

SIP MEETING
College Park, Maryland USA
August 20-24, 1989

The 22nd Annual Meeting of the Society for Invertebrate Pathology will be held at the Adult Education Center of the University of Maryland, College Park, Maryland, on August 20-24, 1989. The Co-chairmen of this meeting are:

Dr. Charles Reichelderfer
Department of Entomology,
Symons Hall,
University of Maryland,
College Park,
Maryland 20742.
301-454-7138

Dr. James L. Vaughn
USDA Insect Pathology Lab.,
Room 214,
Building 011A. BARC-W,
Beltsville,
Maryland 20705.
301-344-3689

Information on the meeting site, accommodations and other nearby attractions will be contained in the next newsletter. The program committee has tentatively arranged the following interesting and informative symposia and workshops.

Symposia

1. Origin of Invertebrate Pathogens
Convener: Dr. Kevin Hackett
2. Fungal Pathogens of Human Disease Vectors
Convener: Dr. Jeff Lord
3. Molluscan Pathobiology
Convener: Dr. Robert Anderson
4. Insect Virology
Convener: Dr. Donald Stoltz
5. Bt Toxin Membrane Interactions
Convener: Dr. Donald Johnson

Workshops

1. Neoplasia Workshop
Convener: Dr. Ester Peters
2. Protein and Nucleic Separations
Convener: Mr. Jack Hench
3. Bioassay
Convener: Dr. Don Murch

The program committee chairman is:

Dr. Edward M. Dougherty
USDA, Insect Pathology Laboratory
Rm 214, Bldg 011A, BARC-W
Beltsville, MD 20705
301-344-3692

If any members wish to broaden the scope of the tentative 1989 program please contact Dr. Dougherty as soon as possible.

TRANSPORTATION

Car: The campus of the University of Maryland at College Park is located 2 mi south of the "Beltway" (Interstate 95) on Rt. 1 (Baltimore Pike) - where many of the motels are also located. The conference will be held at the Center for Adult Education (CEA). To reach the CAE from the Beltway, use Exit 25 (B, College Park) and take Rt. 1 south for 1.0 mi; turn right onto Rt. 193 West (University Blvd.) and proceed 1.9 mi.; make a left onto Adelphi Rd., and immediate left onto Campus Dr., and following signs for the CAE, turn immediately left into the CAE parking lot (University College).

Parking: Visitor parking permits can be obtained at the registration desk.

Air: We highly recommend that conferees arriving by air fly into the Baltimore-Washington International (BWI) Airport. This airport has a shuttle, the "Airport Connection" (301-441-2345), that runs every hour (daily, 6 a.m. to midnight, except Sat, to 8:30 p.m.) and, after an easy changeover, at the Greenbelt Station, will deliver passengers directly to their motel or the CAE. The fee is approximately \$15.00. Taxis from the airports to College Park cost about \$25-30 (BWI), \$18-25 (National), and \$40-45 (Dulles). Arrivals at National or Dulles Airports can also use Metrorail (operates 5:30 to midnight daily, except 8 a.m. to midnight on Sat and 10 a.m. to midnight on Sun) and a taxi: the "Washington Flyer" (703-685-1400) has a shuttle bus that links Dulles and the West Falls Church Metrorail Station (orange line); National is on the blue Metrorail line. Ultimately, passengers using Metrorail should go to the Silver Spring Station (red line) and take a taxi. Warning: this latter strategy could take several hours. Metro (rail and bus) information is 301-637-7000 (6 a.m. to 11:30 p.m.).

Train: Those taking the train should go to the New Carrollton Train Station and take a taxi from there.

Conference Transportation: The R2' bus line runs every 1/2 (rush) to one hour (nonrush) between designated motels on Rt. 1 and the CAE and Brookland Metrorail Station (for forays into Washington, D.C.). Chartered buses will be provided for special conference events.

For further information on transportation, contact Kevin Hackett (301-344-3086).

NEWSFLASH!

The results of the recent ballot on membership fees has just been announced. As of last week, (October 26), with an almost unprecedented return of 444 ballots, or about 55% of those mailed, 418, or 94% were in favour of accepting the proposed new fee structure.

Ann Cali.

XXI ANNUAL MEETING OF THE
SOCIETY FOR INVERTEBRATE PATHOLOGY
UNIVERSITY OF CALIFORNIA, SAN DIEGO
at LA JOLLA
August 14-18, 1988

The 21st Annual Meeting of the Society for Invertebrate Pathology was held at the La Jolla campus of the University of California, San Diego. The Society met jointly with the Society of Vector Ecologists. Attendance at the meeting totaled approximately 250, including 200 participants, 26 companions, and somewhere in the range of 20 children. As has become typical for our annual meetings, the meeting had a very international flavor with many countries being represented. In addition to participants from the United States and Canada, scientists were in attendance from the United Kingdom, France, Italy, Germany, The Philippines, Japan, People's Republic of China, Thailand, India, Egypt, Denmark, Finland, Mexico, Argentina, Taiwan, The Netherlands, Israel, Kenya, and Australia, to list just those that come immediately to mind.

The scientific program for the meeting included six symposia conducted as plenary sessions, 10 contributed paper sessions, 2 poster sessions, and 3 workshops. Altogether, 132 papers were presented including 18 posters. Although there were numerous papers this year on bacterial and fungal pathogens of insects, most other facets of invertebrate pathology were also represented at

SIP Newsletter

The SIP Newsletter is produced four times a year by the Society for Invertebrate Pathology. Annual dues (U.S. funds) in the Society are: regular members, \$11.00; and students, \$4.00. Members receive the SIP Newsletter and a copy of the abstracts of all SIP Annual General meetings free, whether or not they attend. Application forms for membership in the Society may be obtained from the Treasurer, Mr. Fredrick G. Kern, Cooperative Oxford Biological Laboratory, 18 South Morris Street, Oxrod, Maryland 21654, U.S.A.

Council Officers of the Society are:

- President Donald W. Roberts, USA
- Vice President Elizabeth W. Davidson, USA
- Past President John C. Harshbarger, USA
- Secretary Robert C. Anderson, USA
- Treasurer Fredrick C. Kern, USA
- Trustees Christopher J. Bayne, USA.
Peter Faulkner, Canada
Christopher C. Payne,
England
Dudley E. Pinnock,
Australia

Send news items and other contributions to:
David Tyrrell, Editor
SIP Newsletter
Forest Pest Management Institute
Canadian Forestry Service
P.O. Box 490
Sault Ste. Marie, Ontario, Canada P6A 5M7

DEADLINE NEXT ISSUE: 15 February, 1989.

