

# sip

# newsletter

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## society for invertebrate pathology

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Volume 15, Number 4  
November 1983

17TH ANNUAL SIP MEETING  
UNIVERSITY OF CALIFORNIA, DAVIS, AUGUST 6-10, 1984

The 17th Annual Meeting of the Society for Invertebrate Pathology will be held on the University of California campus in Davis on August 6-10, 1984. Dr. Harry K. Kaya, Department of Entomology, University of California, Davis, CA 95616 is the Chairman of the Local Arrangements Committee. Contact Dr. Kaya for local arrangements at the above address, and Dr. Donald W. Roberts for the program at Insect Pestology Resource Center, Boyce Thompson Institute, Cornell University, Tower Road, Ithaca, N.Y. 14853, U.S.A.

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MINUTES OF THE XVth ANNUAL BUSINESS MEETING OF SIP  
HELD AT CORNELL UNIVERSITY, ITHICA, N.Y., August 10, 1983

The XVth annual General Membership Meeting of the S.I.P. was called to order by President Wayne Brooks at 10:45 a.m. A motion to accept the minutes of the last General Membership Meeting as published in the SIP NEWSLETTER (Vol. 14, No. 4, November 1982) was seconded and passed.

Dr. Aaron Rosenfield presented the Treasurer's report which will be published in the Newsletter. Auditors Drs. Albert Sparks and Wayne Garnder reported that our Society treasurer's books are in order. A motion was made, seconded and passed to accept the Treasurer's Report. Dr. Denis Burges advised us that approximately \$6,000 surplus is being held from last year's SIP meeting at Brighton, England until the most appropriate time to be exchanged and returned to our treasury.

Dr. James Fuxa reported on the results of an extensive membership campaign drive by the members of the Membership Committee. He also acknowledged the special assistance of Dr. Richard Daoust in contacting many other scientists in Brazil. Our current membership is: 612 regular members, 37 student members, 10 emeritus members, 2 honorary members and 4 sustaining members. He suggested that the Membership Committee should conduct a membership drive every 3 or 4 years. President Brooks commended this committee for their fine efforts which resulted in 93 new members.

Dr. Brooks advised members that Dr. Elizabeth W. Davidson had only been recently appointed as Chairperson of the Publications Board Committee and that the Board had not had time to initiate any specific activities at this time.

Dr. Thomas Cheng presented his report on the Journal of Invertebrate Pathology which will also be published in the Newsletter. He emphasized that the reason for delay in publications has been that Academic Press limited the number of pages published/year. On a more positive note, however, he indicated that in 1984 they will increase the number of pages/year to 800 (an increase of approximately 200 more pages/year). There is still a problem with the low number of subscriptions. In 1983 JIP had 109 subscriptions from individuals and 683 from institutions and libraries (total = 792). One thousand subscriptions are required to make a profit. A marketing expert has been hired by Academic Press to increase the number of subscriptions to all journals published by Academic Press. The 1984 subscription rate to JIP will increase from \$72.50 to \$80 for individual U.S. and Canadian subscribers and from \$145 to \$180 for institutions and libraries. Outside the U.S. and Canada the subscription rates will be \$80 (individual) and \$191 for institutions and libraries (an increase of \$6.50 and \$19 respectively). Dr. Phyllis Johnson advised Dr. Cheng that the number of individual subscribers in 1983 is probably over 120 rather than 109.

Dr. Donald Roberts presented the Program Committee report and asked for comments on the present meeting. Future meeting dates and sites are:

- 1984 - Aug. 6-10 Davis, Calif., Local Arrangements Comm., Chm. Dr. Harry Kaya.
- 1985 - Aug. 5-9 Sault Ste. Marie, Canada, Local Arrangements Comm., Chm. Dr. Terry J. Ennis.
- 1986 - (possibly) Netherlands Convention Ctr., Dr. J.M. Vlak.
- 1987 - inviting invitations.
- 1990 - (possibly) Australia, Dr. D.E. Pinnock.

Dr. Pinnock and associates are hoping to make arrangements through their government to assist in funding for speakers and reduced rates from Quantis for attendees.

Dr. Mauro E. Martignoni's report of the Glossary Committee was presented by President Brooks. The committee is preparing a third edition of the "Glossary of Terms Used in Invertebrate Pathology" to be published in 1984. Dr. Martignoni hopes that he will not need any financial assistance from our Society. He also reported that a multilingual translation entitled "Terms Used in Invertebrate Pathology in Five Languages; English, French, German, Italian, Spanish" is to be published soon for distribution or sale to key libraries and institutions. The U.S. Dept. of Agriculture will print this small edition of 500-1000 copies. Dr. John Briggs stated that he is preparing to update the Directory for Invertebrate Pathology and may ask financial assistance in the future. Dr. Brian Federici suggested that if possible telephone numbers should be included.

Dr. John Briggs reported that the SIP Council has voted that the Founders' Lecture be an annual event given in the first plenary session of the annual meeting. He is soliciting suggestions from members on who should be honored and who should deliver the lecture. Members were asked to send resumes on possible speakers to Dr. Briggs. Suggestions were also made to recognize divisions of our society. Dr. Briggs hopes that in the future there will be sponsors who can assist in arranging travel expenses for speakers.

