	(240)	(240)
Net Revenue After Fund Transfers	$260	$242	$265	$862	$455	$2,084
Fund Balance	$260	$242	$1,210	$9,896	$6,559	$18,167

Exhibit D

SOCIETY FOR INVERTEBRATE PATHOLOGY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED APRIL 30, 1997

Note 1: Membership Dues

	1997	1996
Full Member (752@$30; 729@$30)	$22,560	$21,870
Student Member (127@$15; 137@$15)	1,905	2,055
Microsporida Member (155@$2; 139@$2)	310	278
Virology (130@$2; N/A)	260	0
Bacteria (121@$2; N/A)	242	0
Microbial Member (372@$2; 361@$2)	744	722
Miscellaneous Prior Year Amounts	64	195
	$26,085	$25,120

Note 2: Interest and Investments

Investments owned by SIP at April 30, 1997:

	CD #0768358035	CD #0768354404	CD #0768801231	CD #0768804931	Total
Society Operations:					
Cost	$20,795	$27,735	$27,535	$25,292	$101,357
Maturity Date	10/6/97	11/23/96	5/21/97	8/4/97	-
Interest Rate	5.20%	4.75%	4.70%	4.60%	-
Endowment Fund:					
Cost	-	-	$5,508	-	$5,508
Maturity Date	-	-	5/21/97	-	-
Interest Rate	-	-	4.70%	-	-
Microbial Control:					
Cost	-	-	-	$5,060	$5,060
Maturity Date	-	-	-	8/4/97	-
Interest Rate	-	-	-	4.60%	-
Total Certificates	$20,795	$27,735	$33,043	$30,352	$111,925

Note 3: Fiscal year ended April 30, 1997 "Program and Abstract Expense" increased over 1996 fiscal year levels because of an increase in postage rates coupled with a 33% increase in the number of pages.

Note 4: Dues Processing Fees were assessed based on the following data:

Year ended April 30, 1996:	
1,054 members in database @ $4.10=	$4,321
103 optional journals @ $1.30=	134
424 division dues @ $.70=	297
Total	$4,752
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

Note 5: Contracted Services

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

The major item of business was use of MCD funds. At the last annual meeting, members voted to create a monetary award for students. Members attending the meeting discussed how to select recipients. Comments included the need of eastern European students for funding in order to be able to attend meetings, preference for students from institutions not well represented at SIP meetings, the research presented by applicants should pertain to microbial control, and students receiving an award should be required to make a presentation. It was decided that a committee composed of the three MCD members-at-large, Bonifacio Magalhaes (as chair), Travis Glare, and Jorgen Eilenberg, should write the student award guidelines. The guidelines are to be presented at the Banff meeting (1997) at which time there will be discussion and attending members will vote on the final structure for this award.

During the year after the 1996 meeting in Cordoba, the three members-at-large developed guidelines for the student award. It is possible that the guidelines might be changed to some extent during discussion at the 1997 annual meeting, before being accepted by the membership.

At the Banff meeting, the Microbial Control Division will sponsor a symposium organized by Harry Kaya on Pathogen Interactions. The Microbial Control Divison is also sponsoring a workshop by John Fenlon on Statistical Methods and Insect Pathology, after the MCD business meeting on Monday night.

As of 30 July 1997 there are 342 members in the Division. The total amount of money accumulated to date (fund balance) in the Microbial Control Division is $9,880.31. Total dues collected for the fiscal year ended 04/31/97 was $728.00 and there was an additional $117.79 earned from the $5,000 certificate of deposit which is allocated to the Microbial Control Division. This balance does not include the $1,000.00 that will be used to cover expenses for our workshop speaker at the Banff meeting.

Respectfully submitted by:

Ann Hajek, Chair
Lerry Lacey, Secretary

Virus Division Report

The Virology Division now has 126 members registered. The officers are Suzanne Thiem, Chair; Peter Krell, Vice Chair; Just Vlak, Secretary/Treasurer; and Nikolai van Beek, Member at Large.

During the past year, Bylaws for the Division were prepared by Doreen Winstanley and submitted to the Council; their approval is anticipated at the Banff meeting.

For the 1997 annual meeting in Banff, we have organized a Symposium on "Viruses in their Natural Hosts", to be convened by Suzanne Thiem, and a workshop on "Viral Taxonomy" to be convened by Peter Krell.

At the 1997 meeting, plans will be made for one or more symposia and workshops for the SIP International Colloquium to be held in 1998 in Sapporo, Japan.

Suzanne Thiem, Chair

Microsporidia Division Report -1997

Annual Meeting 1996. The Division on Microsporidia held its annual business meeting on September 2, 1996 with 12 members in attendance. The meeting was convened by Lee Solter, Chair. Minutes for the 1995 meeting were not available, however, the balance in the treasury was reported to be $945 and total membership of the Division is 79 persons.

The nominating committee for officers of the Division, Margaret (Peg) Johnson, Louise Malone, and Ingemar Fries, presented candidates Andreas Linde for Vice-Chair and Michael Baker for Secretary/Treasurer. No nominations were made from the floor and both candidates were duly elected to fill the 1996-1998 positions.

It was decided that procedures for elections and terms of office are vaguely worded in the Division on

Microsporidia By-laws. An ad hoc committee made up of members Wayne Brooks and Tim Kurtii was appointed to amend the By-laws and to present the suggested changes to the membership at the 1997 business meeting.

Peg Johnson has continued to add information to the SIP Microsporidia home page. She would like to add research specialty areas to information about members.

A workshop organized by Lee Solter was held following the business meeting with a topic of life cycle, molecular, and ultrastructural characters used for describing new species of microsporidia. Excellent presentations were made by Ronnie Larsson, Louise Malone, and James Becnel.

The Division also sponsored a symposium, "Applied Ecology of Microsporidia" organized by James Becnel. Presentations were made by Ingemar Fries, Carlos Lange, and Lee Solter.

Ronny Larsson chaired a contributed papers session with papers given by members James Becnel, Louise Malone, Norman Pieniazek, Albert Undeen, and David Williams.

1997 Business. Albert Undeen and Lisa Carloye have organized a symposium for the 1997 meeting. The symposium "Physiological Ecology of Microsporidia" will feature speakers Michael Henn, Gernot Hoch, Earl Weidner, and Al Undeen. A workshop, "Microsporidia- Current Status as a Biological Control Agent" has also been organized by Andreas Linde. Speakers for the workshop will be Leah Bauer, Ted Andreadis, Wayne Brooks, and Andreas Linde.

L. Solter, Chair

Bacteria Division Report

The Bacteriology Division now has 120 registered members. The officers are Chair, Andre Klier; Interim Vice Chair, David Ellar; Secretary/Treasurer, William Moar; Members-at-large, Betty Davidson and Sue MacIntosch.

Originally, Barbara Knowles held the position of Vice Chair, however, she resigned owing to other responsibilities. In her place, President B. Federici appointed David Ellar to assume the position on an interim basis. David has agreed to take on the Vice Chairmanship for the remainder of Barbara's term providing, in accordance with the SIP constitution, his appointment is approved by Council.

During the past year, Bylaws for the Division were prepared by Brian Federici and submitted to the Council; their approval is anticipated at the Banff meeting.

For the 1997 annual meeting in Banff, Division member Jean-Louis Schwartz organized a symposium entitled "Mode of Action of Bacterial Toxins". In addition, Jean-Louis and Eileen Raymond organized a workshop on "Partnerships to meet new Challenges: Public and Industrial R & D on *Bt*".

At the 1997 meeting, plans will be made in collaboration with the 1998 Organizing Committee to arrange the program for the Fourth International Conference on *Bacillus thuringiensis* to be held in conjunction with the SIP International Colloquium in Sapporo, Japan.

Andre Klier, Chair

COMMITTEE REPORTS

Meetings Board Committee Report, 1997

The Meetings Board Committee (MBC): Dr. Just M. Vlak, Chair, Wageningen, the Netherlands, Dr. Mike Adang, Athens, USA, and Dr. Yoshifumi Hashimoto, Kyoto, Japan. The XXIXth Annual SIP Meeting was held in Cordoba, Spain, September 1-6, 1996, in conjunction with the IIIrd International Conference on *Bacillus thuringiensis*. Over 330 participants attended the meeting located on the university campus and enjoyed the hospitality of the organizing committee and the city of Cordoba.

The 1997 Annual Meeting in Banff, Canada. The meeting is being organized by Dr. Mark Goettel, Dr. Andrew Keddie and Dr. Martin Erlandson, and the organizers are expecting to host over 300 participants in the magnificent holiday resort and nature reserve of Banff National Park. The 1998 Annual Meeting of the SIP (XXXIst) will be held for the first time in Asia, in Sapporo, Japan, in conjunction with the VIIth International Colloquium on Invertebrate Pathology, and will enjoy the hospitality of Dr. T. Iizuka and his committee.

A decision of where to hold the 'XXXIIIrd Annual Meeting' in 1999 is pending. Offers have recently (1997) been received from Dr. Meir Broza, Israel, to host the SIP in Haifa, and from Dr. Brian Federici and Dr. Harry Kaya, to host the meeting in San Diego, U.S.A., both for the beginning of August. The MBC chairman contacted Dr. Jorge Ibarra to confirm the 2000 meeting in Guanajuato, Mexico. The MBC solicited sites for the SIP meetings in 2001 (USA?), 2002 (International Colloquium) and 2003 (USA?). An informal offer to host the 2004 meeting in South America has been received. The MBC has the intention to maintain an international spread of future meetings, alternating sites between Northern America and other parts of the world. The confirmed and tentative sites for SIP Meetings through 2000 are as follows:

Year	Site	Dates	Status
1997	Banff Canada	Aug. 24-29	Confirmed
1998	Sapporo Japan	Aug. 23-28	Confirmed[a,b]
1999	Israel/USA	Early Aug.	Tentative
2000	Guanajuato Mexico	Pending	Confirmed[b]

[b] International Colloquium,
[b] International Conference on *Bacillus thuringiensis*

No firm offers have been received for meetings beyond 2000 and the MBC urges the US membership to consider the organization of one of these meetings.

Just M. Vlak, Chair
July 26, 1996

Newsletter Report

Three issues of the Newsletter comprising a total of 140 pages were produced in the 1996-97 year. In addition to 88 pages of Newsletter text, there were 4 supplements comprising 52 pages. The first two supplements provided Meeting Information and Registration packages. The third supplement was a Microbial Control Questionnaire and the forth was the 1997-98 SIP Membership Directory.
Text was prepared in Lethbridge and printed by FASEB in Maryland. Newsletters were mailed by FASEB to U.S. members using the U.S. Postal Service. Newsletters were mailed 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 1996 - August 1997.
Total cost of Newsletter (3 issues): $15,665.75
Cost per member based on 848 members: $18.47

Expenses at Lethbridge

	Vol 28(3) (40 pp)	Vol 29(1) (32 pp)	Vol 29(2) (68 pp)
Desktop spec.	$300	$275	$225
Stationary/Misc.	120	137	112
Lethbridge Total	420	412	337
Expenses at FASEB			
Printing	$1,822	$1,500	$ 3,650*
Processing	179	290	464
US Mailing	370	372	1,167**
Intern'll Mailing	841	886	2,951***
FASEB Total	3,214	3,048	8,233
TOTAL	**$3,634**	**$3,460**	**$8,570**

* Does not include $4,089 cost of printing of the Meetings Program & Abstracts
** Includes mailing to Mexico and mailing of Meeting Program & Abstracts
*** Includes mailing of Meeting Program & Abstracts

Mailing: We have switched international mailing to a private mailing firm and this has generally

improved delivery times, although problems still exist. It seems that as we address each problem, another new one arises.