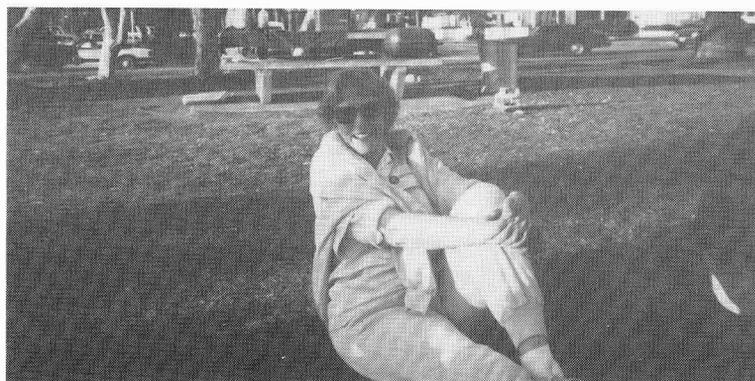
the meeting. The impact that molecular biology is having on the field was very apparent, particularly with respect to our rapidly expanding knowledge of the protein toxins of various bacilli. The Founders Memorial Lecture entitled "Molecular Biology of Insecticidal Proteins Produced by *Bacillus thuringiensis*", presented by Professor Helen R. Whiteley of the University of Washington, Seattle, tied in very nicely with this aspect of the meeting. This year also saw increased representation by industry at the meeting, largely as a result of the expanding interest in the development and use of insect pathogens as microbial control agents and as sources of novel insecticidal proteins for use in transgenic plants.

The meeting received excellent financial support from industry, and both the Society of Invertebrate Pathology and Society of Vector Ecologists extend their sincere appreciation to the following companies for their generous contributions.

- | | |
|------------------------|-------------------------|
| Abbott Laboratories | EcoScience Laboratories |
| American Cyanamid | Evans BioControl |
| Biosys | Monsanto |
| Calgene | Mycogen |
| Du Pont | Plant Genetic Systems |
| Ecogen | Safer Ltd |
| Sandoz Crop Protection | |

The support from these companies contributed substantially to the success of the La Jolla meeting.

A special word of thanks also goes to Mabry Steinhaus for providing each of the registrants with a gift copy of "Disease in a Minor Chord," a history of the development of the field of invertebrate pathology by



Mabry Steinhaus enjoying the evening sunshine at the beach barbecue at La Jolla Shores

her late husband, Edward A. Steinhaus, a founding father and pioneer in the field. Additional copies could (and still can be) be purchased at \$4 per copy, and one foreign pathologist was so impressed with Ed's effort that he bought and paid for 10 more on the spot!

To encourage and reward participation by students, SIP initiated the "Best Paper by a Student" award this year. Eight students chose to have their papers considered for the award, and First Prize (\$200 and a certificate) went to William J. Moar of the University of California, Riverside, for his paper entitled "Comparative Toxicity of Spores and Crystals from the NRD-12 and HD-1 Strains of *Bacillus thuringiensis* subsp. *kurstaki* against *Spodoptera exigua*". The judges (Betty Davidson, Drion

Boucias, and Jim Harper) were so impressed with the overall quality of the student papers that they elected to award a Second Prize (\$50 and a Certificate) to Mohamed Shams-El-Din, also of the University of California, Riverside, for his paper entitled "Early Cellular Responses of Mosquito Larvae to Mermithid Penetration." Though the organizers of the meeting were certainly pleased to see two Riverside students as recipients of these awards, they can not help but wonder whether the judges weren't influenced by the balmy weather that held for the length of the meeting and the ample supply of wine made available to them throughout the week. Several other excellent student papers were presented outside the award series, and it is hoped that next year more students will enter their papers in this worthwhile and challenging contest.

Some of the social highlights of the meeting included the Sunday night mixer, Tuesday night beach barbecue at La Jolla Shores, and the Wednesday night Banquet. The mixer was held outside to take advantage of the fine weather, and featured a variety of wines from California, France, Spain, and Australia, imported and domestic beers, along with pates, cheeses, fruits, and other finger-foods. It is interesting to observe that the Bass Ale, Heineken, and Anchor Steam all were consumed well in advance of the Coors, Corona, and Miller's Lite. Certainly, SIP member's can be proud of a most distinguished palate for beer. The wines were consumed at an admirable rate as well, with all 40 bottles drunk by the end of the end of the evening. In fact, all of the food provided, and most of the drink (except for a few cans of Coors!), were gone by the mixer's end.

The beach barbecue and banquet both drew many members (the costs for these were included in the registration fee this year), with approximately 200 in attendance at each. The beach barbecue ended with a lovely sunset, after which most participants returned to the townhouses on campus for a little partying and joke-telling or just plain rest. The banquet featured a luau complete with entertainment from the islands of the south Pacific. The food was ample and tasty, and the entertainment, provided by the "Young Polynesians," was surprisingly good. We were treated to live music, song, and dance characteristic of different south sea islands. The highlight (or lowpoint, depending on one's view!) of the entertainment came toward the end of the evening when several Society members were invited on stage, given a quick lesson in south sea island "dirty-dancing," and allowed to gyrate themselves silly with the help of the Young Polynesians' dancers. It was all in good fun and a fitting end to the evening.

The meeting ended the next day at noon, but many of the participants stayed on for a few days to do a little touring and sightseeing in the beautiful San Diego area. It was a very good meeting, and those who could not make it for one reason or another should make a special effort to attend the meeting next year, which will be at the University of Maryland. We look forward to seeing you all there. And don't forget to mark your calendars now for the Vth International Colloquium of Invertebrate Pathology and Microbial Control, which will be held in Adelaide, Australia, from the 20th-24th of August, 1990. For certain the Aussies will put on a good show!

Minutes of the XXI Annual SIP Business Meeting

University of California, La Jolla, California

August 15, 1988

The XXIst Annual SIP Business Meeting was called to order by President John Harshbarger on August 15, 1988 at 17:30 hours.

A motion to accept the minutes of the Gainesville General Membership Meeting as published in the SIP NEWSLETTER was seconded and passed.

Since all reports will be published in the Newsletter, only the highlights are presented. All were approved.

Secretary, Dr. Ann Cali reported that a constitutional amendment had been proposed, supported by the membership, and distributed to the council in sufficient time to be considered by the council. It was discussed and unanimously passed at both the council and business meetings.

The election results were read and two suggestions made regarding the election procedures:

- 1) that the outer ballot envelope have a place on it marked "signature required" and a space to sign it. The council agreed
- 2) that the election procedures and timing be reviewed.

It was suggested that a review of the bylaws might be necessary and that Dr. Roberts, the new President, consider having a committee to do this.

Treasurer, Dr. Robert Granados, presented his report. It included a \$300.00 loss for the previous year. He expressed a strong need for accounting of meeting finances from previous meetings and the need for a procedure checklist for meeting organizers of future meetings.

Because of the financial needs for the operation of the treasurers' position, it was moved and unanimously passed that \$2000.00 be allocated to the treasurer for future years.

Consideration of a dues increase and the need for an executive secretary: The membership no longer covers the costs and the dollar devaluation has not helped. Additionally, the new president is directed to give serious consideration to the possibility of getting an executive secretary to take the burden off the treasurers position and to study the feasibility, duties, and location of such a person.

The motion was made and passed, by council, that the dues should be raised to \$15.00 reg. members and \$6.00 student members. This must go out by mail ballot to the society.