Dr. Brooks reminded members that we are no longer affiliated with AIBS and we are operating under our new CONSTITUTION and BY LAWS. The funding from WHO received during the last 2 years will no longer continue. Volunteers were solicited by Treasurer Rosenfield to help devise a system for computerizing our mailing list. Dr. Howard Dulmage mentioned that it is possible for \$400-\$500 to select software for a suitable program from a Houston company. Dr. Donald Roberts volunteered to speak to the bookkeeper at Boyce Thompson Institute on our needs.

Dr. Phyllis Johnson reported on the activities of the Membership and Journal Retention committee. Her committee investigated the most economical and efficient methods of dues payments for members and specific recommendations are included in the report of this committee published in the Newsletter. Her report also dealt with the problems of retaining memberships of members from soft-currency countries, the desirability of providing more services to members, and possible means for providing the Journal of Invertebrate Pathology to members or libraries in developing countries.

Dr. Randy Gaugler reported on the plans of the Color Slide Atlas Committee to prepare a set of 200 35 mm slides covering viruses bacteria and rickettsiae, fungi, protozoa, noninfectious diseases and microbiology of healthy invertebrates. A master negative will be prepared of each slide. One hundred slide sets will be obtained initially and will be sold for approximately \$30/set. Dr. James Harper questioned whether the slides will be copyrighted. Dr. Denis Burges suggested that donors could be approached

if one wanted to copy their slide. Dr. John Briggs questioned whether a scale would be placed on each slide or the magnification as taken could be noted.

Dr. Rosenfield recommended that we give a vote of thanks to the organizing committee for such a splendid meeting. All approved. Dr. Donald Roberts reported that the reprint collection of Dr. E.A. Steinhaus is now housed in the Boyce Thompson Institute (BTI). These include reprints up to 1972 and number about 15,000. Dr. Tanada asked if BTI would Xerox copies. Dr. Roberts replied, "Yes".

The meeting was adjourned at 11:55 a.m.

Respectfully submitted,

Jean R. Adams, Secretary

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#### SIP COMMITTEE REPORTS

##### Secretary's Report

The following is a summary of the Secretary's activities during the past year. Upon receipt of the revised SIP Constitution and Bylaws from Dr. Martignoni, copies were printed and mailed to all our members along with a ballot. The results of the ballot were: FOR-227, AGAINST-2. Several hundred copies of the Constitution were purchased to send to new members and are available from the Secretary upon request.

Council and committee members were contacted June 15 to request annual reports for our Council meeting in August. Those members who indicated that they would be unable to attend were Dr. Terry Couch and Dr. Hitoshi Watanabe. Proxies were indicated.

Council members were sent copies of the proposed agenda and copies of the annual reports that had arrived by July 19, 1983.

Jean R. Adams, Secretary

#### 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 free. Application forms for Membership in the Society may be obtained from the Treasurer, Dr. Aaron Rosenfield, Oxford Lab., NOAA, Nat'l. Marine Fisheries Service, Oxford, Maryland 21654, U.S.A.

Council Officers of the Society are:

President	Wayne M. Brooks, USA
Vice President	H. Denis Burges, England
Past President	Phyllis T. Johnson, USA
Secretary	Jean R. Adams, USA
Treasurer	Aaron Rosenfield, USA
Trustees	Terry L. Couch, USA
	John E. Henry, USA
	Peter Lüthy, Switzerland
	Hitoshi Watanabe, Japan

Send news items and other contributions to:

Sardar S. Sohi, Editor  
SIP Newsletter  
Forest Pest Management Inst.  
Canadian Forestry Service  
P.O. Box 490  
Sault Ste. Marie, Ontario Canada P6A 5M7

#### Financial Statement of SIP for the Period September 1, 1982 - August 15, 1983

##### Receipts

Balance on hand August 31, 1982		\$12,774.59
Membership Dues		
Regular	\$6,124.48	
Student	183.00	
Sustaining	800.00	
	<u>\$7,107.48</u>	7,107.48
Division on Microsporidia		75.00
Division on Microbial Control		168.00
AIBS Affiliation (1982 Delinquencies-U.S. Members)		48.00
Journal of Invertebrate Pathology Subscriptions		
U.S.	\$5,424.50	
Foreign	4,607.50	
	<u>\$10,032.00</u>	10,032.00
Interest		985.73
Miscellaneous		
Donations and Contributions	100.00	
WHO payment-Newsletter space	2,500.00	
Return Newsletter Expenses	60.00	
Other	24.20	
	<u>\$2,684.20</u>	<u>2,684.20</u>
<b>TOTAL</b>		<b><u>\$33,875.00</u></b>

Disbursements

Journal for Invertebrate Pathology Academic Press		\$10,032.00	
Newsletter			
Printing and envelopes	\$1,053.08		
Postage and miscellaneous	<u>1,312.26</u>		
	2,365.34	2,365.34	
Pacific Science Assoc.			25.00
AIBS			62.33
Officers expenses			
Member billing and postage	243.20	243.20	
Foreign check cashing charges and bank draft fees	251.20		
Office supplies and printing	438.40		
Returned check	85.50		
Refund	12.00		
Cost for printing and mailing Constitution	<u>1,140.06</u>		
	2,085.07	2,085.07	
Balance on hand, July 15, 1983		<u>19,219.97</u>	
TOTAL		<u>\$33,875.00</u>	

Included in this financial statement are income and expenditures entered into the ledger by the previous treasurer for the months of August and September after which time the records of transactions were transferred to the current treasurer. All transactions were kept in the same formats and in accordance with previously set precedents to ensure continuity.