WWW: An alternative to mailing hard copies of the Newsletter may be making the Newsletter available on the WWW.

New Members: We must make arrangements to ensure that New Members receive back copies of the Newsletter.

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

Endowment Committee Report - 1997

Interest from the endowment fund is used to provide support for membership in SIP for scientists 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 10 to 12 persons per year. Through personal contacts and postings on the WEB, the committee has encouraged the scientific community to nominate colleagues for endowment membership.

Twelve colleagues were selected for endowed membership in 1997: two from Mexico and one each from Italy, Romania, Poland, Czech Republic, Brazil, Jordan, Egypt, Malagasy Democratic Republic, Russia, and People's Republic of China. The committee encourages all SIP members to nominate colleagues for endowed membership for 1998.

Tad Poprawski (Chair)
Stephen Wraight
Nguya Maniania

Report for Founders Lecture Committee - 1997

Dr. Donald Roberts presented the 1996 Founders Lecture at the 29th Annual Meeting of the Society for Invertebrate Pathology on the Universidad de Cordoba campus in Cordoba, Spain on September 2. The lecture honoured Agostino Bassi, long recognized for his brilliant 19th century work which associated *Beauveria bassiana* with disease in the silkworm.

Dr. Roberts gave an interesting historical summary of Bassi's life, pointing out his many contributions to science and to insect pathology. He recognized Bassi as the father of the germ theory of disease and presented several interesting anecdotal insights into his life and character. Dr. Roberts then outlined some of the important aspects of his own career in microbial control of insects, insect pathology, and international development activities. He recounted some of his early experiences as a student of Dr. Ed Steinhaus at Berkeley and discussed highlights of the years with the Boyce Thompson Research Institute where he brought together an important critical mass of scientists working on many aspects of insect pathology and microbial control.

At the Thursday night SIP banquet, Harper presented Dr. Roberts with a check for $500.00 US and a beautifully engraved certificate which had been prepared as for all previous lecturers, by contacts of Dr. John Briggs in Columbus, Ohio.

Dr. Harper requested that the members, both present and at large, provide his committee with suggestions for honorees and lecturers for consideration for the 1997 meeting to be held in Banff, Alberta, Canada. A plea for suggestions was also placed in the Newsletter. The committee received several excellent suggestions and is appreciative of all who took the time to make them. A list of worthy nominees for both honoree and lecturer has been initiated for consideration by future committees.

The committee members selected Drs. Thomas Angus and Arthur Heimpel as the persons we would honour in 1997. This is the first time that two persons have been honoured, but the committee recognized the partnership of these two pathologists in their early professional careers, the significant contributions they made jointly on mode of action of *Bacillus thuringiensis*, and the parallel routes that their individual careers followed in their later lives.

The 1995 Lecturer selected by the Committee is Dr. Kees van Frankenhuyzen from the Forest Pest Management Institute at Sault Ste Marie, Ontario, Canada. Dr. van Frankenhuyzen is particularly well suited to deliver the lecture on these two men because he works in their footsteps at the Sault laboratories and has been involved in moving much of their early work from bench to field, one of the ultimate goals that they had as justification for their research. The Founders Lecture will be give by Dr. van Frankenhuyzen at the Opening Plenary Session of the XXX Annual Meeting of the Society for Invertebrate Pathology at Banff, Alberta, Canada on August 25, 1997.

1996-97 Founders' Lecture Committee

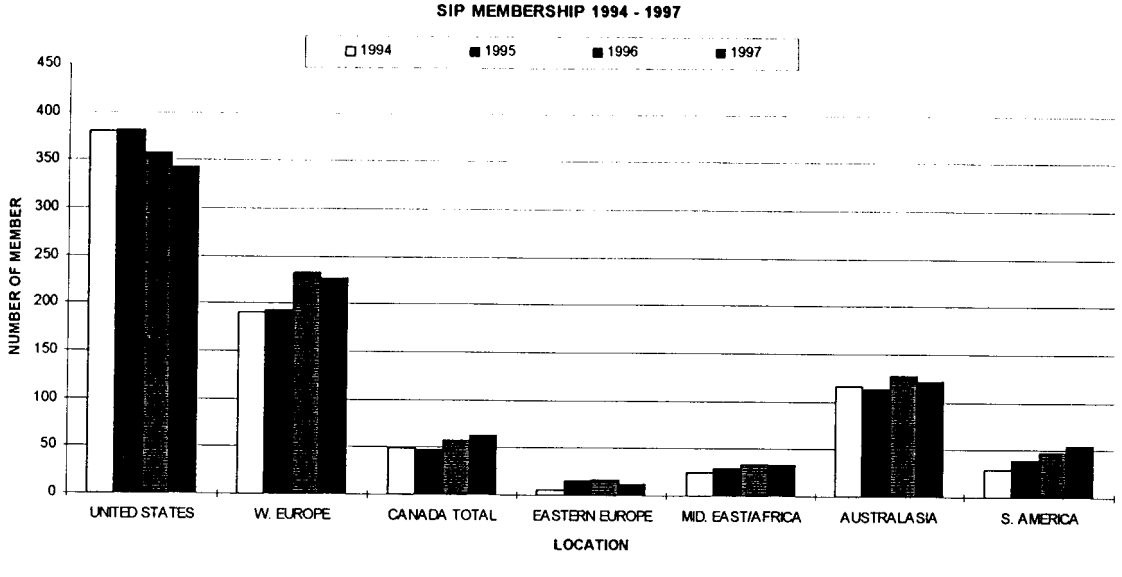
Jim Harper, Chair
Richard Daoust
David Ellar
Tony Sweeney

Membership Committee Report

Composition of SIP Membership: Membership in the SIP has experienced a small decrease of approximately 2% during the past 12 months (see table and chart for breakdown by country and region).

SIP MEMBERSHIP 1997

LOCATION	1993	1994	1995	1996	1997	%change
UNITED STATES	341	380	352	347	343	-1%
AUSTRIA	2	3	4	3	4	
BELGIUM	4	6	7	9	8	
DENMARK	5	5	4	7	7	
FINLAND	3	4	4	3	3	
FRANCE	34	43	35	42	37	
GREECE	0	1	1	1	1	
IRELAND	1	2	2	3	3	
ITALY	5	8	16	12	12	
NETHERLANDS	7	10	10	10	15	
NORWAY				2	2	
PORTUGAL	5	7	9	7	7	
SPAIN	5	6	8	19	13	
SWEDEN	7	9	7	9	8	
SWITZERLAND	6	8	5	4	7	
UNITED KINGDOM	65	67	66	83	83	
GERMANY	13	11	16	19	17	
W. EUROPE	142	174	184	213	227	7%
CANADA TOTAL	44	48	48	57	53	-7%
CZECHOSLOVAKIA	2	3	5	3	4	
HUNGARY	0	1	7	7		
MOLDOVA					1	
POLAND	1	1	2	3	4	
FORMER USSR	0	1	0	3	3	
RUSSIA	0	0	1	1	1	
EASTERN EUROPE	3	6	15	17	13	-31%
EGYPT	3	4	7	7	5	
ISRAEL	11	11	11	11	12	
JORDAN	1	1	2	2	2	
KENYA	1	2	1	2	3	
MADAGASCAR				1	1	
NIGER	0	2	1	0	1	
PAKISTAN					1	
SOUTH AFRICA	2	3	4	4	3	
WEST AFRICA				3	3	
TURKEY	2	2	2	3	2	
ETHIOPIA	0	0	2	1	0	
MID. EAST/AFRICA	20	25	30	34	33	-3%
AUSTRALIA	28	27	24	29	25	
B. SOLOMON IS.	1	1	1	1	1	
CHINA	13	10	11	11	11	
FRENCH POLYNESIA	0	1	0	0	0	
INDIA	1	1	3	3	3	
INDONESIA	1	1	1	1	1	
JAPAN	39	46	45	49	51	
MAURITIUS	1	1	0	0	0	
NEW CALEDONIA					1	
NEW ZEALAND	8	10	9	10	9	
PHILLIPINES	4	3	3	3	3	
REUNION	0	1	0	0	0	
W. SAMOA	1	0	0	0	0	
SINGAPORE	4	4	5	0	1	
S. KOREA	1	2	1	0	0	
SRI LANKA	0	1	0	1	1	
KOREA	0	0	1	3	3	
TAIWAN	4	3	6	14	8	
THAILAND	3	4	3	2	4	
AUSTRALASIA	109	116	113	127	122	-4%
ARGENTINA	3	5	5	7	6	
BRAZIL	12	12	15	18	23	
COLOMBIA	0	1	1	1	3	
COSTA RICA	1	2	0	2	2	
DOMINICAN REP.	1	1	1	1	1	
MEXICO	8	8	16	17	16	
PERU				1	1	
VENEZUELA	1	1	1	1	1	
WEST INDIES					1	
S. AMERICA	25	30	38	49	54	10%
TOTAL ALL	727	829	871	973	951	-2%



Currently, there are 855 members worldwide representing 56 countries. Approximately 50% of the members are from outside North America; the largest increases in membership were from South America (up 11 %) and Canada (up 10 %). There was a decrease in all other regions.

There are currently 4 Divisions within the SIP with a total of 667 members (see chart below). The largest division is Microbial Control followed by Virology, Bacteria and Microsporidia.

DIVISION	NUMBER OF MEMBERS
Microsporidia	79
Microbial Control	342
Virology	126
Bacteria	120
TOTAL	**667**

Summary for SIP Division Memberships for 1997

Activities during 1996/97:

1. 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.

2. Membership packets (composed of a copy of the newsletter, SIP data sheet and an application form) were mailed to individuals requesting information on the Society. Approximately 25 requests were received by the Chair.

3. 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 1997/98:

I. 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.

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

III. Continue to promote increased participation in the annual meetings (the society's number one fund raiser) through cooperative efforts with other groups (such as the BT group).

IV. 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 1996/97 consists of Jorge Ibarra, Robert Anderson, Lerry Lacey and James Becnel.

Submitted by James J. Becnel: July 1997

Publications Board Report - 1997

Dialogue is on-going between the Publications Board and Drs. Carol Reinisch (Editor-in-Chief of JIP) and Charles Crumly (Senior Editor, Life Sciences, Academic Press). The possibility of special or supplementary issues of JIP is a new idea that has surfaced. These issues would probably be devoted to single, "cutting-edge" topics. The Publications Board has formulated a list of some subjects, and would welcome additional ideas from the Membership. If we go forward with this project, details concerning review and speed/timing of publication will be worked out between JIP and SIP.