Brian Federici gave the local committee report. there are 260 registrants, 30 children; 135 abstracts, 5 canceled. Thanks to corporate donations, we will cover costs and possibly be ahead \$1500.00.

Future meetings:

August 20-24, 1989 the meeting will be in Maryland.

August 20-24, 1990 the meeting will be held in Australia, additionally this meeting will be the

International Colloquium. D. Pinnock's report presents a meeting plan that should entice all to come.

Meetings board report: D. Roberts
For 1991 we have an invitation from Professor Yu to come to the Peoples Republic of China, however, it was felt that it was too close after the Australian meeting. Other locations such as Spain and France were discussed. The council accepted an invitation from E. Davidson and Northern Arizona University, U.S.A..

For 1992 there was discussion of possibly meeting in Europe in conjunction with other meetings. This will be investigated; no decision was made at this time.

Division of Microbial control: D. Roberts
No activity to report.

Division on Microsporida: T. Andreadis
Report approved

International Union of Biological Sciences: J. Briggs - Report approved

Culture Collection: H. D. Burges
Report approved

Safety: L. Lacy
Suggested council consider possibility of safety meeting every other year. Also suggestion made that it could be an area for the microbial control division - the matter will be considered.

Nominating Committee: W. Brooks
Report approved

Tellers Committee: R. Gaugler
Discussion followed regarding the signature of voters on the outside of the outer ballot envelopes. Many members forgot to sign their envelope, therefore, it was decided that future outer Ballot envelopes carry a signature line and statement: "Must be signed".

Archivist: W. Brooks
Report approved.

Founder's Lecture: L. Van der Geest
This year the lecture will not be honoring anyone, instead it will be a "State of the Art" presentation.

Membership Committee: R. Anderson
Discussion: Motion made and passed that the President appoint a committee to stimulate interest in non-insect pathology.
Other suggestions approved: A description sheet go with membership forms. Membership dues may be paid at meetings by new members.

Endowment Committee: E. Davidson
Davidson requested that when we pay our dues we consider making a donation to the endowment fund since it covers the dues for people who cannot otherwise pay it.

Courses in Invert. Pathology Committee:
H. Zimmack
Course booklet prepared and distributed- there are some late additions.

Newsletter: D. Tyrrell

Approved suggestion: Newsletter editor will send schedual of deadlines to Secretary, Meetings organizers, and President; hopefully, this will facilitate more timely receipt of materials for newsletter deadlines.

Publications Board (General Information, Glossary and Journal): J. Harper
Discussion of ways to get the Glossary published included the lack of success in adding it to existing books in development. The possibility of the ESA miscellaneous publications was suggested. A committee to investigate this and a \$4,000.- ceiling for it, was suggested. It was also suggested that the need for this may not be there. Harper will contact M. Martignoni about revisions available and the council will discuss the matter by mail following these inquiries.

Discussion of Journal of Invert. Path.: Academic Press has made it clear that SIP has no input on the Journal. We are still attempting to work with Academic Press on editorial policy. Harshbarger should hear from Academic Press by year end on their assessment of the problem. Decided to table the matter as nothing can be done now.

New Business:
A motion was made by Granados, that a committee be formed to advise the treasurer. This was approved.

New Business from the general meeting:
Briggs suggested Society look into outside funding sources for the Australia meeting. He said we need to start now and keep the membership informed. Membership agreed and Briggs volunteered to do it.
In regard to costs re: Australia meeting, Pinnock said Qantas will give us a charter flight rate.

In regard to the ballot problems Brooks suggested that a separate mailing of the ballots gets more people to submit votes. Burges suggested that separately mailed ballots should have the cv's included eventhough they were in the newsletter. The final decision was that the new president should look into this issue, as was suggested in council.

Respectfully submitted:
Ann Cali, Sec. SIP.

ANNUAL REPORTS:

SECRETARY'S REPORT

The minutes and reports from the Gainesville meeting (1987) were prepared and submitted to the newsletter.

Elections:

The nominations for officers in the SIP were recieved from W. Brooks and all the candidates were contacted for biographical sketches. These were forwarded to the SIP Newsletter editor for the next issue and the ballots were sent to the membership. All ballots received were returned by June 1, 1988.

The Tellers committee, chaired by R. Gaugler, counted the ballots and gave the results to me. The results were sent to all candidates as well as the newsletter.

1988 BALLOT RESULTS:

President: Dr. Donald W. Roberts
Vice President: Dr. Elizabeth W. Davidson
Secretary: Dr. Robert S. Anderson
Treasurer: Mr. Fredrick G. Kern
Trustees:
Dr. Dudley E. Pinnock & Dr. Peter Faulkner
Honorary Membership:
Dr. C. Vago & Dr. Y. Tanada

There was a problem with the lack of identification on the outer envelopes of some ballots. I suggest that in future years we print on the outer envelope: "Name and address" with blank lines to follow. I am sure that those persons who did not identify themselves, did so inadvertently, even though they were told to provide this information on the outer envelope.

We need to review the constitutional procedure for balloting in regard to mailing procedures and timing. (In my opinion the cv's should be together with the ballot and both should either be sent in the newsletter or mailed separately. Additionally, it makes more sense for the secretary to send the material to the editor to be reprinted and mailed to the membership because the newsletter editor has the "machinery" for the procedures.)

Constitution Amendment:

John Harshbarger and several other society members proposed changes in the constitution. In accordance with the constitution regulations regarding such changes, I sent each council member a copy of the following in April:

"Proposed changes in the SIP Bylaws on the composition of the Publications Board
Article VII., Section 6(b)

Current: Voting members of the Publications Board shall be the Board Chairperson, the President of the SOCIETY, and the Editor or Editor-in-chief of each SOCIETY publication.

Proposed:

Voting Members of the Publications Board shall be the Board Chairperson, the President, the Vice President, and the Treasurer of the SOCIETY and one SOCIETY member appointed by the President.

Article VII., Section 6(c)

Current:

Nonvoting Members of the Board shall include the Vice President, and the Treasurer of the SOCIETY.

Proposed:

Nonvoting Members of the Board shall include the Editor or Editor-in-chief of each SOCIETY publication.

The proposed changes will eliminate the conflict of interest of having the Editors and Editors-in-chief of the Society's publications as Voting members of their own governing board."

These changes will be discussed and voted on at the August meeting of the executive council and the Society.

The agenda and reports were sent to all council members. A few reports still have not been received. I sent a copy of the agenda to all chairpersons, hopefully some of the missing ones will bring a report.

There is some confusion regarding the chairmanship of the safety committee and we need to decide on its status as suggested in Lacey's report.