The financial statement as of this date does not account for any expenditures accrued for the 1983 Annual Meeting in Cornell nor does it reflect any transactions related to the International Colloquim and Meeting at Brighton, England, in 1982. However, it was noted that Dr. Burges reported a "profit" of approximately \$6000 was made at the Brighton meeting on which taxes may still be due. These remaining funds will be transferred to the Treasury at a later appropriate date. Transactions for the NIH travel grant were included in last year's financial statement to the membership; however, accounting reports to NIH remain to be submitted as per NIH requirements. No problems are anticipated in completing the report. Although not a real problem, clarification must be obtained on filing the appropriate Internal Revenue Service documents. Apparently the IRS requires completion of a form different from that used in previous years for tax exempt non-profit non-lobbyist organizations.

Income this year is running higher than previously, largely because of membership retention, relatively few members being in arrears, the addition of several new members, and the World Health Organization's continuing grant of \$2500 to support publication of their news relating to insect pathology and vector control in the SIP Newsletter. Furthermore, interest income was increased over last year largely as a consequence of keeping a reserve of \$15,000 of treasury funds in a high interest-bearing savings account (10%), and utilizing a NOW checking account that pays interest provided a minimum of \$2500 is retained in the account. Donations, although modest, doubled over the amount contributed last year (\$100 vs. \$50). Apparently, Newsletter expenses were lower by over \$400 because of less cost for printing, stability of postal rates, and reduced miscellaneous costs associated with the Newsletter. However, the latest Newsletter, Annual Meeting program and abstracts printing and their mailing costs are not included in this accounting but are anticipated to be approximately \$1100.

Foreign check cashing charges and bank draft fees continue to present perplexing problems to the Society who

thus far has been absorbing the costs. The amount this year was close to triple that of last year (approximately \$200 vs. \$70). This subject will be addressed by the Special Committee on Membership Retention who has been exploring various approaches in efforts to resolve the problem. Costs for printing and mailing and the Constitution and By-laws accounted for a major expenditure of funds, but this should not be a recurring annual expense.

A budget is being prepared according to guidelines suggested by the Council during the Council meeting at Cornell, August 7, 1983.

Respectfully submitted,

Aaron Rosenfield, Treasurer

Journal of Invertebrate Pathology: Annual Report  
1982-83

As stated in an editorial published in the Journal of Invertebrate Pathology (1972, 20: 379-380), this journal is devoted to the publication of results of original research in the area of the pathobiology of invertebrates in the broadest sense. This policy has attracted great interest on the part of investigators all over the world. Consequently, the Journal has developed into the primary one for the publication of results pertaining to (1) the hematology and immune mechanisms of all groups of invertebrates; (2) the basic biology, morphology, and biochemistry of potential and real viral and microbial biological control agents; (3) the taxonomy and biology of microsporidians; (4) the histopathology (both light and electron microscopy) of all groups of invertebrates caused by both infectious and noninfectious diseases; and (5) applied field studies relative to biological control.

As in the past, every attempt has been made to maintain an international character. This has resulted in the attraction of manuscripts from numerous countries, especially from Europe and Asia. Most of these, as determined by expert reviewers, have been of high quality. As your editor has commented in an editorial published in JIP (1977, 29: 115-117), many of these, especially those authored by our Japanese colleagues, are written in a more scholarly fashion and in better English than those authored by some North Americans.

Recommendations of the committee established by Dr. Phyllis Johnson, the Past-President of SIP, to increase the number of subscriptions to the Journal, have been discussed with Academic Press, the owner and publisher of the Journal.

Academic Press cannot include advertisements in the Journal from anyone. They do include advertisements of their own publications periodically. If they start to carry advertisements from other businesses, the postage and tax rates will have to be altered since the Journal would then be considered a commercial magazine.

It was agreed many years ago when I took over the editorship from the late Dr. Edward Steinhaus that the Journal will not publish "Letters to the Editor" and other materials that may have a quasi or truly political ring. We do publish book reviews and notices of meetings sponsored by nonprofit academies and other professional organizations.

Presently we publish two volumes of the Journal per year, with approximately 230 pages per volume. If the number of pages or the number of volumes are increased to speed up publication, the subscription rate will have to be increased significantly. This, in turn, will most probably cause some to cancel their subscriptions.