Both Carol and Chuck were unable to attend the Banff Meeting, however, they communicated by E-mail messages. Carol reported continued efforts to reduce further the turn-around time for manuscripts (esp. time held by reviewers), she also indicated that

a new JIP cover scheme is in the works. Chuck reiterated their tentative support for the concept of special/supplementary issues to be developed in cooperation with SIP.

R.S.Anderson, Chair
M.Bidochka
W.Gelernter,
R.Possee
M.Goettel (ex officio)

MICROBIAL CONTROL NEWS

Thermo Ecotek Signs Agreement to Acquire Novartis' Bt Product Line

WALTHAM, Mass., Oct. 24, 1997 -Thermo Ecotek Corporation (Amex: TCK) announced today that its subsidiary, Thermo Trilogy Corporation, has signed an agreement to acquire the sprayable Bt-biopesticide product lines of Novartis AG, Novartis Crop Protection, Inc., and Sandoz Agro, Inc., for approximately $19.1 million in cash and the assumption of certain liabilities. The Bt product line has worldwide annual sales of approximately $21 million. This acquisition also includes a production facility in Wasco, California.

"The Bt products would complement our neem-based biopesticides and our biological pest- and disease-control products," said Brian Holt, president and chief executive officer of Thermo Ecotek. "This acquisition will greatly enhance our customer base and distribution network, and allow us to offer a more complete integrated pest-management program to growers and consumers."

This acquisition is subject to the satisfaction of a number of closing conditions, including antitrust clearance.

Thermo Ecotek Corporation is an environmental company involved in clean combustion and engineered clean fuels, as well as a range of other environmentally sound technologies. Its biopesticides subsidiary, Thermo Trilogy Corporation, specializes in naturally derived products for protecting crops. Thermo Ecotek is a public subsidiary of Thermo Electron Corporation. More information is available on the Internet:
athttp://www.thermo.com/subsid/tck.html

Thermo Electron Corporation

WHO Global Collaboration for the Development of Pesticides for Public Health (GCDPP)

In order to control or eradicate vector-borne diseases, the World Health Organization launched a substantial program of research and coordination of the screening, evaluation and development of pesticides for the control of disease vectors and human pests in the early 1960's. This program of research and development continued into the 1970's. Various collaborating centers and WHO regional research laboratories were involved in this multi-phase evaluation and research program. This program was later designated as WHO-PES (WHO Pesticides Evaluation Scheme) which included laboratory screening of new pesticides and their formulations and finally small-scale and large-scale village field trials where efficacy, safety and feasibility of application were studied. Additionally, whenever possible, impact on the level of endemic diseases was also assessed. The 4th phase of this scheme addressed specifications of pesticides and their formulations to be used in vector control.

The WHO-PES program eventually come to a halt in the eighties with restructuring of the Vector Biology and Control Division in WHO. It soon became apparent, that member countries carrying on substantial vector control programs, especially mosquito and mosquito-borne disease control operations, soon reached the stage when appropriate tools and strategies for use in operational programs became scarce. Member countries put forward demands for the development of more effective and safer chemical and biological control measures.

To respond to this global demand, the Division of Control of Tropical Diseases (CTD) at WHO, reinvigorated the WHO-PES Program by holding an informal consultation on the Evaluation and Testing

of Insecticides in October 1996, where I was asked to serve as the chairperson of the consultation. Copies of the report of this consultation can be obtained from Dr. Morteza Zaim, whose address appears at the end of this article.

As a result of the Informal Consultation and recommendations made by this group and other discussions held at WHO regarding the future need for public health pesticides, CTD recently (1996) launched the GCDPP program. This is indeed a crucial program which requires collaboration among national and international agencies, research institutions, industry and regulatory agencies.

The main objectives of the GCDPP program are:

* To facilitate the search for alternative pesticides including microbial pesticides as well as application methodologies

* To advise on the relative priority of activities within the mandate of GCDPP

* To advise on issues related to the development and use of pesticides and application equipment within the context of WHO's global disease control strategies.

* To promote harmonization of activities related to pesticide development and safe use.

* To promote and encourage the highest quality of work through appropriate resource mobilization

GCDPP will serve as an advisory group to CTD/WHO/PES in matters of pesticide development, safe and proper use and pesticide application equipment.

Membership and Meetings: A number of agencies, organizations and manufacturers of pesticides and application equipment will become members of GCDPP as well as foundations and WHO Collaborating Centers. Other groups and organizations involved in manufacturing, pest management and crop protection will also be invited. Attempts will be made to maximize representation but at the same time ensure an appropriate balance. In addition to the above, distinguished scientists and officers in charge of vector control in the WHO Regional Offices may also be invited to attend the meetings of GCDPP.

GCDPP will provide a forum for the exchange of technical information and ideas on program activities and the proposed WHO-PES biennial plan and collaboration with other organizations and institutions. GCDPP will meet every other year in Geneva, Switzerland. Informal consultation meetings on specific topics will be convened as the need arises. CTD will be responsible for the organization of such meetings providing support for report preparation and other documents and perform secretariat functions.

Funding: To advance the objectives of GCDPP, a stable source of funding will be necessary. WHO/CTD (WHO-Division of Control of Tropical Diseases) will establish and administer a trust fund which will be designated as GCDPP - Trust Fund, which will be administered according to the WHO financial rules, regulations and practices.

The trust fund will be used to convene meetings, production and dissemination of documents, exchange and dissemination of information on the need for public health pesticides and equipment, and for activities which will promote the development and use of alternative, safe, and cost-effective pesticides. These funds will not be used for the evaluation of specific compounds or application equipment, the cost of which will be borne by the individual manufacturer.

For further information on WHO-PES or GCDPP, contact :

Dr. Morteza Zaim
WHO-PES, CTD
World Health Organization
1211 Geneva 27
Switzerland
E-Mail: zaimm@WHO.ch

Mir S. Mulla
University of California, Riverside

The following articles were extracted from the ISB News Reports:

Commercialized Crops Spawn Secondary Biotech Products

Hundreds of millions of dollars have been spent on engineering of crops to induce pest resistance and herbicide tolerance. These transgenic products are being enthusiastically embraced by growers because of the significantly reduced expense and effort to combat insect damage and herbicide exposure. The full potential of this technology, however, can only be realized if accurate and easy verification methods for genetic traits are available.

Strategic Diagnostics, Inc. (SDI, Newark, DE) has stepped into this market with immunoassay testing technology that is ideally suited for transgene verification. SDI's first product, GeneCheck B.t.k., was developed under contract with Monsanto to detect the insect toxin produced by *Bacillus thuringiensis kurstaki*.

The proprietary GeneCheck test is a 10 minute, field-portable immunoassay with a non-enzymatic visual detection method that uses gold particles. The test kit consists of only a disposable microcentrifuge tube, a few drops of buffer, a disposable micro tissue grinder and a detection strip similar to those used for home pregnancy tests. For only a dollar or two apiece, hundreds or even thousands of plants can be screened to verify the presence of a transgene product.

Monsanto's Bollgard insect-resistant cotton has been described as the most financially successful new agricultural product introduction in the U.S. The SDI test is a crucial part of the quality assurance checks employed by seed supplier Delta and Pine Land Company (Scott, MS) and others during seed propagation and quality control of seed production. About a million SDI B.t.k. tests were used for this process in 1996. Other potential applications could include monitoring of seed lots to prevent mixing of seed and spot-checking growers' fields to verify compliance with licensing requirements for refugia.

According to James Stave, Vice President for R&D, SDI is actively partnering with leading developers of transgenic crops to produce similar immunoassay tests for the detection of other transgene products.

Pat Traynor
Information Systems for Biotechnology
traynor@nbiap.biochem.vt.edu

Boom and Bust of Insect Resistant Bt Cotton?

The development of insect resistant crop varieties has been the most successful application of agricultural biotechnology research so far. The Bt transgenic crops derive their resistance from the insecticidal gene of the bacterium *Bacillus thuringiensis*. Cotton, corn, and potato engineered with such genes were grown commercially for the first time in 1996. Transgenic Bt cotton was grown on 1.8 million acres last year, accounting for about 12% of US cotton acreage.

A major worry lurking behind this success is the potential vulnerability of Bt crops to eventual adaptation by insect pests. Large scale deployment of Bt transgenics will certainly impose a selection pressure for pre-existing Bt-resistant insects to increase their numbers. As a result, the effectiveness of this environmentally sound method of pest control would be reduced. Although several resistance management strategies have been proposed to slow the evolution of insect adaptation to Bt genes, they are not based on empirical data, such as the initial frequency of resistance alleles in the population, but rely instead on theoretical estimates that may prove inadequate.

According to Bruce Tabashnik, University of Arizona, excitement over the success of Bt plants "must be tempered with an admission of ignorance" on how to effectively manage pest resistance to ensure long term durability of the approach. Thus a study conducted by a team led by Fred Gould of North Carolina State University may be a turning point in Bt research because it provides the first direct estimate of the field frequency of Bt-resistant insects (1). They report that in tobacco budworms (*Heliothis virescens*), a major cotton pest, 1 in 350

individuals carried an allele for resistance to the Bt toxin. This estimate is considerably higher than those assumed in earlier theoretical models, and thus forebodes a swift evolution of resistant insect populations. Tabashnik calls this study "a timely finding" which "provides inspiration to plunge ahead" into larger field tests of resistance management tactics (2).

The study was a mammoth effort that began with collecting 2,000 male insects from four cotton-growing states in 1993, before transgenic Bt crops were grown commercially. As the resistance trait is recessive, it is difficult to detect heterozygous insects but estimates of the number of such heterozygotes carrying recessive alleles are critical as those individuals are predominant in any population. The collected males were then individually crossed with females of a strain selected for its extreme high resistance to CryIA(c), the Bt gene used in cotton against tobacco budworm.

The resulting first and second generation progeny from 1025 successful crosses were tested for resistance to Bt toxin using artificial diets in the laboratory. Three males from the sample of 1025 were confirmed to be carrying an allele for resistance to Bt toxin, leading Gould and co-workers to conclude that field frequency of Bt resistance alleles was about 3 in 2,000. William Moar of Auburn University comments, "Gould's research definitely illustrates that resistance management procedures such as refuges, intense field monitoring of transgenic plants for potential escapes, and alternate control strategies are essential to maintain the viability of this valuable resource."

To slow the adaptation of insects to Bt cotton, the EPA has mandated that cotton growers should plant at least 4% of their crop with non-transgenic cotton and this refuge cannot be treated with any insecticides. The idea is that such 'refuges from toxin' will harbor susceptible insects and thus retard the evolution of insect resistance against the Bt gene. Gould *et al.* predict that with 4% refuge, the Bt cotton could remain efficacious to tobacco budworm for 10 years. This is not bad considering that insects have developed resistance to many pesticides and conventional varieties in less time than that. However, the current Bt cotton has less resistance to other pests such as cotton bollworm and European corn borer, and thus the authors predict a boom cycle of only 3-4 years for this variety. Again Tabashnik puts it elegantly -"Nothing will be gained and much can be lost if we pretend to know more about resistance management than we really do".