Respectfully submitted

Ann Cali, Secretary
July, 1988

TREASURER'S REPORT

During the period from July 1, 1987 through June 30, 1988, the SIP Treasury account remained stable and currently totals \$40,051.97. Funds (\$8,000.00) were transferred to our Canadian Newsletter account and a separate financial statement will be submitted by the Newsletter editor, Dr. David Tyrrell. The Newsletter account has facilitated the financial operation of that office and it is recommended that the yearly transfer of funds to the Newsletter office be continued in the future. The majority of the SIP treasury funds (\$34,189.84) are presently held in a super saver account where it earns a 5.5% interest rate. Interest income was approximately \$200.00 less than in the year 1986-87.

The Microsporidia Division (80 members) has assets of \$1,124. and the Microbial Control Division (250 members) has \$1,432. Neither division has spent any money since they started collecting dues in 1971 and 1981, respectively. The endowment committee chaired by Dr. Betty Davidson selected 11 persons for whom dues were paid for in 1987-88. The endowment fund as of June 30, 1988 totals \$3,710.93.

The Society was billed for \$6,175.63 to cover the publishing of the proceedings for the Invertebrate Pathology Colloquium, Veldhoven, The Netherlands. This amount was subsequently refunded to the Society but a full financial statement for the Colloquium has not been submitted as yet.

The SIP membership is now computerized and a Reflex database program is now operational. The society membership increased by 61 during 1987-88 and now totals 958 members. A total of 112 new members joined the society during 1987-88; this included 75 regular members and 37 students members. The Treasurer's Office continues to have increasing demands for numerous SIP functions and, in spite of the new membership database, our growing memberships will result in increased activities for this office. Consequently, I recommend that the Society allocate \$2,000.00 per year for part-time clerical assistance (10 hr/week). During 1987-88, \$1,427.85 was expended on part-time student help. I would like to thank the Boyce Thompson Institute for providing funds for part-time clerical help and for excellent secretarial support during my 2 year term as Society Treasurer.

Respectfully submitted

Robert R. Granados
Treasurer, SIP
10 August, 1988

Financial Statement of the Society
for Invertebrate Pathology for the Period
1 July, 1987 - 30 June, 1988

Society for Invertebrate Pathology
Budget

August, 1988

Balance on Hand 30 June 1987 \$40,420.57

<u>Income</u>			
Membership Dues		\$ 9,249.00	
Regular	\$ 8,097.00		
Student	352.00		
Sustaining	800.00		
Div. Microsporida		83.00	
Div. of Microbial Control		260.00	
Journal of Invertebrate Pathology Subscription		959.00	
U.S.	386.00		
Foreign	573.00		
Interest		1,768.22	
Regular Savings	1,582.53		
Endowment Savings	185.69		
Contributions		263.00	
Endowment Fund	39.00		
Society Fund	224.00		
Directory for Invertebr. Pathology		25.00	
Veldhoven Funds (refund)		6,175.00	
Petty Cash Refund		44.07	
Miscellaneous		66.50	
		<u>\$18,892.82</u>	<u>\$18,892.82</u>
			<u>\$59,313.39</u>

<u>Disbursements</u>			
Academic Press (J.I.P.)		\$ 1,339.00	
Treasurer Office Expenses		2,619.40	
Bank Fees	57.44		
Postage	948.04		
Printing/Photocopies	11.50		
Student Help	1,427.45		
General Office Supplies	74.97		
Petty Cash Account	100.00		
Awards			
Founders Lecture Award		\$ 338.89	
Newsletter - Funds for Canadian Account		8,400.00	
Purchase Veldhoven Proceedings		6,175.63	
Computerization SIP Membership		388.50	
		<u>(19,261.42)</u>	<u>(19,261.42)</u>
			<u>\$40,051.97</u>

<u>Balance on hand 30 June, 1988</u>		
Tompkins County Trust Co.		\$40,051.97
Savings Account	34,189.84	
Endowment Account	3,952.93	
Checking Account	1,865.13	
Petty Cash Balance	44.07	
	<u>\$40,051.97</u>	

REPORT OF THE COMMITTEE FOR THE XXII SIP ANNUAL MEETING AT THE UNIVERSITY OF MARYLAND AUG. 20-24, 1989

Dr. E.M. Dougherty, Insect Path. Laboratory, has officially accepted the position of Program Committee Chair. He and Dr. Reichelderfer met with the staff of the Adult Education Center on the U. of Maryland campus to tour the facility and to make some preliminary determinations as to size and location of the rooms available. Dr. Dougherty has made initial contacts with chairpersons of the two divisions of the society to request their input as to possible program topics.

Dr. Clayton Beegle has accepted the position of secretary of the local committee. He has prepared a list of industrial contacts with companies that may be willing to provide support for the meeting. We will begin to contact these people for their support following the close of this years annual meeting.

Respectfully submitted,
Charles F. Reichelderfer and James L. Vaughn
Co-chairs, 1989 Local Meeting Committee

	Proposed 1987-88	Actual 1987-88	Proposed 1988-89
<u>INCOME</u>			
Dues			
Regular	\$ 8,600.00	\$ 8,097.00	\$ 9,000.00
Student	375.00	352.00	400.00
Sustaining	1,600.00	800.00	1,000.00
Microsporida	125.00	88.00	85.00
Microbial Control	262.00	260.00	260.00
Interest	2,500.00	1,768.22	2,000.00
Directory	0	25.00	25.00
Journal	12,300.00	959.00	0
Contributions	100.00	263.00	300.00
Miscellaneous	50.00	110.57	100.00
Veldhoven Income	0	6,175.03	0
	<u>\$25,912.00</u>	<u>\$18,897.82</u>	<u>\$13,170.00</u>
TOTAL INCOME			
<u>EXPENDITURES</u>			
Newsletter	\$ 8,400.00	\$ 8,400.00	\$ 8,400.00
Office Expenses			
Ballots/Printing	600.00	11.50	100.00
Postage	1,000.00	948.04	1,000.00
Office Supplies	75.00	174.97	175.00
Bank Fees	75.00	57.44	75.00
Student Help	1,700.00	1,427.45	2,000.00
Journal	12,300.00	1,339.00	0
Miscellaneous	300.00	0	0
Founders Lecture Award	2,300.00	338.89	1,000.00
Computerization SIP	500.00	388.50	200.00
Purchase Veldhoven Proc.	0	6,175.63	0
Student Paper Award	0	0	250.00
	<u>\$27,250.00</u>	<u>\$19,261.42</u>	<u>\$13,200.00</u>

Preliminary Report
of the Organizing Committee
XXI SIP Annual Meeting
University of California, San Diego
at La Jolla
August 14-18, 1988

As of June 30, 1988

1. Paper submitted for presentation = 132	
15 Posters	
25 Symposium papers	
89 Contributed papers	
<u>3 Informal papers</u>	
132	
2. Registrations	
70 Singles	75
21 Doubles	21
35 Families (x est. 3/family)	105
25 No Accommodation	<u>25</u>
	226
3. Corporate sponsor donations	
Abbott Laboratories	\$ 500
American Cyanamid	250
Biosis	250
Mycogen	350
Safer	250
Sandoz	<u>500</u>
	\$ 2,100

Submitted by: B. Federici, Chair
1988 Annual Meeting
Organizing Committee

REPORT OF THE ORGANISING COMMITTEE FOR THE
VIH INTERNATIONAL COLLOQUIUM ON INVERTEBRATE
PATHOLOGY AND MICROBIAL CONTROL, ADELAIDE, SOUTH
AUSTRALIA 20-24TH AUGUST, 1990.