We are attempting to process manuscripts as quickly as possible. Some of the delay may be due to the large number of manuscripts that arrive in this office, especially at certain times of the year, e.g., October through January; however, most of the time the delay is due to carelessness on the part of authors, i.e., omitting references; incorrectly citing references, especially dates and page numbers; not following the Instructions to Authors relative to style, especially in the case of Research Notes; and submitting xerox copies of photo and electron micrographs. To give readers of the Journal some idea of the delay between the initial submission of a manuscript and the time of acceptance, we now publish both dates. It is impossible for readers to know that sometimes a manuscript is returned as many as five times to an author for corrections. The Editorial Board has reaffirmed that it is not their duty nor that of the Editor to look up references or rewrite manuscripts for authors. Scholarship is an integral part of scientific professionalism.

During the period extending from July 1, 1982, to June 30, 1983, we received 141 manuscripts for consideration for publication. Of these 45 were rejected. The remainder have either been forwarded for publication or are in the process of being reviewed or revised. By comparison with last year, the number of manuscripts submitted during this reporting period is down by 19; however, the average manuscript is about 4 pages longer. Consequently, the total number of pages utilized during the past year remains essentially the same. It is noted that each number published during the past year has appeared on time with the full number of pages.

Consideration has been given to a one-time increase in number of pages to permit us to "catch up" on the delay in publication. This will only result in a higher subscription rate for the year, which, in turn, will only cause our treasurer headaches. In brief, manipulation with the total number of pages may solve the backlog problem but it will increase the cost to each subscriber. Your editor cannot see any way of hastening publication unless authors are more careful in the preparation of manuscripts and/or subscribers are willing to pay more.

As the number of subscriptions directly governs the viability of the Journal, the following figures obtained from Academic Press are being provided for the Society's information.

	1981		1982		1983	
	Institu- tional	Individ- uals	Institu- tional	Individ- uals	Institu- tional	Individ- uals
U.S.A.	346	39	361	50	387	61
For- eign	335	43	340	52	296	48
Sub- totals	681	82	701	102	683	109
Totals	763		803		792	

The figures for 1983 presented above were received on May 25, 1983, and may not reflect the latest. Nevertheless, based on these, the total number of subscriptions has not risen during the past year, although it is higher than during 1981.

Of interest to the Society is the fact that the Journal Department of Academic Press has recently hired a marketing expert. Her duties are to increase the number of subscriptions to all journals published by Academic Press, including JIP. How successful she will be will be reflected in next year's figures.

The Editorial Board is dedicated to quality. Your editor wishes to take this opportunity to thank each member of the Board for rapid and expert service.

Respectfully submitted.

Thomas C. Cheng, Editor-in-Chief

Report of the Membership and Journal Retention Committee  
1982-1983

The Committee was charged by President Brooks with suggesting solutions to problems of retaining members and subscriptions to the Journal of Invertebrate Pathology, especially problems in soft-money countries. The following are our findings and recommendations:

I. Membership Retention

A. Cost to members and SIP of foreign exchange.

The committee regrets that it was unable to suggest a solution to the dues-payment problems faced by people in countries with severe monetary restrictions. Recommendations can be made concerning transmittal of dues payments from hard-currency nations, where typically the cost of a bank draft or bank money order can be almost as much as the due payment itself.

1. Canadian members: The Post Offices of the U.S. and Canada have a reciprocal arrangement whereby funds can be sent in the appropriate currency via domestic postal money order (i.e., funds may be sent to the U.S. from Canada in U.S. dollars). This method is much less expensive than use of bank draft and bank money orders, costing only \$.64 for up to \$200, and entails no collection fee on the part of the recipient. The Committee recommends that Canadian members send dues payments by Canadian domestic PMO, in U.S. dollars.

2. Members in Caribbean countries: Reciprocal arrangements similar to that of the U.S. and Canada are in effect between the U.S. Post Office and post offices of the following Caribbean countries: Bahamas, Belize, Cayman Is., Dominica, Jamaica, Leeward Is., Santa Lucia, Saint Vincent and Grenadines.

3. Members in other hard-currency countries: International Postal Money Orders (IPMO) can be purchased in many hard-money countries. Charges should be less than for bank drafts or bank money orders, and they can be cashed at American banks for no charge. The Committee recommends that IPMOs be used for dues payments by members in countries where they are available.

4. Central dues collectors: It would further reduce the cost for members outside the U.S., Canada, and the Caribbean, if a volunteer in each country with more than a few members, collected dues from the other members and sent the money in a single IPMO (or bank draft or bank money order if IPMOs are not available in that country). Conditions for this would be as follows:

- a) Losses or gains due to fluctuating exchange rates would be absorbed by SIP.
- b) SIP would bear the cost of postage and the IPMO.
- c) All dues forms and dues payments would be sent to the collector, and the forms forwarded with the joint payment.

Certain members in a number of countries have been asked to contact all the other members in their country to find out what interest there would be in a collective dues payment.

B. Maintenance of memberships in soft-money countries.

Informal sponsorship of membership between friends: The Committee believes informal payments of dues by members in hard-currency countries for friends and colleagues in soft-money countries should be continued and encouraged, with the understanding that these arrangements are of a temporary nature. We further suggest that more interest in sponsorship might be generated by placing a note in SIP Newsletter stating the number (but not the names) of members sponsored in soft-money countries, and the benefit derived, both the sponsored members and SIP.