References

1. Gould, F. *et al.* 1997. Proc. Natl. Acad. Sci., USA 94:3519-3523.
2. Tabashnik, B.E. 1997. Proc. Natl. Acad. Sci., USA 94:3488-3490.

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

MEMBERS ON THE MOVE

Raymond St. Leger has moved from the Boyce Thompson Institute for Plant Research in Ithaca to become an Associate Professor at the University of Maryland. Raymond will continue with his research on the molecular and biochemical basis of fungal/insect interactions. However, like his old partner Don Roberts, he will be increasing his educational activities to cover the training of M.S. and Ph.D candidates (see Positions Available).

Raymond's new address is:
Department of Entomology
4112 Plant Sciences Building
University of Maryland
College park, MD. 20742-4454
Tel: (301)405-5402
Fax: (301) 314-9290
E-mail: rl106@umail.umd.edu

Johannes A. Jehle has moved from the Department of Virology at the Wageningen Agricultural University (The Netherlands) to the newly established "Center for Green Gene Technology" at the State Education and Research Center for Agriculture,

Viticulture and Horticulture (SLFA) in Neustadt/W., Germany. For the last 2 ½ years he did a post-doc in Prof. Just Vlak's lab in Wageningen. Johannes has worked on the molecular characterization of the *Cryptophlebia leucotreta* granulovirus, identification of granulovirus genes and on horizontal transfer of insect transposons into baculovirus genomes. In his new position he is leading the research group "Biotechnological Crop Protection". He will be working on the use of baculoviruses for control of orchard and vineyard pests *Cydia pomonella* and *Lobesia botrana* and on the development of disease resistant transgenic crops.

His new address is:
Johannes A. Jehle
Staatliche Lehr- und Forschungsanstalt fuer
Landwirtschaft, Weinbau und Gartenbau (SLFA)
Zentrum Gruene Gentechnik
Breitenweg 71
67435 Neustadt/W.
Germany

Tel: +49 6321 671 482
Fax: +49 6321 671 222
E-mail: slfa.jehle@t-online.de

Barbara Mulock has moved to the Northern Grains Insect Research Laboratory (USDA-ARS) where she will be investigating the potential use of *Beauveria bassiana* for the management of corn rootworm (*Diabrotica* spp). Previously she worked on environmental fate studies with genetically modified baculoviruses at the Pest Management Research Centre-London, Agriculture and Agri-Food Canada.

Barbara's new address is:
NGIRL
USDA/ARS
2923 Medary Ave.
Brookings, SD 57006, USA
Tel: 605-693-5217
Fax: 605-693-5240
E-mail: bmulock@ngirl.ara.usda.gov

Conrad E. Yunker retired in late 1995 and came to the Puget Sound area to live where the mountains meet the sea. For the 3 ½ years prior to this, he was on an Agricultural Research Council of South Africa Research Fellowship at the Onderstepoort Veterinary Institute near Pretoria, RSA, and involved in field and laboratory studies of heartwater disease of ruminants. Field work involved estimation of Cowdria-infection rates in *Amblyomma hebraeum* ticks of endemic areas of the country. This work, initiated and carried out by staff members of the Medical University of South Africa (Nigel Bryson, George Stewart) was based on techniques devised, in collaboration with Andy Norval and Jerry Butler in Zimbabwe. It employs pheromones extracted from feeding male ticks, in combination with carbon dioxide, to lure unfed adult ticks of both sexes to traps. Ticks so collected were transported to the laboratory, where DNA was extracted to test for evidence of *Cowdria ruminantium*. This was a side activity, however, as Conrad's main energies were devoted to developing a tissue culture-based live vaccine for heartwater, improving the in vitro system and providing materials to the Institute's molecular biologists for their "cutting-edge" studies.

Current activities include sailing, fishing and consulting on ticks and tick-borne diseases of man and animals. Conrad is also on the boards of editorial consultants of several scientific journals.

Conrad's new address is:
Tickconsult
230 Pioneer Drive
Port Ludlow, WA 98365-9620 USA
Tel.: (360) 437-0498

Moving?

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

PUBLICATIONS

Advances in Insect Control, The Role of Transgenic Plants Edited by Nadine B. Carozzi and Michael G. Koziel, 1997. Tàylor & Francis, 300pp.

ISBN 0 7484 04171 Hbk £70.00

Contents: Uses of transgenes to increase host plant resistance to insects: opportunities and challenges; Insect control with transgenic plants expressing *Bacillus thuringiensis* crystal proteins; The development of a comprehensive resistance management plan for potatoes expressing the Cry3A endotoxin; Transgenic maize expressing *Bacillus thuringiensis* insecticidal protein for control of European corn borer; Enhancing insect resistance in rice; Cholesterol oxidase for the control of boll weevil; Vips: novel proteins for control of corn pests; Plant lectins as insect control proteins in transgenic plants; Transfer of bruchid resistance from the common bean to other starchy grain legumes by genetic engineering with the a-amylase inhibitor gene; Proteinase inhibitors and resistance of transgenic plants to insects; Chitinases for insect control; The role of peroxidase in host insect defences; Insecticidal compounds induced by regulated over production of cytokinins in transgenic plants; Genetic engineering of plant secondary metabolism for insect protection; Managing resistance to transgenic crops.

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Microbial Control of Grasshoppers and Locusts (M.S. Goettel and D.L. Johnson, eds)

Memoirs of the Entomological Society of Canada Volume 171 (approx. 400 pages)
Expected release date: November, 1997

In recent years, efforts at developing microbial control agents of grasshoppers and locusts, founded on progress in the previous decades, have been renewed. This effort includes not only researchers conversant in insect pathology and microbial control, but also environmentalists, control specialists, population ecologists, regulators, donor agencies and administrators. The objective of this publication is, therefore, to provide a basic reference point for future work on microbial control of grasshoppers and locusts. It consists of 24 chapters written by 51 authors from 11 countries.

Contents

1. Prior, C. and D.A. Streett. Control Strategies
2. Shah, P.A. and C. Kooyman and A. Paraïso. Surveys for fungal pathogens in Africa and the Near East.
3. Jenkins, N.E. and M.S. Goettel. Methods for mass-production.
4. Moore, D. and R.W. Caudwell. Formulation.
5. Bateman, R. Methods of application.
6. Goettel, M.S., and S.T. Jaronski. Safety and registration..
7. Swanson, D. Economic feasibility in Madagascar.
8. Streett, D.A., S.A. Woods & M. A. Erlandson. Entomopoxviruses
9. Erlandson, M.A. and D.A. Streett. Entomopoxviruses: Biochemical characterization.
10. Zelazny, B., M.S. Goettel & B. Keller. Bacteria.
11. Baker, G.L. and J.L Capinera. Nematodes and Nematomorphs.
12. Bidochka, M.J., R.J. St. Leger & D.W. Roberts. Mechanisms of deuteromycete fungal infections.
13. Jaronski, S.T. and M.S. Goettel. *Beauveria bassiana*.
14. Delgado, F.X., et al. Laboratory and field evaluations of *Beauveria bassiana* in Africa.
15. Inglis, G.D., et al. Persistence of *Beauveria bassiana* 16. Lomer, C.J., C. Prior and C. Kooyman. *Metarhizium*
17. Milner, R.J. *Metarhizium flavoviride* in Australia
18. Lomer, C.J., et al. Control in northern Benin using *Metarhizium flavoviride*.
19. Magalhaes, B.P., et al. Characterization and virulence of a Brazilian isolate of *Metarhizium flavoviride*.
20. Delgado, F.X., et al. Field and laboratory evaluations in Madagascar.
21. Carruthers, R.I., et al. *Entomophaga grylli*

22. Sawyer, A.J. et al. Seasonal patterns of cadaver persistence and sporulation by *Entomophaga grylli*
23. Johnson, D.L. Nosematidae and other Protozoa
24. Johnson, D.L. and M.G. Dolinski. Attempts to increase the prevalence and severity of infection by repeated application.of *Nosema locustae*

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POSITIONS AVAILABLE

Postdoctoral Position at the Kyoto Institute of Technology (KIT)

The KIT is seeking candidates with a Ph.D who have research background in insect virology and cell culture. The successful candidate will participate in the Venture Business Laboratory which was established in April 1997 for Ph.D students selected by the KIT to perform the insect science projects. It is strongly recommended that the postdoctoral fellow performs her or his own project independently. Conditions of employment and documents required for application are follows:

1) Term: immediately to the end of March 1998 and with possible extension for an additional fiscal year (April 1, 1998 to March 31, 1999).

2) Salary: 300,000 yen per month including benefits. Transportation costs between the present residence and Kyoto are not covered.

3) Application: a detailed curriculum vitae and arrangement to have three letters of references sent.

4) Dead line: open until filled.

5) Correspondence:

Dr. Tsuguo Matsumoto
Department of Applied Biology
Kyoto Institute of Technology
Matsugasaki, Sakyo-ku
Kyoto 606, Japan
E-mail: tsuguoma@ipc.kit.ac.jp
Fax: 81-75-724-7764; Tel: 81-75-724-7770

Assistant or Associate Professor/ Insect Pathologist

Department of Entomology & Plant Pathology at Mississippi State University seeks applicants for a research/teaching tenure-track position with appointments in the Mississippi Agricultural & Forestry Experiment Station and the College of Agriculture and Life Sciences. Responsibilities include development of a recognized research program in insect pathology, teaching and cooperation with other scientists interested in ecological and epidemiological aspects of insect diseases. Preference will be given to candidates with a broad base of knowledge and diagnostic capabilities in Insect Pathology. Applicants should send a letter of application including research and teaching interests, CV, transcripts of all post-secondary education, appropriate reprints, and the names of 3 individuals who can be contacted for letters of reference to:

Insect Pathology Search Committee
Department of Entomology & Plant Pathology
Box 9775
Mississippi State, MS 39762 USA

For more information contact:

Clarence Collison, Head
Department of Entomology and Plant Pathology
Tel: (601) 325-2085; Fax: (601)325-8837
E-mail: chc2@ra.msstate.edu).

Postdoctoral Position: Insect Biochemistry and Baculovirus Pathogenesis

Position available to study the biochemical and molecular structure of lepidopteran peritrophic membranes (PMS). Studies will include the cloning and sequencing of midgut genes encoding PM structural proteins. Utilization of the two-hybrid system for the detection and analysis of protein-protein interactions. The role of midintestinal mucins and other proteins as components in the intestinal mucosal immune system will be examined. Experience in insect biochemistry, cell and molecular biology, and pathology is desired. Salary will be commensurate with experience. Two year appointment available immediately. Send curriculum vitae, three letters of recommendation and a brief description of research interest and activities to:

Dr. Robert R. Granados
Boyce Thompson Institute for Plant Research
Cornell University
Ithaca, New York, 14853 USA
Tel: (607) 254-1265
Fax: (607) 253-1242
E-mail: rg28@cornell.edu

Two Post Doctoral Positions, Cambridge University

Available immediately to join a well established multidisciplinary group studying the molecular basis of receptor-toxin interaction and the membrane pore-forming mechanism of epithelia-specific insecticidal proteins produced by *Bacillus thuringiensis*. Suitable candidates should have a strong background in molecular genetics or protein/membrane biochemistry or molecular microbiology. Experience in protein engineering, protein purification, assay development and protein structural analysis are target skills. The posts are funded for 3 years in the first instance with a salary in the range of £15,159 to £21,016 pa according to age and experience.