The local Organising committee consists of:

Dr. David Cooper
Dr. Jane Drummond
Ms. Nicola Featherstone
Prof. Dudley Pinnock (Chairman)
Dr. Kevin Samuels
Mr. Phil Weinstein

Council members may recall that the dates of the 1990 meeting were determined by the Society's Central Meetings Committee, chaired by Dr. Don Roberts. Accordingly, reservations at the Adelaide Convention Centre were made for these dates, i.e. 20 - 24th August, 1990.

The Adelaide Convention Centre was opened in 1987 and provides a full range of convention services, including auditoria, meeting rooms, A/V and telecommunication facilities, catering, etc. Some brochures describing the Centre were distributed to Council Members at the Gainesville meeting, and more will be available at San Diego.

It has been decided that the delegates to the 1990 Colloquium will take most, but not all, lunches and dinners at the Centre. In this way a large proportion of the Centre hiring charges are waived. The Centre's catering is of excellent standard, and fully competitive in cost with restaurant or hotels offering a similar standard of food and service elsewhere in the City. The Organising Committee feels also that, by keeping the group together in this way (as was done at Veldhoven), there is better opportunity for interchange between delegates. Also, we run less risk of "losing" delegates in the numerous arcades and alleyways which honeycomb the City.

Most of the delegates' accommodation has been reserved in the Grosvenor Hotel, directly across the street from the Centre. Additional rooms and apartments have been reserved at other nearby hotels or apartment complexes.

The tentative schedule for the meeting is as follows:

- 18th: (possible) arrival of Council Members -
Dinner with Organising Committee
- 19th: Council Meeting
Evening - Reception/mixer
- 20th: Scientific meeting:
- 21st: Symposia, sessions of contributed papers &
posters. Lunch & Dinner in the Centre
- 22nd: Excursion to a local wine producing
region, lunch (included) in the village,
evening free for dinner in the City.
- 23rd: Same as 20th and 21st
- 24th: Same as 20th and 21st
Evening Banquet.
- 25th: Post Conference tour departs for Alice
Springs.

General Notes:

The Scientific Meeting can be configured in various ways according to need. For example, morning Symposia (all in one auditorium, then up to four concurrent sessions if required).

The Organising Committee will, if possible, keep the evenings after dinner free for workshops or Division meetings, or for delegates' recreation and cultural activities.

Post Conference Tour:

August is of course, mid winter in Australia, and an excellent time of the year to visit the Outback and Great Barrier Reef. In the hope that delegates will be tempted to bring their families for a vacation, the Organising Committee is arranging a Post-conference Tour which will give a memorable impression of the natural beauty of this vast country.

The post conference tour is still being organised, but will include the Outback (Alice Springs, Uluru National Park, Ayers Rock, The Olgas) and the Great Barrier Reef National Park. It is proposed to hold a workshop on the Great Barrier Reef leg of the tour. After the Great Barrier Reef, delegates may depart Australia from Cairns, or take an optional "add-on" tour to Sydney and depart from there.

D.E. Pinnock
Chairman

DIVISION OF MICROSPORIDIA
SOCIETY FOR INVERTEBRATE PATHOLOGY

ANNUAL REPORT OF COMMITTEE ACTIVITIES
JULY 1987 - JUNE 1988

The Division of Microsporidia held its annual business meeting on July 21, 1987 at the XX Annual Meeting of the Society for Invertebrate Pathology in Gainesville, Florida.

Under old business, Dr. A. Cali presented her ideas on the content and format for a proposed "Atlas of Microsporidia Ultrastructure" that would be compiled and edited by her. Questions were raised concerning the organization of such a book, the involvement of the Division in the undertaking, and the possibility for publication. No decisions were made at this time and the subject was tabled for further discussion at the meeting in San Diego.

Under new business, Mr. J. Becnel provided information for the submission of type specimens to the International Protozoan Type Collection housed at the National Museum of Natural History of the Smithsonian Institution. Members were encouraged to submit specimens whenever possible and it was suggested that this information be distributed to all members of the Division.

The need to obtain an English translation of Dr. I.V. Issi's 1986 monograph (in Russian) on the taxonomy of the Microsporidia was discussed. Dr. J. Henry checked on the USDA, ARS translation service and found it was not currently available. It was suggested that perhaps we could obtain the translation services of a Society member who was familiar with Russian and pay the individual with Division revenues. Formal letters of request were sent by Dr. T. Andreadis to Drs. J. Lipa and J. Weiser.

Dr. S. Jaronski reported that he would be willing to update the inventory list of live microsporidia cultures if there appeared to be a need. He was sent a list of current SIP membership in the Division of Microsporidia for the purpose.

A nominating committee consisting of Drs. J. Maddox, Chairman, J. Hamm and S. Jaronski was selected.

The 1987 workshop, held in Gainesville, was well attended and dealt with the "Application of Molecular Biology to the Study of Microsporidia." Presentations were made by Drs. A. Cockburn, J. Maddox, and A. Undeen. Two subjects have been coordinated by Mr. J. specimens for the 1988 workshop: "New Techniques for the Study of Microsporidia" and an "Update on Human Microsporidia."

Respectfully submitted

Theodore G. Andrealis
Chairman

1988 REPORT
COMMISSION ON INVERTEBRATE PATHOLOGY
FOR INTERNATIONAL UNION OF BIOLOGICAL SCIENCES

The activities on the Commission on Invertebrate Pathology are essentially the activities for the Society for Invertebrate Pathology. Bi-annual reports to the IUBS convey the essential elements of the activities for that period.

Several valuable elements in the IUBS in support of the Commission are quarterly publications of a general nature which can be used to describe the activities of the SIP for international consumption. Two years ago, John Couch and John Briggs were suggested as co-authors for a manuscript of the IUBS publications. The manuscript is still incubating.

The IUBS provided a direct grant several years ago in support of the Second International Colloquium on Invertebrate Pathology. Direct grants are no longer available from IUBS, however, loans in support of the organization of international meetings are available in amounts up to \$2,000. The Society may wish to exercise the availability of such a small grant in partial support of the international colloquium to be convened in Australia.

The IUBS in its bi-monthly Newsletter maintains a calendar of forthcoming international meetings. The announcement of SIP meetings and Colloquia are generally published in the calendar.

John D. Briggs
Chairperson

CULTURE COLLECTION COMMITTEE

No culture collection has come to the attention of the Committee as being at risk and in need of assistance.

H.D. Burges
Chairperson

THE SAFETY COMMITTEE

One bit of "safety news": The finishing touches are being put on The Safety of Entomopathogens (Laird, Lacey and Davidson), CRC Press. It should be in the publisher's hands by the time of the meeting.