According to our Constitution and Bylaws, members who paid the previous year are given the calendar year to pay their current dues, and are entitled to receive all Society communications during this period. To reduce costs, it would be desirable to know whether informal sponsorship will continue because mailing and printing costs for the SIP Newsletter and ballots would be saved if the Treasurer knew sponsorship was being discontinued. The Committee recommends that the Treasurer send the dues notice to the sponsor, and based on response of this person, send either notification of sponsor payment or a dues notice to the sponsored individual. In case of discontinuance, an explanation should be added that membership will have to be terminated unless the formerly sponsored person finds some other method of dues payment.

The majority of members are unable to attend the Annual Meetings. They would feel closer ties with the Society and benefit professionally by having access to the Abstracts of the Annual Meetings. The Committee recommends that meeting abstracts be distributed by being included in a mailing of the SIP Newsletter. The Committee further recommends that we try free disbursement of the abstracts in the pre-meeting issue of the Newsletter for a few years.

II. Provision of Journal of Invertebrate Pathology subscriptions to libraries and institutions in developing countries.

There are countries with interest in invertebrate pathology where JIP is unavailable or difficult of access for most people. The Committee agrees that formal provision by the Society of JIP subscriptions to central libraries or institutions in such countries would be dependent on outside sources of money, and thus could not be implemented at this time. Several methods might be useful that would not necessitate outlay of Society funds.

A. Editorial Board copies.

We recommend that members of the JIP Editorial Board be urged to continue their personal subscriptions and donate the extra subscription to an institution in a developing country. The Society could aid by keeping a list of these journal recipients and sponsors. When editorial board members leave the board, incoming members would have the opportunity, if they so desire, of continuing subscriptions already underway.

B. Donation of unwanted copies of JIP by other SIP members.

Some members who subscribe to JIP may not wish to retain their copies. They might be interested in donating current and past issues. The Society should not become officially involved, but coordination could be provided by the Society as above.

C. Journal exchange.

Arrangements might be made between SIP members or their institutions for exchange of JIP for journals published in

developing or soft-money countries. Again, the Society should not be involved in such exchange, but could publicize in SIP Newsletter names of journals wanted by members in exchange for JIP, and could perform liaison between individuals or institutions.

Respectfully submitted,

J.V. Maddox  
Y. Tanada  
P.T. Johnson, Chairperson

Report of the Program Committee

The Society for Invertebrate Pathology sponsored two meetings in 1982. An ad hoc meeting was held in conjunction with the American Institutes of Biological Sciences at Pennsylvania State University in University Park, PA, August 9-10. Drs. William G. Yendol and William J. McCarthy served as local arrangements chairmen. Although originally perceived as a local (United States) meeting, several participants were from outside North America. Approximately one hundred persons attended. The official meeting of the society was held in conjunction with the International Colloquium on Insect Pathology and Microbial Control at Brighton, England, September 6-11. Local arrangements chairmen were Drs. Denis Burges and Chris Payne of the Glasshouse Crops Research Institute. Abstracts and Proceedings, the latter consisting of papers of up to six pages in length by symposium speakers in the Colloquium, were available at the meeting. Approximately four hundred people were in attendance. This meeting was by far the best attended of any insect pathology meeting held to date. Both the program and the local arrangements were organized by the English hosts.

In 1983 SIP meeting will be held on the Cornell University campus at Ithaca, NY, August 7-11. The local arrangements committee is being chaired by Robert R. Granados of the Boyce Thompson Institute, who also assisted in organizing the program. Approximately one hundred and seventy participants are anticipated. At the request of the Society President, Dr. Wayne Brooks, copies of the program and abstracts for the meeting were mailed to all members of the Society. In the past only attendees at the meetings have had access to the abstracts. The Committee welcomes comments from the members as to the desirability of continuing the practice of sending abstracts to all members. The Ithaca meeting will include 4 symposia, 5 workshops and 75 contributed papers. A 5-km race, a first for the Society, was organized by Lerry Lacey and Jeff Lord.

The 1984 meeting will be held in Davis, CA, August 6-10. The local arrangements chairman will be Dr. Harry Kaya. The program will be prepared by the program committee. This will be the last year that the program committee prepares the program. Due to a change in the Society's constitution, the local arrangements committee will prepare the programs in the future. The first year under this scheme will be in 1985 when the meeting will be held August 5-9 at Sault Ste. Marie, Ontario, Canada. The local arrangements will be chaired by Dr. Terry J. Ennis. The Society anticipates returning to Europe for the 1986 meeting. Negotiations are under way at present on the meeting site and local arrangements committee.

Donald W. Roberts, Chairperson

Report of the Membership Committee

The committee conducted a membership drive during the Spring of 1983. A letter, SIP brochure, and application blank were sent to 839 scientists in 57 countries (313 scientists in U.S.A./Canada, 266 (from 15 countries) in

Western Europe, 159 (7 countries) in Eastern Europe and the U.S.S.R., 16 (4 countries) in Egypt and the Near East, 25 (12 countries) in Africa, 44 (9 countries) in South America, and 16 (8 countries) in Mexico/Central America/Caribbean). Sources for names of these scientists included non-members who were listed in an updated version of The Directory for Invertebrate Pathology, who registered at the XV Annual Meeting of the SIP, or who have recently published in the Journal of Invertebrate Pathology. Additionally, SIP brochures were distributed at the XV Pacific Science Congress and at a meeting in Jakarta, Indonesia, to scientists from Malaysia, Japan, and Oceania. A few other SIP members contributed their efforts to the drive of their own volition, most notably R. Daoust, who sent ca. 180 additional letters to scientists in Brazil.