Detailed information about the record and aims of the research group can be found on the group web sit at: http://www.bio.cam.ac.uk/dept/biochem/UTOs/Ellar.html

Applications in duplicate and including full CV, publications list and the names of at least two referees should be sent to:

Dr. David J. Ellar
Biochemistry Department
Cambridge University
80 Tennis Court Road,
Cambridge, CB2 1GA, UK
Tel: 01223 333751
Fax: 01223 766043
E-mail: dje1@mole.bio.cam.ac.uk

The University follows an Equal Opportunities Policy.

Ph.D Studentships, Insect Mycology

Raymond St. Leger currently has two studentships available to:

1) assess the key signalling and sensory transduction processes involved in fungal pathogenicity. This is part of a federally funded project to understand how information from the host cuticle is used to formulate an appropriate array of pathogenic responses (differentiation of infection structures and synthesis of enzymes and toxins) that determine virulence and host range.

2) Determine whether the use of fungal pathogenic proteins in transgenic plants could provide a route for formulating new products for crop protection. We have entered into a collaboration with Dr. Richard Dixon of the Noble Foundation to engineer crops for insect resistance using genes from fungi fused to insect spittle inducible plant promoters.

Applicants should send CV and names of two academic references to:

Dr. Raymond St. Leger
4112 Plant Sciences Building
University of Maryland
College park, MD. 20742-4454
Tel: (301)405-5402
Fax: (301) 314-9290
E-mail: rl106@umailsrvO.umd.edu

Postdoctoral Position: Entomopoxvirus Biochemistry, Molecular Biology and Pathogenesis

A postdoctoral position is available immediately directed towards development of entomopoxviruses as vectors for possible use in human gene therapy and vaccine vectors. Studies will of necessity involve aspects of entomopoxvirus biology/molecular biology and utilize molecular approaches for the study of gene regulation, mapping, vector construction, infected insect pathology and gene expression in mammalian environments. Extensive experience in insect cell culture as well as growth and manipulation of entomopoxviruses are strongly preferred. Salary commensurate with experience.

Send Curriculum Vitae, three letters of recommendation and a brief description of previous work and experience to:

Dr. Richard W. Moyer
University of Florida College of Medicine
P.O. box 100266
Gainesville, FL 32605-0266
Tel: (352) 392-7077
FAX: (352) 846-2042
E-mail: rmoyer@medmicro.med.ufl.edu

Graduate Research Assistantship (MS/Ph.D.)

A graduate research assistantship is immediately available for a motivated student interested in host resistance/biological control of turfgrass insects. Stipend, tuition waiver, health benefits included.

Address inquiries to:

Parwinder Grewal
Department of Entomology
OARDC
The Ohio State University
1680 Madison Av.
Wooster, OH 44691
Tel. (330) 263-3963
E-mail: grewal.4@osu.edu.

Request application materials from:

Dr. David Denlinger
Chair, Department of Entomology
103 Botany and Zoology Building,
1735 Neil Avenue, Columbus, OH 43210-1220
Tel. (614) 292-8209.

POSITIONS WANTED

Ph.D. with **8 years working experience in microbial/biological control** and broad interest seeks interesting work.

1992 - 1997: **Insect Pathologist** discovery of new pathogen isolates from *Papuana* spp. (*M. anisopliae*, *B. popilliae*, protozoans); culture and bioassay baculovirus, fungi, nematodes, bacteria, protozoa; surveys and field-tests in 4 Pacific countries; training (assistant, graduate student, leaflets, seminars, workshop).

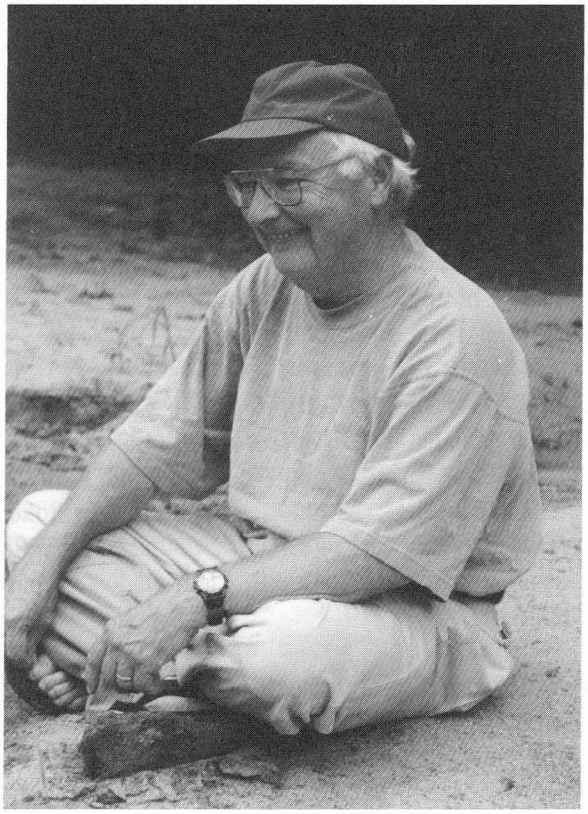
1989 - 1991: 28 month **Postdoctoral Fellow** IRRI : isolation of 4000 *Bacillus thuringiensis* including several new isolates, bioassay against lepidopteran rice insect pests.

1985- 1989: **Ph.D.** "Reproduction related peptides: a study in different insects, using immunocytochemistry, bioassays and recombinant DNA methods." Additional subject "Identification of Bt strains simplified by RFLP analysis", broad basis of laboratory techniques .

Computer literate (wordprocessors, spreadsheets, databases, statistical programs). Working knowledge of **Dutch, English, French, German**. **Broad interest in microbial/biological control** - pathogens - insect physiology - biotechnology - resistance (- management) - agricultural, medical pest - research, implementation, training. Tropical location and travel certainly welcome. Available December 1, 1997.

Theunis Wilfried
Insect Pathologist, EU/SPC Taro Beetle Project
P.O. Box 912 Honiara, Solomon Islands,
Tel: 677 31014; Fax: 677 31007,
E-mail: SPCTARO@welkam.solomon.com.sb

MEMBER NEWS



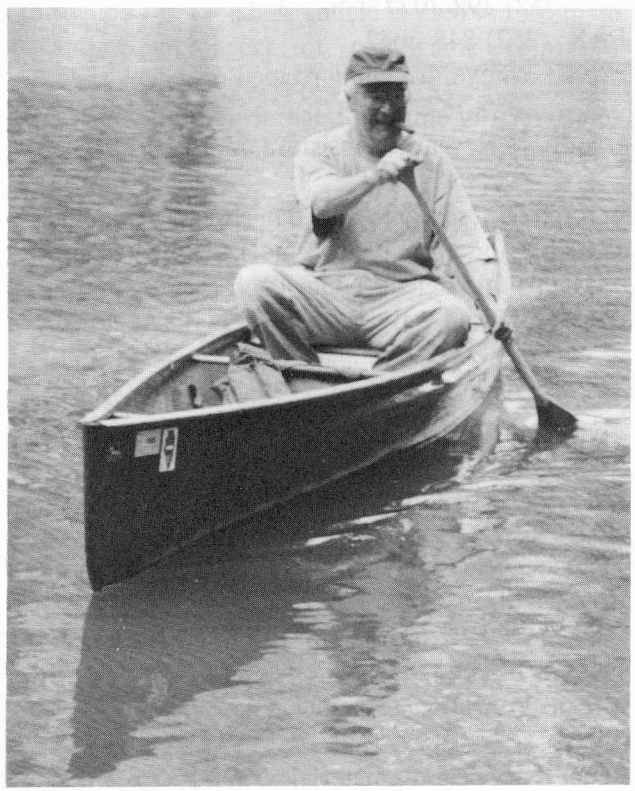
Joseph V. Maddox, Professional Scientist and insect pathologist, has retired from the Illinois Natural History Survey after more than 35 years of service. Joe's research interests and contributions ranged from taxonomic, biological, and epizootilogical studies of entomopathogenic microsporidia to the epizootiology of fungal pathogens of several field crop pests and studies of insect viruses and protozoa other than microsporidia.

An affiliate of the Department of Entomology at the University of Illinois, Joe taught a graduate-level course in insect pathology. He also taught summer insect pathology courses associated with the NCR-125 Midwest Biological Control Institute designed to fill deficits in graduate curricula at 12 Midwestern universities.

Joe has spearheaded international studies of microsporidia pathogenic to pest insects, including studies of pathogens of mosquitoes in Pakistan and an international collaboration of European and American scientists for the study of several species of microsporidia pathogenic to the gypsy moth. He also participated in biological control teaching and foreign exploration programs with the Pan American School of Agriculture in Honduras.

Joe has been an active member of SIP and has served as Treasurer of the society and Chair of the Division on Microsporidia. Joe retired with emeritus status and will continue his work in insect pathology, but he also plans to travel and, of course, find some good fishing spots. Anyone wishing to honor Joe's retirement may do so with a contribution to the "Luckmann Fund" at the Illinois Natural History Survey. This fund was established to provide support for graduate student attendance at the North Central Region, ESA annual meetings. Checks should be payable to the fund and mailed to:

Luckmann Fund
c/o Beverly Harvey
Illinois Natural History Survey
607 E. Peabody Dr.
Champaign, IL 61820.

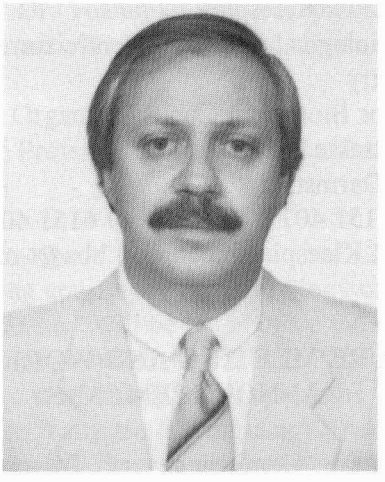


I'm sure I saw some microsporidians around here!

Mir S. Mulla, Professor of Entomology, was presented the Science Society of Thailand's Meritorious Recognition Award by the Thailand Minister of Science and Technology last October. Mulla, an authority on insects of medical and public health importance was cited for his efforts and leadership in organizing the First International Symposium on Biopesticides convened at Naresuan University in Thailand. This symposium attended by some 300 participants from 20 countries covered biodiversity, safety, toxicity, efficacy and proper use of biopesticides based on natural products and pathogenic organisms. The proceedings of this first symposium amounting to 300 pages will be published soon. The editors of the first volume are: Professor Mir S. Mulla, SIP Member, Jittawadee Rodcharoen, SIP Member, and Professor Siriwat Wongsir, both in the Department of Biology, Faculty of Science, Chulalongkorn University, Bangkok, Thailand. Mulla informs us that the 2nd International Symposium on Biopesticides will be held in late October 1998, on Langkawi Island off the coast of Malaysia. Anyone interested in receiving further information should contact Dr. Mulla at tel: (909) 787-5818 and E-mail: mulla@mail.ucr.edu

Flavio Moscardi, entomologist and Chief of the National Center for Soybean Research at Londrina, Parana, Brazil, has recently received the 1996 Award in Agriculture, conferred by the "Third World Academy of Sciences" (TWAS) and the "Third World Network of Scientific Organizations." This award is conferred to scientific organizations or individuals whose scientific and technical innovations have provided significant and sustainable solutions to important economical and social problems in the Third World and have brought, or will bring, substantial benefits to the well-being in developing countries.