With the development of engineered organisms, the safety committee should be more active than ever. I recommend that someone who is active in the field should be the safety chairman.

Considering recent lukewarm response to the safety sessions at the SIP meetings, perhaps it would be best to schedule sessions for every other year.

L. Lacey
chairman.

NOMINATIONS COMMITTEE REPORT

From a large list of potential nominees and as a result of several ballots, the committee obtained a ranked list of six nominees for each open position on the Council (other than President). The following agreed to serve if elected: President, D.W. Roberts; Vice President, E.W. Davidson, J.D. Harper; Secretary, R.S. Anderson, P.F. Entwistle; Treasurer, K.R. Cooper, F.G. Kern; Trustees, D.E. Pinnock, P. Faulkner, D.J. Alderman. The Council's attention is called to the increasingly difficult task of attempting to find candidates for the office of Treasurer as few candidates have the time or fiscal resources to handle this office adequately.

W. M. Brooks, Chair

REPORT OF THE AD HOC TELLERS
COMMITTEE

The committee (Gaugler- Chair, Cali, Shadiack, Takvorian, & Becker) met on 7 June, 1988 at Rutgers University, Newark to tabulate election ballots previously submitted to the Secretary. The following were elected to office: D.W. Roberts (President), E.W. Davidson (Vice President), R.S. Anderson (Secretary), F.G. Kern (Treasurer), D.E. Pinnock and P. Faulkner (Trustees). Drs. Vago and Tanada were elected to honorary membership in the Society.

Respectfully submitted,
R. Gaugler, Chair

ARCHIVIST REPORT

While few matters have needed attention during the past year, officers and committee chairpersons are reminded that appropriate correspondence of potential historical value to the Society may be sent for storage in our archives at the conclusion of their terms of office. Members may also contribute such material, especially upon retirement or upon conclusion of Society related business matters. Special efforts are being made to obtain copies of the SIP Newsletter as well as Programs and Abstracts &/or Proceedings of each annual meeting for the archives

W.M. Brooks, Archivist

REPORT OF THE FOUNDERS LECTURE
COMMITTEE

The Founders Lecture Committee still comprises Granados, Johnson, Pinnock and van der Geest (Chairman). The committee unfortunately, did not meet as a whole at the 1987 SIP meetings at Gainesville, Florida, as some of us were not able to attend the meetings. Therefore,

correspondence with regards Founders Lecturers was partially done by mail. At the 1986 Veldhoven meetings, a long list of possible candidates for the lecture was prepared and by using this list, it appeared easy to select the 1988 Founders Lecturer. The lecture at the 1988 San Diego meetings will be presented by Dr. Helen Whitely, who will give a "state-of-the-art" presentation about the research on the Bacillus thuringiensis genome.

The Committee wishes to express its thanks to Dr. John Briggs for preparing the certificates which are handed to the Founders Lecturer.

L.P.S. van der Geest
Chairman

REPORT OF THE MEMBERSHIP COMMITTEE
(UPDATED) 7/27/88

The Membership Committee includes Drs. Robert Anderson, Ralph Elston, Susan E. Ford, Peter Gotz, Toshihiko Iizuka, Lawrence A. Lacey, Esther C. Peters, and Dudley E. Pinnock. Membership forms and SIP fliers have been distributed to all the committee, who have been actively recruiting new members and generally boosting the Society. The literature has been given to prospective new members at many scientific meetings including ones in the Caribbean, India, Nepal, Brazil and Australia. Identification of other prospective members was facilitated by gaining access to lists of attendees at meetings with related areas of interest. For example, about 100 invitations to join the Society were sent to scientists who attended the 2nd international Colloquium on Pathology in Marine Aquaculture last year in Portugal. We are continuing to work toward our goal of expanding international membership in SIP, as well as full representation of all branches of our areas of specialization.

The Membership Committee approved the nominations of eight new Emeritus Members since the last S.I.P. Annual Meeting: Drs. Y. Tanada and C. Vago were also elected to Honorary Membership. The total membership in the Society continues to increase: about 800 in 1986, 900 in 1987 as of June 30, 1988.

Robert S. Anderson

REPORT OF THE ENDOWMENT COMMITTEE,
1987-88

Membership in the Society was offered to eleven colleagues from countries with difficulty in paying for membership in United States dollars. These members reside in Yugoslavia, Czechoslovakia, Turkey, Nigeria, Mexico, Burma, Peoples Republic of China, Iraq and Hungary. No Journal subscriptions were provided this year.

Members are encouraged to contribute to the Endowment with their annual dues. Membership in the Society is very important to these scientists who cannot otherwise feel a part of our organization.

Elizabeth W. Davidson, Chair

REPORT OF THE INVERT. PATH. COURSE COMMITTEE

Questionnaires were mailed to professors in seven foreign countries, to 17 professors in the United States and to department chairpersons at six universities. The list of Invert. Path. courses that appeared in the February, 1988 SIP Newsletter is the results of those responses received by that time. Since then, five additional letters have been received (It is hoped that they can be included in some future Newsletter).

Dr. Harold L. Zimmack, Chairman
Courses of Instruction in Invert. Path. Committee

SIP NEWSLETTER

Two issues of the Newsletter were prepared and mailed direct to members during the period August 1987 to June 1988 (Vol.19(3) and Vol.20(1)). Vol.20(2) is currently in the mail as this report is prepared. Ten extra copies of each issue are mailed to the Archivist and Treasurer respectively. Again, as in 1986, late submission of material forced the combination of Vol. 19(3) and (4) into a single issue.

These three Newsletters together comprised 24 pages. Thus the total for the 12 month period is 24 pages, a slight increase over the comparable period last year. In addition, the ballot for Society Officers, a booklet on Invertebrate Pathology courses and the call for Abstracts for the 1988 Annual Meeting were produced and mailed.

Printing and mailing costs for Vol. 19(3), 20(1), 20(2) and other miscellaneous items are shown in Table 1.

This year the Programme Abstract Booklet has been produced in California by the Local Arrangements Committee and will be mailed from Riverside. The current issue (20(2)) of the Newsletter was therefore printed in Sault Ste. Marie and shipped in bulk to Riverside for mailings together with the Abstracts.

Table 1

	Printing	Mailing	Total
Newsletter 19(3)	574.42	971.32	1,545.74
20(1)	460.00	1,125.56	1,585.56
20(2)	150.00	54.94b	204.94
			<u>3,336.24</u>
Invertebrate			
Pathology Booklet	496.00		496.00
Correction Sheet	62.00		62.00
Template for Abstracts	93.77		93.77
Envelopes for			
Newsletter			344.61
Envelopments for Ballot			323.56
Secretarial Help			20.00
Miscellaneous			6.64
	<u>1,836.19</u>	<u>2,096.88</u>	<u>1,346.58</u>
			4,482.82

- a) All amounts are in Canadian dollars
b) Bulk mailing to Riverside: individual mailing being handled by San Diego meeting personnel

The problem of late submission of material, with consequent delay in Newsletter production, is one that needs tackling. In some respects it involves better coordination of some of the responsibilities of the various Society Officers. Having now been through a two year cycle, I am preparing schedules which will alert incoming officers to critical dates for various tasks in order that the information can be published in the Newsletter on time.