As of 8 August 1983, SIP had a total of 665 members in the following categories:

Regular	612 (69 new)
Student	37 (24 new)
Emeritus	10
Honorary	2
Sustaining	4
Total	665

Total membership has increased by 58 since 23 August 1982, with an increase of 60 regular members and a decrease of 3 student members. Of the 612 regular members, 496 are in good standing at present, 76 owe dues for 1983, and 40 owe dues for 1982 and 1983. Of the 37 student members, 22 are in good standing, 12 owe dues for 1983, and 3 owe dues for 1982 and 1983. The committee approved Dr. T.W. Tinsley's request for emeritus status.

We thank those who provided assistance during the membership drive, particularly Wayne Brooks, John Briggs, Phyllis Johnson, Joe Maddox, Jean Adams and Henri Wassink.

Respectfully submitted,

L.A. Lacey  
C.C. Payne  
J.S. Pillai  
A. Rosenfield  
J.R. Fuxa, Chairperson

Report of Local Arrangements Committee XVI SIP Annual Meeting, Ithaca, N.Y., U.S.A., August 7-11, 1983

The 1983 SIP Annual meeting is being organized with the services of the Cornell University Conference Office. For a service fee of \$2.50/person/day, the Conference Office is responsible for housing, pre-registration, registration, meeting needs, and special events.

All conferees will be housed in Building 5 at the North Campus Student Residences. Campus buses will be available at 15-minute intervals to transport conferees to the meeting rooms on the west side of the campus. The meeting rooms are approximately a 15- to 20-minute walk from the residence halls. For more details concerning the meeting please refer to Volume 15, Nos. 1, 2 and 3 issues of the SIP Newsletter.

The Boyce Thompson Institute and the Cornell University community look forward to hosting this event and we anticipate a very well attended and successful SIP meeting.

July 13, 1983

Robert R. Granados, Chairperson  
Alan Wood  
Richard Humber  
John Kramer  
Don Roberts

Report of the Glossary Committee 1982-83

There were no changes in Committee membership during the past year. Preparation of the first draft of the third edition is continuing, albeit slowly. The Council of our Society, at its 1982 meeting at Brighton, formally offered to cover (fully or in part) the cost of publication of this edition of the glossary. The council and the glossary editor will discuss details as soon as the final copy is ready for printing.

The glossary editor contacted several potential publishers for our manuscript "Terms Used in Invertebrate Pathology in Five Languages: English, French, German, Italian, Spanish". The cost of publication and the very limited size of the "market" dampened the initial enthusiasm of most publishers. As of this date, the U.S. Department of Agriculture is considering printing a small edition of the multilingual translation, for distribution or sale to key libraries and institutes. The glossary editor will inform the council as soon as publication arrangements are made.

Respectfully submitted,

Mauro E. Martignoni, Editor  
Michael C. Mix, Associate Editor  
Thomas C. Cheng,

Chairperson Publication Board  
L. Bailey Harold W. Rossmore  
S.Y. Feng Albert K. Sparks  
John C. Harshbarger C. Vago  
Phyllis T. Johnson Harold E. Welch  
Aloysius Krieg

Report of the SIP Newsletter Editor for 1982-83

Three Newsletters (Vol. 14, No. 4; Vol. 15, Nos. 1 and 2) comprising a total of 30 pages were produced, and were sent by airmail direct to the individual members during the period September 1982 to June 1983. In addition, 50 copies of each issue were sent to the World Health Organization in Geneva, Switzerland, and 10 copies of each issue were sent to the Archivist, and another 10 to the Treasurer. The total cost for the three issues was U.S. \$2,322.48 (printing \$827.27, envelopes \$236.36, postage \$1258.85). The third issue of Volume 15 will be produced and mailed in early July. So far we have been able to get the typing done free in the Canadian Forestry Service Laboratories, but we may have to pay for typing in the future.

Some of the regional correspondents have contributed news items quite frequently. Others have not been quite so active. The regional correspondents are: Drs. K. Aizawa (Japan), H.D. Burges (United Kingdom), B. Gabriel (The Phillipines), R. Teakle (Australia), H. Wassink (Latin America), K. Söderhäll (Scandinavia) and C. Yamvriasis (Greece).

June 23, 1983

Sardar S. Sohi, Editor

Report of the Division on Microbial Control 1982-83

The Division held its second official business meeting at the Brighton, England meetings on Monday, September 6, 1982 at 4:00 p.m. James Harper, Chairperson, reported that the Council had approved incorporation of the Safety Working group as a working group within the Division. A committee appointed to nominate both a Member-at-Large to fill the expired term held by Don Roberts and to nominate a replacement for Chairperson-elect Denis Burges, who

asked to be relieved of this office following his election as President-elect of the Society, recommended Dudley Pinnock for the Member-at-Large position. He was elected unanimously. At the time of the meeting, no nomination was given for the Chairperson-elect position, but the committee later provided the name of Dr. Chris Payne. He will be presented as a nominee for the office of Chairperson at the 1983 meeting in Ithaca.