Flavio was presented the prestigious award by the President of Brazil, Fernando Henrique Cardoso during a ceremony held at the opening session of the VI TWAS Conference on September 8, 1997. Flavio's research centres on developing methods for use of baculoviruses against soybean pests. The 1996 award is being shared with Dr. K. A. Siddiqui from Pakistan.



Flavio Moscardi

ANNOUNCEMENTS

Laboratory for Diagnosis of Insect Pathogens

Since 1960 we have maintained a diagnostic laboratory for diseased insects, as we are interested in finding new insect pathogens suitable for biological or integrated control.

If you have problems with insect rearing or if you find diseased or suspicious insects in the field, you can send them directly to our laboratory. Please include the following information with your shipment:

- Sender's address - Institute
- Common and scientific name of the insects
- State and number of insects

- Signs and symptoms observed
- Place were the insects were found
- Date of collection
- Host plant of the insects
- Treatments with pesticides or other control measures
- Remarks on the occurrence and frequency of the diseased insects
- Mortality figures

For shipment please use sturdy plastic boxes closed with a perforated cover, or vials plugged with cotton, if possible.

Dr. Regina G. Kleespies
Federal Biological Research Centre for Agriculture and Forestry
Institute for Biological Control
Heinrichstrasse 243
D-64287 Darmstadt
Tel.: 49 6151 407 226 ; Fax: 49 6151 407 290
E-mail: R.Kleespies.biocontrol.bba@t-online.de

FUTURE MEETING AND WORKSHOP ANNOUNCEMENTS

International Conference of Integrated Pest Management (IPM) - Theory & Practice, Developing Sustainable Agriculture, Guangzhou, China, June 15-20, 1998

This conference is being organized by the Guangdong Association for Science and Technology Cooperation and the Guangdong Entomological Society. Early registration deadline is 31 December, 1997 and abstract receipt deadline is 1 March, 1998. For more information, contact:

Guo Mingfang
Guongdong Entomological Society
The Guangdong Entomological Institute
Xingang West Road 105
Guangzhou 510260
China
Tel: 86/20/84199129
Fax: 86/20/84191709, 84183704
E-mail: gzgeii@puplicl.guangzhou.gd.cn

British Mycological Society *International Symposium:* The Future Of Fungi In The Control Of Pests, Weeds & Diseases, Southampton University, April 5-9th, 1998.

This meeting provides an excellent opportunity for mycologists of all persuasions to join with others in a vigorous discussion of an important issue concerning the relevance of fungi in a practical and environmental context. Fundamental aspects of the biology of fungi that impinge on the problems and opportunities surrounding the actual and potential use of these organisms as biocontrol agents will be of prime concern. The discussion will provide a platform from which to initiate future research themes and outline strategies for the successful development of fungi as sustainable, environmentally benign agents for crop protection.

The main symposium will last four days and integrate experiences, knowledge and understanding in use of fungi to control pests, weeds and diseases. The first two days will be conducted in general session and be devoted to fundamental issues and debate. The second two days will concern more specific issues related to practical application and registration.

Outline of Programme

Sunday 5th April
- Registration and set up posters, stands & stalls.
- President's Reception to welcome guests. Light refreshments provided.

Monday 6th April
- Overviews of fungal biocontrol agents
- Mechanisms of fungal pathogenesis
- Offered paper session
- Workshop I - Fungal Toxins

Tuesday 7th April
- Improving virulence and ecological fitness of fungal biocontrol agents
- Distribution and survival of fungal biocontrol agents in the environment
- Offered paper session
- Poster session

Wednesday 8th April
- Production, formulation and application
- Biocontrol fungi: progress, problems and potential
- Conference Dinner

Thursday 9th April
- Risk Assessment and Registration (COST 816 sponsored session in collaboration with BMS)
- Workshop II - Registration of fungal biocontrol agents

Invited speakers include: Dr. Guy Riba (France), Dr. John Whipps (UK), Dr. Harry Evans (UK), Prof. P.E. Kolatakkudy (USA), Prof. Olin Yoder (USA), Prof. Ilan Chet (Israel), Dr. Keith Charnley (UK), Prof. Ray St. Leger (USA), Dr. Naresh Magan (UK), Dr. Mike Jeger (Netherlands), Dr. Mark Goettel (Canada), Dr. Alistair McCartney (UK), Prof. Brian Kerry (UK), Prof. Jim Deacon (UK), Dr. Yvonne. Couteaudier (France), Dr. Steve Wraight (USA), Dr. Mark Jackson (USA), Dr.Charles Wilson (USA), Dr. Roy Bateman(UK), Dr. David Moore (UK), Dr. Chris Jackson (UK), Dr.Adrian Gillespie (Denmark), Dr. Jurgen Kohl (Netherlands), Dr.Nyckle Fokkema (Netherlands), Drs. Usall & Vinas (Spain), Dr. Alan Watson (Canada), Prof. Robert Lumsden (USA), Dr. Werner Knauf (Germany), Dr. Alison Hamer (UK), Dr. Alain Vey (France), Dr. Hermann Strasser (Austria).

For Further Information Please Contact:

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Fax +44 (0)1703 594269
E-mail: cwj@soton.ac.uk

The 3rd Pacific Rim Conference of Biotechnology of *Bacillus thuringiensis*, October, 1999, Huazhong Agricultural University, Wuhan, P.R. China

The following topics are being considered:

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

The International Organizing Committee:
Chairman: Dr. Toshihiko Iizuka (Japan)
Vice-Chairman: Dr. Takashi Yamamoto (USA)

The Local Organizing Committee:
Chairman: Professor Ziniu Yu (P.R. China)

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 Gorge on Yangstse (Changjiang) River in Hubei Province, will be organized after the conference.

Please contact the following if you have the intention to participate in the conference.

Dr. Ming Sun or Assistant. Prof. Ziduo Liu
Department of Microbial Science and Technology
Huazhong Agricultural University
Wuhan, Hubei 430070
P.R. China
Fax: 86-27-7393882
E-mail: YZ41@public.wh.hb.cn

Fourth International Lincoln Workshop Microbial Control of Soil Dwelling Pests, AgResearch, Lincoln, New Zealand, February 17-19, 1998

This workshop is the fourth of a series, initiated in 1990, to allow discussion on the important theme of

microbial control of soil dwelling insects. The purpose of the workshop is to bring together researchers working in microbial control to discuss recent advances in research and develop cooperative programmes. In this workshop we want to examine how basic science assists the development of microbial control. Suggested themes are listed below. The major objective of the meeting will be to determine how we can use science to make microbial control more effective in the field. Further suggestions for sessions are welcome.

Workshop Themes

- Infection processes and immune responses
- Genotype and pathotype determination
- Microbes for root colonisation or transgenic plants
- Modelling epizootiology and ecology of pathogens in soil
- Parasitoids and pathogens for biological control
- Production and formulation of pathogens for biocontrol

Registration fee: NZ$150* (includes Proceedings, lunches and local transport)
Student fee: NZ$80 (Fees GST inclusive)

Please submit papers for the workshop by Dec 15, 1997. A preliminary programme will be circulated by Dec 20 1997. Proceedings of the meeting will be published.

Third Lincoln Training Course, Insect Pathology and Microbial Control of Soil Dwelling Pests AgResearch, Lincoln, New Zealand, February 23-26, 1998

An intensive course on insect pathology and microbial control of insect pests will be presented. It is designed for researchers with some background in microbiology and/or entomology who are seeking to widen their skills in this expanding area. The course will be highly interactive and involve a number of top specialists.

Course Themes

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

The course is organised by the Microbial Control Group of AgResearch at Lincoln who have more than 16 years experience in microbial control of soil dwelling pests. The group developed Invade® for control of the grass grub *Costelytra zealandica*, the world's first microbial insecticide based on a bacterium from the Enterobacteriaceae.

Course leaders include Drs Trevor Jackson, Travis Glare, Drion Boucias, and Maureen O'Callaghan. The course is scheduled to follow the *Fourth International Lincoln Workshop on Microbial Control of Soil Dwelling Pests* to be held at Lincoln on 17-19 February 1998.

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

For further details and registration form:

Dr T. A. Jackson
AgResearch Lincoln
PO Box 60
Lincoln
New Zealand
Tel +64-3 325 6900
Fax +64-3 325 2946
E-mail: jacksont@agresearch.cri.nz

Agricultural Biotechnology International Conference '98, Saskatoon, Saskatchewan, Canada, June 9-12, 1998

Sponsored by Saskatchewan Agriculture and Food, Ag-West Biotech Inc. and a team of 21 corporate and

institutional sponsors, ABIC '98's theme, "Agbiotech: the Science of Success," will focus on strategies for the commercialization of agbiotech products.

ABIC '98 will feature tours of Saskatoon's agbiotech industry sites, 55 expert presentations by 40-plus speakers, poster presentations and a trade show.

Presentation topics include:

- international patterns and projections in agbiotech development;
- emerging market opportunities;
- high impact science;
- strategies for building agbiotech businesses;
- guidelines for entering the international marketplace.

More than 30 sessions are organized into four main topic streams: Plant and Crop Development, Animal Science, Microbial Science, and Commercial Development.

Posters. Participants are invited to present research findings at the conference Poster Session. Research is welcomed from all areas of agricultural biotechnology including new developments from industry. Abstracts will be published in the Conference Highlights for ABIC '98. Application forms and guidelines for abstract submission and poster presentation are available from the ABIC '98 Secretariat. Since the number of posters will be limited by available space, submissions will be considered on a first-come, first-served basis.

For more information contact:
ABIC 98 Secretariat
c/o The Signature Group
608 Duchess Street
Saskatoon, Saskatchewan, Canada S7K 0R1.
Tel: 306-934-1772; Fax: 306-664-6615
E-mail: siggroup@ sk.sympatico.ca
Web site at http://www.lights.com/abic/.

PAST MEETINGS AND WORKSHOPS

The 6th European Meeting in the IOBC/WPRS Working Group: *Insect Pathogens and Insect Parasitic Nematodes,* Special Theme: *Role of insect pathogens in Sustainable Agriculture,* Royal Veterinary and Agricultural University, Copenhagen, Denmark, August 10-15, 1997

International Organisation of Biological Control (IOBC) is subdivided into regional sections, the West Palaearctic Regional Section being one of them. In this section, a number of working groups exist, with the focus on specific crops or specific methods or approaches. The working group on Insect Pathogens and Insect Parasitic Nematodes is chaired by Peter Smits (The Netherlands) and meets every second year. The group has two subgroups, Fungi (chaired by Bernard Papierok, France) and Nematodes (chaired by Ralph-Udo Ehlers, Germany).