David Tyrrell, Editor

REPORT OF THE PUBLICATIONS BOARD
SOCIETY FOR INVERTEBRATE PATHOLOGY
1987-1988

The Publications board has worked with two issues in 1987-88, the relationship between the Journal of Invertebrate Pathology and the Society and the issue of a glossary of terms for invertebrate pathology. Following the 1987 SIP meeting in Gainesville and apparently after Editor-in-Chief Tom Cheng met with them, Academic Press informed President Harshbarger that they had made a final decision to remove the phrase "Published under the Auspices of the Society for Invertebrate Pathology" from their cover. No explanation or reason for this action was given, but presumably it was the result of displeasure on the part of the Editor-in-Chief and Academic Press officials over the results of the survey report of the ad hoc Journal Advisory Committee and the Board's activities taken during 1986-87 all of which were directed toward seeking improvement of the Journal's quality and editorial policies. President Harshbarger explained the action of Academic Press to the membership in a memo dated September 30, 1987 which was sent to all members also with their dues announcements. Academic Press is still offering a reduced individual subscription price to SIP members. The Board has been in communication with Academic Press regarding these issues.

Several mechanisms for publication of a revised glossary have been investigated during the past year, as recommended during the Council meeting in 1987. We explored the possibility of publication of the glossary as either chapters or appendices in the CRC safety publication being edited by Laird, Davidson and Lacey, or in the text or reference book being written by Tanada and Kaya on insect pathology. In the former case, publication deadlines precluded inclusion. In the latter, the material was considered inappropriate. Efforts to determine an optimal publication mechanism are still being sought. The ad hoc Journal Advisory Committee's questionnaire included a section on interest in the glossary. A highly positive response to its development was received.

No major problems have been reported to the board regarding publication of the Newsletter.

An amendment to our constitution has been prepared by President Harshbarger which would change the composition of the Publications Board. The basic reason for this is that the present composition includes editors of the Society's publications as voting members. This means that they are partially self governing, and creates potential conflicts of interest. The amendment would place these individuals on the

board as non-voting members and change the composition of voting members. The amendment will be voted on at the 1988 meeting in La Jolla.

Respectfully submitted,

James D. Harper,
Chair

PLEASE CONTRIBUTE TO THE SIP ENDOWMENT

SIP now has members in fifty countries. In several of those countries, the sole member is supported by your endowment, which provides free memberships to scientists from countries with difficulty in paying dues in US dollars. Correspondence from these members confirms that this membership is very important to them; in many cases it is their major link with the wider world of invertebrate pathology. PLEASE consider adding a few dollars to your annual membership dues for the endowment. Please also consider including the SIP endowment in your will. Every cent goes toward the endowment, the principal is never spent, and the interest proceeds all go toward this worthwhile purpose.

LET US HELP YOU CLEAN OFF YOUR SHELVES

Do you have an accumulation of Science, Current Contents, or other such publications which are not longer of interest to you but may be valuable to other scientists? We can provide you with names of members in countries where such publications would be very welcome. For the trouble of boxing them up and the cost of surface mail, you can have the satisfaction of knowing your journals are continuing to be useful. Or are you working at an institution where you could benefit from such journals? Please contact the Endowment Committee chair, Elizabeth W. Davidson, Department of Zoology, Arizona State University, Tempe, AZ 85287-1501, USA.

Elizabeth Davidson

MEMBERS IN THE NEWS

Dr. Kevin Hackett

Dr. Kevin Hackett of Beltsville, Maryland, was presented with the Derrick Edward Award, given in recognition of outstanding contributions in research in the field of mycoplasmaology, at the International Congress of Mycoplasmaologists held in Baden, Austria in June, 1988.

Dr. Hackett's studies on the effects of media variants on growth of various *Spiroplasma* and *Mycoplasma* species led to the development of a defined medium for *Spiroplasma mirum*, the suckling mouse cataract agent, one of the most fastidious spiroplasmas.

Dr. Hackett is currently Research Entomologist, Plant Protection Institute, U.S.D.A. Beltsville, Maryland. In this position he has had success in his attempts to cultivate two previously uncultivable spiroplasmas, the Colorado potato beetle spiroplasma and the *Drosophila* sex ratio spiroplasma.

The faculty of Biological Science of the Autonomous University of Nuevo Leon in Monterrey, Mexico, has named their new microbiological laboratory building the "Howard T. Dulmage Laboratories of Industrial Microbiology" and dedicated them to Dr. Dulmage in honor of his many contributions to microbiological research, and particularly for his pioneering studies on the entomocidal bacterium, *Bacillus thuringiensis*. This is a rare award that has been awarded only 3 times in the 34 year history of the University. The dedication took place on the first day of the 19th National Congress of Microbiology, held in Monterrey April 26 to 30, 1988. The keynote speaker for the Inaugural Session was Dr. Carlos Casas Compillo, head of the Departments of Biotechnology and Bioengineering of the Centro de Investigacion Avanzada, I.P.N. y Miembro del Colegio Nacional, Mexico DF, Mexico.

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Announcement.

The B.t. Management Working Group is a consortium of companies interested in research on B.t. resistance and in developing strategies to optimize the efficacy of B.t. products (microbials and plants). In anticipation that the working group will be raising a pool of funds to support a limited number of projects, we are now soliciting 2-3 page pre-proposals for future funding on the following research topics (in order of priority):

- 1) What is the potential for insects to develop resistance to B.t.?
 - a) What is the likelihood of cross resistance developing to different B.t. endotoxins?
 - b) Will selection to two or more endotoxins delay resistance development?
- 2) What is the cellular mechanism of resistance to B.t. (as related to the mechanism of action of B.t.)?
- 3) Development of a field monitoring program for detection of B.t. resistance.
 - a) Baseline database of susceptibility to B.t. in field populations.
 - b) Standardized lab/field assays for assessment of susceptibility and detection of resistance in insect populations.
 - c) Development and validation of predictive population dynamics models.
- 4) Development of strategies for optimizing efficacy of B.t. products such as:
 - a) Multiple genes (B.t. or non-B.t.)
 - b) Tissue/temporal specific expression
 - c) Multilines
 - d) Altering expression level
 - e) Product rotation

Pests of primary interest:

Heliothis, Colorado potato beetle, European corn borer, Diamondback moth, Spruce budworm, mosquitoes, Cabbage looper.

PRE-PROPOSAL DEADLINE: MARCH 1ST

Pre-proposals will be evaluated and a decision made by April 1st. Those researchers whose pre-proposals are selected will be notified with a request for full proposals.

Send proposals to: Dr. Pam Marrone
Monsanto Agricultural Company,
700 Chesterfield Village Parkway,
Chesterfield, MO 63017.