Dr. Don Roberts chaired a workshop on "Problems Relating to Microbial Control in Developing Countries". Approximately 60 persons were in attendance and considerable discussion was generated. A summary of the conference was prepared by Dr. Roberts and was printed in the newsletter.

A workshop on formulation of microbial insecticides has been developed for the 1983 SIP meetings at Ithaca by Dr. Lerry Lacey.

As of June 8, 1983, the Division had a total membership of 149 including 137 regular and 12 student members.

James D. Harper, Chairperson

#### Report of the Safety Working Group 1982-83

The Safety Working Group of the Division of Microbial Control met during the annual meeting at Cornell University. A representative of the U.S. Environmental Protection Agency discussed proposed nontarget insect guidelines for registration. He emphasized that the Agency now assumes safety of microbials and encourages registration of biorationals. However nontarget insects are a high risk group. It is also hard to measure the economic importance of nontargets. Chemical tests are inappropriate for these organisms, and the range of nontargets required for these tests has not yet been determined. First tier testing will require testing against honey bees, predators, and parasites. A copy of the current guidelines is available from E. Davidson.

Lerry Lacey, USDA, P.O. Box 14565, Gainesville, Florida 32604 was elected the new Chairman of the Safety Working Group.

The following recent publications will be of interest to our members:

Shaddock, J.A., Roberts, D.W. and Lause, S. 1982. Mammalian safety test of *Metarhizium anisopliae*: Preliminary results. Environ. Entomol. 11:189-192.

Hassan, S.A. et al. 1983. Results of the second joint pesticide testing programme by the IOBC/WPRS-Working Group "Pesticides and Beneficial Arthropods". Z. ang. Ent. 95:151-158.

Krieg, A., Hassan, S. and Pinsdorf, W. 1980. (Comparison of the effect of the variety *israelensis* with other varieties of *B. thuringiensis* on non-target organisms of the order Hymenoptera: *Trichogramma cacoecia* and *Apis mellifera*.) Anz. Schadlingskde., Pflanzenschutz, Umweltschutz 53:81-83 (in German).

E. Davidson, Chairperson

#### Report of the Division of Microsporida

The annual business meeting of the Division of Microsporida was held in conjunction with the XVI annual SIP meeting at Cornell University, Ithaca, New York on 9 August 1983. Vice-chairperson, Dr. G.G. Wilson called the meeting to order at 0800 hr. The minutes for the 1982 meeting were read by the Secretary and approved by members.

Dr. S. Jaronski summarized the results of his inventory of viable microsporidian cultures, which will be mailed to Division members by Christmas. Dr. W. Brooks discussed the decision of the SIP to form an Ad Hoc Committee to prepare a slide collection of invertebrate pathology. Dr. J. Henry discussed the IR-IV program for funding preliminary tier-1 testing for the safety of microbial agents. Dr. R. Barker and Dr. G. Wilson will appoint a Nominating Committee to present a slate of candidates for election as officers to the Division of Microsporida at the 1984 meeting.

A topic for the 1984 Microsporida workshop was discussed. Dr. A. Cali suggested a workshop on vertebrate microsporidia, which was eventually selected by members at the meeting.

No additional new business was introduced and Vice-Chairperson Dr. G. Wilson adjourned the meeting.

Besides the business meeting, the Division of Microsporida held its workshop on 9 August 1983 during the Ithaca SIP meeting. The topic discussed was "What is a sporant?" Presentations were given by Drs. A. Cali, J. Maddox and E. Hazard. A paper prepared by Dr. Weiser was read by Dr. D. Streett. An interesting discussion followed, but the question was not resolved.

Douglas A. Streett, Secretary

#### Report of Founders' Lectureship Committee 1982-83

For the first two years of the Founders' Lecture, the Committee identified and negotiated successfully for the honoree and the lecturer in the annual meeting of the Society.

1982: Brighton, Sussex, England  
Kenneth M. Smith, Honoree  
Claude Rivers, Lecturer

1983: Ithaca, New York, USA  
John G. Mackin, Honoree  
Albert K. Sparks, Lecturer

The Committee has taken a broad view of the task to identify Founders in Invertebrate Pathology. There is an essential element of education in the lecture for the membership of the Society and the scientific and lay communities. This is in addition to the appreciation of the contributions of individuals who are honorees and of those who serve as lecturers.

The cost to the Society for the first two years of the Founders' Lecture has been minimized by the geographical location of the annual meeting and the close proximity of the lecturer to the meeting site. The honorees were not in attendance at the meetings. The Society supported the cost of the preparation of citations which were drafted and framed for the presentation to the lecturer and to the honoree. A citation was prepared for the widow and the family of the late Professor Smith.

The Committee has recommended the support by the Society for the publication of the text of the Founders' Lecture.