Copenhagen was chosen for the 1997 meeting. The meeting specifically focused on sustainable agriculture, as the organizing committee felt that this subject urgently needed to be addressed. The desire to replace chemicals with microbial substitutes simply do not meet the need for a more holistic approach in plant protection and sustainability of the agro-ecosystem.

The main target group for the meeting was the members of the working group, and colleagues from West and Central Europe. The 113 participants represented 16 European countries as well as USA, Canada, the Middle- and Far-East.

There were more than 40 oral and 40 poster presentations covering many aspects of the subject. Some general presentations were given to allow us to have an impression on approaches to reach sustainability using microbials. The list included: The importance of the public, growers and industrial opinions (Ray Carruthers, USA; Itamar Glazer, Israel), the agricultural system affecting natural populations of nematodes and fungi (Andrzej Bednarek, Poland; Siegfried Keller, Switzerland); the challenge to enter with microbial control in IPM programmes (Peter Smits, The Netherlands, John

Trumble, USA); possibilities to include autodissemination (Gisbert Zimmermann, Germany); problems with resistance to bacterial insecticides (Christina Nielsen LeRoux, France); the highly disputable regulation guidelines for microbial pesticides (Niels Bohse Hendriksen, Denmark); and novel strategies using metabolites only (Alain Vey, France). Some contributions devoted to summarizing biological control in the country hosting the meeting were also given (Henrik Brødsgaard, Tove Steenberg, Jørgen Eilenberg, Denmark). Finally, one presentation was a philosophical evaluation on natural science (Hans Siggaard Jensen, Denmark).

Peter Smits tries a strange bike during the IOBC conference, Copenhagen.

The posters were presented in two groups and followed by a discussion with the author of each poster. Within each of the two subgroups, further presentation and discussions were scheduled separately. In the fungus group, several presentations gave novel data on autodissemination both on Hyphomycetes and Entomophthorales. In the nematode group, presentations included presentations on integration of methods to use nematodes.

Further, each subgroup discussed specific issues for cooperation. In the fungus group, it was agreed that Gisbert Zimmermann should elaborate and publish a standard protocol for insect bait techniques to allow a better comparison between surveys. Future cooperation on Entomophthorales in the frame of EU (COST-Action or similar) was decided. Urs Tuor (Switzerland) is heading the efforts to achieve support. The meeting in the nematode subgroup included discussions about visions on future activities and strategies for attaining such activities. The European cooperation on nematodes is already well established in the COST action, headed by Noël Boemare, France. A small group discussing Bacteria held a meeting, headed by Christina Nielsen LeRoux.

The proceedings from the meeting will be published in an IOBC/WPRS Bulletin early next year. For further information contact: Peter Smits: P.H. Smits@IPO.DLO.NL. Abstracts from the meeting are available from Jørgen Eilenberg: JEI@KVL.DK

Jørgen Eilenberg (Local Organiser)
Peter Smits (Chairman of the Working Group)

EDITOR'S NOTES

Many thanks to all those who contributed to this issue of the Newsletter. Special thanks to John Bonner, Lorraine Braun, Betty Davidson, Mike Dimock, Toshi Iizuka, Don Roberts and Lee Solter for providing photos of the Banff meetings.

WHEN DID YOU RECEIVE YOUR NEWSLETTER?

In an effort to improve our service to you, we need to know how long it takes for the Newsletter to reach you. We'd like to improve our delivery time, but at reasonable cost.

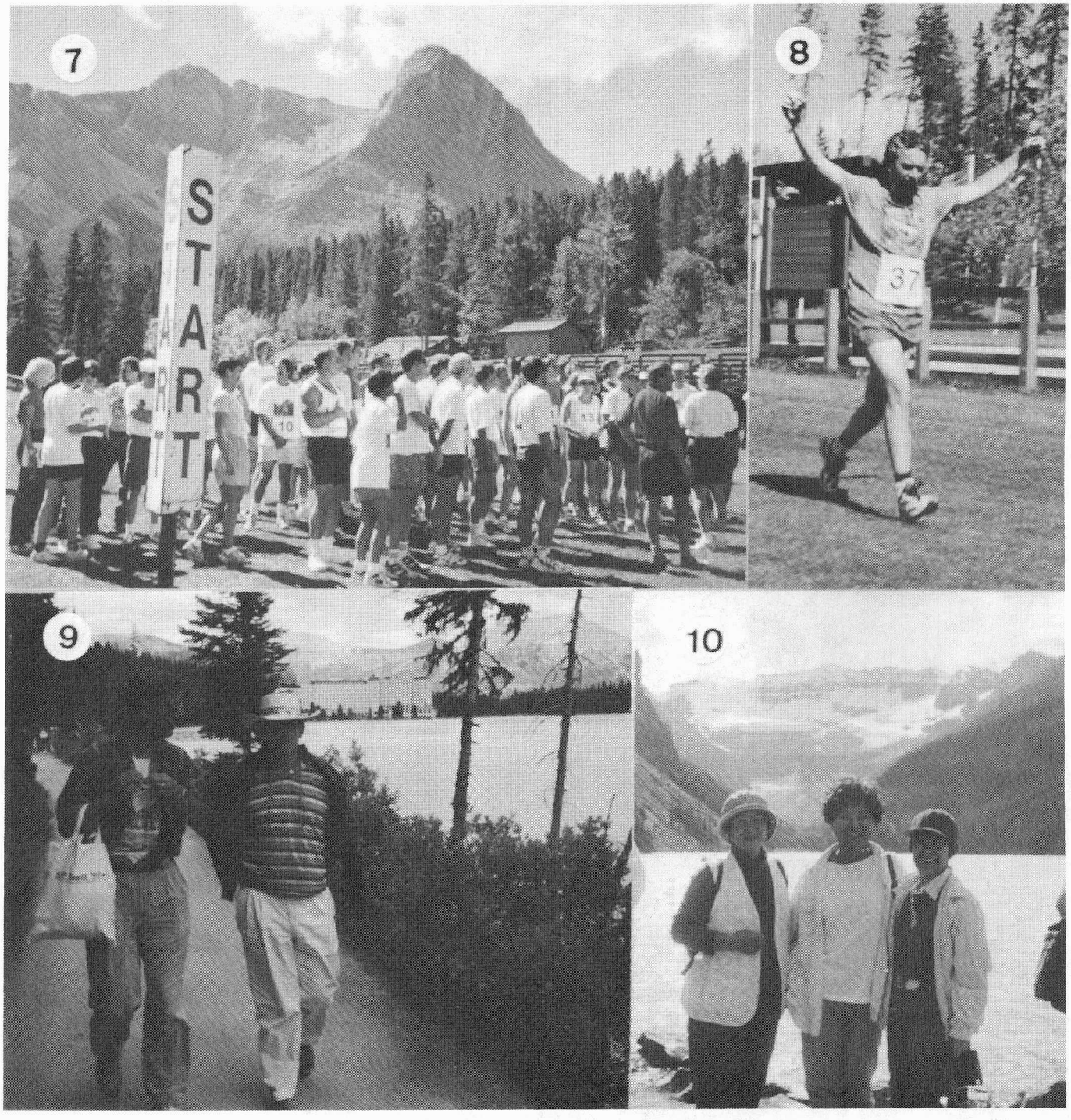
Please send me a short E-mail message or postcard if you received this Newsletter after December 15. Please include the postmark date and place which was on the Newsletter Envelope.

The Editor

Deadline for next issue. Please submit all material by **January 15, 1998** for publication in the February, 1998 issue.

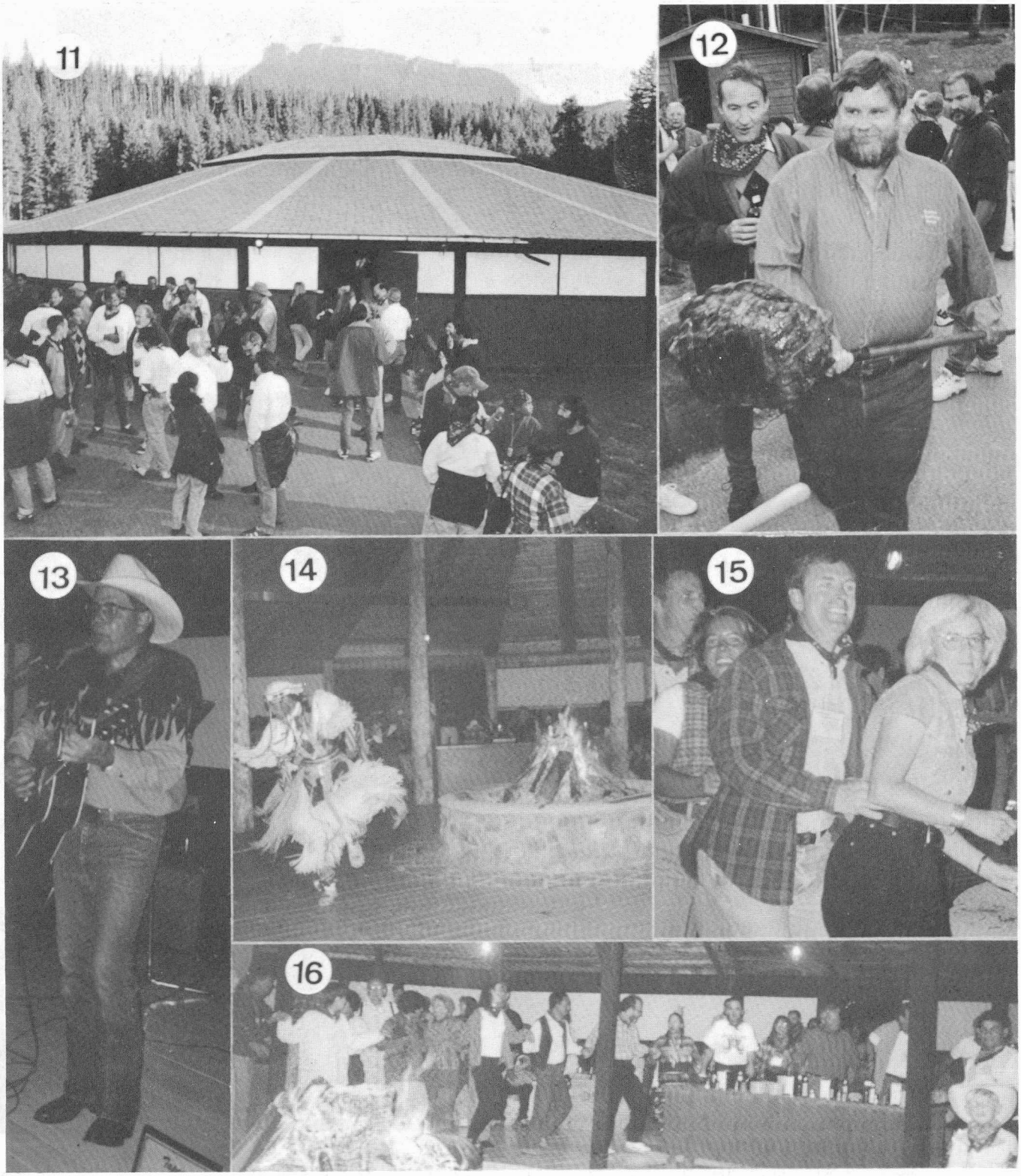
1. Members of Banff '97 Organizing Committee, Joan Cossentine, Lorraine Braun, Andrew Keddie, Martin Erlandson and Mark Goettel; 2. Sheping Li and Doug Inglis; 3. Companion Tour to Columbia Icefields; 4. Doug Baldwin manning the slide preview room; 5. Chinese delegates at the Sunday Mixer; 6. Mrs. and Mrs. Bob Anderson.