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NEW DIRECTIONS IN BIOLOGICAL CONTROL

UCLA Symposia announces a 1989 Conference on the topic of Biological Control to be held in Frisco, Colorado on 20-27 January, 1989. Symposia titles include:

- Foundations of biological control.
- Theoretical basis for biological control.
- Interactions of agents within plants.
- Viruses in biological control.
- Bacteria in biological control.
- Entomopathogenic bacteria.
- Antagonism exterior to the plant.
- Fungi in biological control.
- Parasitoid-host interaction.
- Biological control of foliar pathogens and weeds
- Obligate pathogens of weeds.
- Application of strategies for enhancement. I.
- Application of strategies for enhancement. II.
- Development of biocontrol agents for agriculture.
- The take-home lessons.

For more information, contact:

UCLA Symposia
2032 Armacost Avenue
Los Angeles, CA 90025
U.S.A.

INTERNATIONAL ENTOMOPATHOGENIC NEMATOLOGY SYMPOSIUM.

will be held August 20-22, 1989 at the Asilomar Conference Center, Pacific Grove, California.

for further information, contact:

Randy Gaugler
Department of Entomology,
Rutgers University,
New Jersey 08903,
USA.
201-932-9459

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POSITIONS VACANT

RES. ASSOC.: U.S. Dept. of Agric., Agric. Res. Service. ARS is seeking a res. entomol., postdoc. res. assoc., GS-11 for the Wheat and Other Cereal Crops Res. Unit, Stillwater, OK. Incumbent will study pathogens for the control of aphids, particularly Russian wheat aphid and greenbug. Exp. in insect pathol. desired. 2-yr appt. Ph.D. must have been received within last 3 yrs. Sal. commensurate with exp. (\$27,716 to \$36,032). U.S. citizenship is req. For add. info., contact Dr. Robert Burton at (405) 624-4126. For info. on appl. procedures/forms, contact Cecelia Forsythe at (301) 344-1508. Send CV & telephone nos. of 3 ref. to Dr. Robert Burton, USDA-ARS, 1301 N. Western, Stillwater, OK 74075. Appl. in response to this advertisement should be marked S-8-037. Pos. is immed. avail. ARS is an Equal Opportunity Employer.

Post-doctoral position

A post-doctoral fellowship is available from June 1989 to join a group working with arthropod immunity, especially the role of the proPO-system in immune recognition. The position is for 1 year with a possible renewal for an additional year. Candidates should have a PhD and good training in biochemistry, molecular cell biology or molecular genetics. Applications with a CV and names of 2 references should be sent to Kenneth Soderhall, Dept. Physiol. Botany, University of Uppsala, Box 540, 751 21 Uppsala, Sweden.

M. SC. CANDIDATE

to work on an insect microbiology/pathology project in the Department of Entomology/Microbiology, MacDonald College of McGill University.

We are examining i) the virulence mechanisms of the insect pathogenic bacterium *Xenorhabdus nematophilus* and ii) the antibacterial defenses of insect blood (hemolymph) and blood cells (hemocytes). The goal is to design more effective pathogens to control insect pests.

Graduate student candidates are being sought to examine the changes in the outer membrane of *X. nematophilus* during its development in insect hemolymph. Students will acquire experience with monoclonal antibodies, electrophoresis and immunoblotting.

Research will be for two (2) years. Commencement date is flexible. The living stipend will be at least \$8,520 per year.

Candidates should have some microbiology and/or insect physiology/biochemistry experience. Please submit a letter of interest, a copy of course transcripts (originals not required), and the names of two referees by 1st March, 1988.

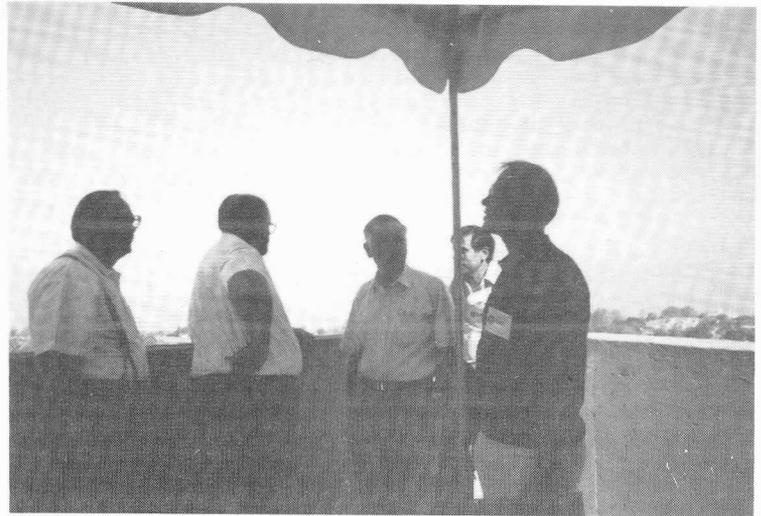
Reply to:

Dr. Gary B. Dunphy
 Department of Entomology
 MacDonald College of McGill University
 21111 Lakeshore Road
 Ste-Anne-de-Bellevue, Quebec
 Canada, H9X 1C0.

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 POSITION WANTED

Insect Mycologist, M. Sc. Agronomy (Phytopathology), Ph. D. Agronomy (Mycology/Biological Control), with post-doctoral, teaching and research experience, in both academic and industrial research and development. Send offers/questions to:

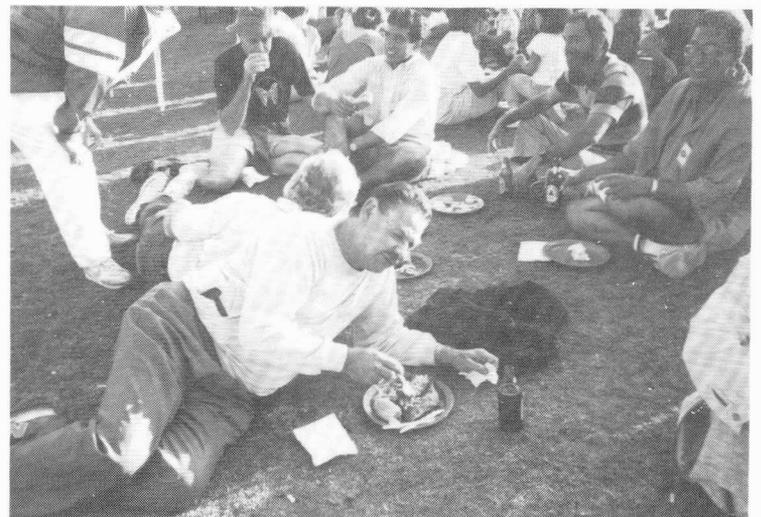
Dr. I.S. Ben-Ze'ev,
 5/1 Hashomrim Street,
 Rehovot,
 Israel 76-232.



Brian "Joe Cool" Federici extolling the virtues of La Jolla prior to the Council Meeting



A happy crowd enjoying the Mixer



Al Sparks demonstrates the best way to eat at a beach barbecue