Photos from Banff



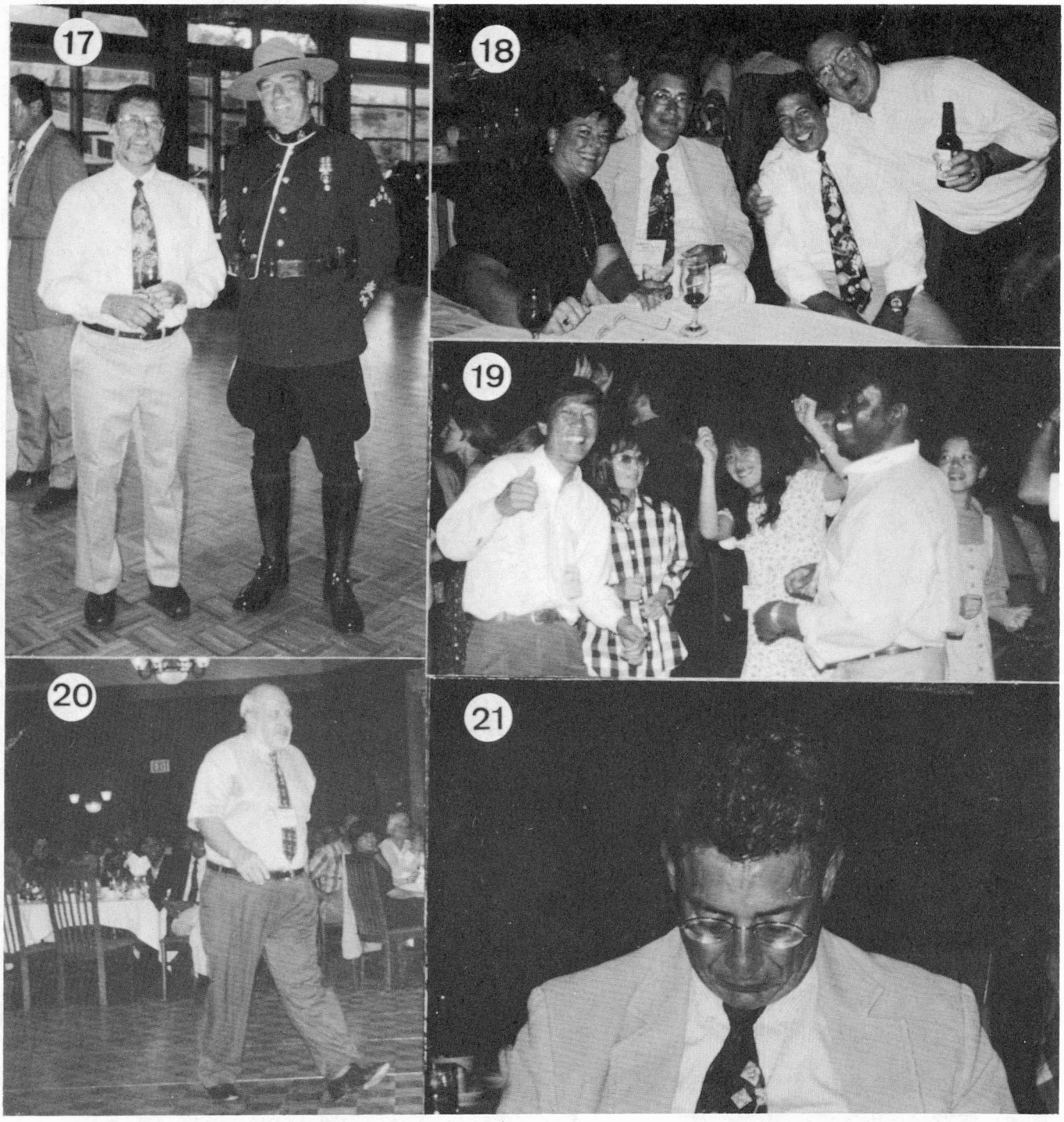
7. Start of 5-k race at the Nordic Centre; 8. Chris Lucarotti crosses the finish line!; 9. Just Vlak and Brian Federici strolling around Lake Louise; 10. Mrs. Iizuka, Kaya and Kawarabata at Lake Louise.

Photos from Banff



11. Brewster Donut Tent, site of the BBQ; 12. Here comes the Alberta beef! Chris Lomer can't believe how big it is!; 13. Member of the "Cottonwood" country and western band; 14. Native Canadian dancer; 15. Wendy Gelernter and Bill Moar "gettin down to some country line dancin"; 16 Everybody else in a country style circle dance.

Photos from Banff



17. Lerry Lacey and Sergeant Peterson of the RCMP; 18. Mrs. Couch, Jimmy Becnel, Ted Andreadis and Terry Couch having a good time at the Banquet; 19. Yasuhisa Kunimi, Madoka Nakai and George Kyei-Poku on the dance floor; 20. Chris Payne on his way to receive the "most enthusiastic square dancer" award; 21. Jimmy Becnel falls asleep despite the loud music and partying around him. Guess the 5-k race this year was a bit tougher than usual, right Jimmy?

Photos from Banff

Questionnaires and Order Form

1) 1997 Slide Atlas of Basic Invertebrate Pathology Order Form

2) Questionnaire for Directory of Specialists Involved in the Development of Fungi as Biocontrol Agents

3) Questionnaire for Directory of Industries Involved in the Development of Microbial Control Products, Second Edition

Society for Invertebrate Pathology

1997 Slide Atlas of Basic Invertebrate Pathology

The Society announces the availability of a **completely new** slide atlas on basic invertebrate pathology, entitled "1997 Slide Atlas of Basic Invertebrate Pathology." Previously, the Society produced a slide atlas in 1984 entitled "Color Slide Atlas of Invertebrate Pathology" and in 1992, the Society's Division of Microbial Control compiled an atlas, centred around microbial control, which was entitled "Color Slide Atlas of Microbial Control." **The new slide atlas** is about **basic invertebrate pathology** and includes 200 slides, 40 from each of the major groups generally included in this field of study (viruses, bacteria, fungi, protozoa, nematodes). Each group of slides was put together by researchers working with that group of pathogens. Slides principally include transmission and scanning electron micrographs, light micrographs, histology sections, pictures of pathogens, infected, dead, and healthy hosts, and life cycle schematics. Figure legends describing each slide are included with each slide set.

The Slide Atlas costs $60 (U.S.). Please pay using a check or money order made out to "Society for Invertebrate Pathology." **If you pay with a check, the check must be drawn on a bank with a U.S. affiliation.**

Mail this order form and your payment to: Dr. Ann E. Hajek, Department of Entomology, Cornell University, Ithaca, NY, U.S.A. 14853-0901.

Number of slide atlases requested: _____

Amount of money enclosed: _____

Name and address for delivery of the slide atlas (please print):

_____

_____

_____

_____

Tel: _____ Fax: _____ e-mail: _____

For further information, contact Ann Hajek at the above address or by phone (607-254-4902), fax (607-255-0939) or e-mail (aeh@cornell.edu).

Directory of Specialists Involved in the Development of Fungi as Biocontrol Agents

A Directory of Specialists Involved in the Development of Fungi as Biocontrol Agents of pests, weeds and diseases is being compiled by Tariq Butt and Mark Goettel, in association with the Society for Invertebrate Pathology and the British Mycological Society. It is hoped that sponsors will be found that would enable distribution of the Directory at minimal cost. The Directory will also be available on the internet.

People/companies wishing to be included in the directory should provide the following information:

1. Surname: _____ 2. First Name(s) _____

3. Title (Prof, Dr, Mr, Mrs, Miss, Ms) **(circle 1)** 4. Organisation _____

5. Street Address_____ 6. City_____ 7. State/Prov._____

8. Country_____ 9. Postal code_____ 10. Telephone_____

11. Fax_____ 12. E-mail address: _____ 13. WWW page address: _____

Use additional sheets if required for the following questions:

14. Membership of professional societies: _____

15. Fungal BCAs (common and Latin names, phylum): _____

16. Target host (common and Latin names, phylum) _____

17. Crop or Habitat _____

18. Research Field (systematics, ecology, pathogenesis, laboratory and field assays, mass production, formulation, application, physiology, biochemistry, molecular biology and genetics, other_____) (circle appropriate fields).

19. Experience or interests. (e.g. current projects, special skills, consultancy, technical or work experience relevant to the development of fungal BCAs)

20. Patents or products registered (provide patent number and brief details of active ingredient, formulation, method of application, target hosts)

21. Keywords List six words which identify the fungi you work with and their target host(s) and describe your expertise and/or areas of interest.

Please return completed form(s) (preferably via e-mail) **by 10 April, 1998** to:

Dr. Tariq M. Butt,
IACR-Rothamsted,
Harpenden, Hertfordshire,
AL5 2JQ, U.K.

tel. +44 (0)1582 763133 ext 24431
fax +44 (0) 1582 760981
e-mail: Tariq.Butt@bbsrc.ac.uk

SOCIETY FOR INVERTEBRATE PATHOLOGY, MICROBIAL CONTROL DIVISION

Questionnaire for Directory of Industries Involved in the Development of Microbial Control Products, Second Edition

This directory will be made available to the Society membership and any other interested parties. In order for this venture to be a success, we need feedback from all industry involved in the area of invertebrate microbial control or use of pathogen genes in transgenic organisms intended for invertebrate pest control. If you are not involved in industry, please forward this questionnaire to someone in industry who may not otherwise receive it. If replying by e-mail, simply include your response following the questionnaire question number. **PLEASE REPLY BY 15 JANUARY, 1998.**

1) Pathogen developed or being developed or area of research, i.e., delivery systems, formulation, safety testing etc. (if more than one pathogen or area of research, please complete separate form for each):

_____

_____

2) Target host(s) (can be broad): _____

_____

3) Crop or Habitat: _____

_____

4) Company name: _____

Company address: _____

Telephone no.: _____ Facsimile no.: _____

E-mail: _____

Contact person: _____

5) Registration status: _____

Which countries? _____

6) Trade name: _____

7) Availability of experimental formulations (are formulations available for researchers to test?):

_____

Please return completed form(s) to:

Paresh Shah
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Swiss Federal Institute of Technology
ETH Zentrum, CH-8092, Zurich, Switzerland
Tel. +41 1 632 4437; Fax. +41 1 632 1148; E-mail: shah@micro.biol.ethz.ch