Nominations for the honoree and the lecturer are generated within the Committee and from members of the Society through the Newsletter, and from other sources in the scientific community. It is appropriate to solicit nominees also from scientific councils and national academies in countries which host the meetings of the Society.

The Committee recommends that the lectures be an annual item in the first plenary session of each annual meeting. Further it is recommended that the Committee with the

Council of the Society seek sponsors for the annual lecture to assure the financial stability of the event as one type of recognition by the Society for excellence and scientific achievement in invertebrate pathology.

A recommendation is made to the Council for the structure of the Committee and for terms of membership. Further, a modest budget is proposed to meet the relatively minor costs for communications, and for the preparation of certificates of award to honorees and lecturers.

Keio Aizwa  
 Carl J. Sindermann  
 Jaroslav Weiser  
 John D. Briggs, Chairperson

Report on International Union of Biological Sciences (IUBS)

The affiliation of the Society for Invertebrate Pathology with the IUBS is as the Commission on Invertebrate Pathology. The Society, serving as the Commission can publish an up-to-date description of the Society, summary reports of activities and announcements of meetings in Biology International, the semi-annual news magazine of the IUBS. The publication includes one or two feature articles in each issue (June 1983: "pesticide resistance"; and "genetic control of insects"), and beginning in 1983 several special issues will be published annually devoted to special subjects. The latter includes "desertification in Africa", "the decade of the tropics", and "environmental education through biology". Reports of projects of the Society could be developed into manuscripts and compete for space in both the regular and special issues of Biology International. Announcements of forthcoming meetings, for several years in advance should include an address for a contact person.

The Society was represented in the XV Pacific Science Congress (New Zealand) by Society membership in the Pacific Science Association. Dr. M. Pillai was the local representative, and he has filed a report to the council on the activities of the Society in the Congress. The XVI Pacific Science Congress will be in Korea, 10-20 August 1987. The theme will be "New Dimensions of Science, Manpower and Resources in the Pacific".

The IUBS can make loans, not to exceed \$2000, for international meeting organization and travel. Societies serving as Commissions in IUBS can apply for additional loans to serve as capital for special projects, e.g., publications of directories of culture collections or atlases of invertebrate disease distribution. Of course all items should be for sale in order to repay the loan.

July 20, 1983 John D. Briggs, Liaison

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AD HOC COMMITTEE FOR THE  
 COLOR SLIDE ATLAS OF INVERTEBRATE PATHOLOGY

The SIP Council has approved a proposal for development of a color slide atlas of invertebrate pathology. Plans call for the preparation of slide sets of 200 2" x 2" transparencies each. Slides selected for inclusion will be appropriate for use as teaching aids and for seminar or symposium presentations. This endeavor is in accordance with the stated educational and scientific objectives of the Society.

All slides will be numbered, collated, boxed and come with a complete syllabus identifying subjects and contributors. Master negatives will be provided which can be retained by the Society for producing additional sets or

as part of a revised slide series. It is anticipated that slide sets will be available for sale in time for the 1984 meeting in Davis.

The following subcommittee chairs have been appointed to solicit representative slides in six subject categories: E. Davidson (Bacteria), G. Poinar, (Nematodes), D. Boucias (Fungi), J. Maddox (Protozoa), C. Kawanishi (Viruses), and M. Brooks (Noninfectious disease/Microbiology of healthy invertebrates). Topics to be illustrated will include diseased hosts, gross pathology, histopathology, cultures, life stages, etc. Approximately 20% of the slides in each category will be concerned with the pathology of invertebrates other than insects. Members with high quality color slides they wish considered for inclusion are strongly encouraged to submit them to the appropriate subcommittee chairperson.

Randy Gaugler, Chairperson

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ITHICA 5K ROAD RACE

Thirty-two hardy individuals ran and/or walked the hilly and long 5K race course at this year's SIP meeting. First prizes of New York champagne and plaques went to Robin Giblin-Davis in the junior division and Gerry Carner in the senior division. Don Steinkraus and Al Undeen took second place prizes.

The response to the race was gratifying, and we hope we have started something. Special thanks are due to Barbara Gibbs for the handsome T-shirt design.

Results:

1. Robin Giblin-Davis	Riverside, CA	19:29
2. Gerry Carner	Clemson, SC	21:50
3. Al Undeen	Gainesville, FL	22:11
4. Norman Ratcliffe	Swansea, Wales UK	22:44
5. Jeff Lord	Ithaca, NY	22:45
6. John Aronson	Guilderland, NY	22:47
7. Wayne Gardner	Experiment, GA	22:49
8. Don Steinkraus	Ithaca, NY	23:02
9. Martin Shapiro	Otis AFB, MA	23:15
10. Tom Boyce	Ithaca, NY	23:17
11. Bob Granados	Ithaca, NY	23:25
12. Paul King	Ithaca, NY	23:32
13. Karen Yamada	Ithaca, NY	23:51
14. Robert Smith	N. Chicago, IL	24:15
15. Steve Wraight	Ithaca, NY	24:56
16. Dan Molloy	Cambridge, NY	24:57
17. John Dentes	Ithaca, NY	25:43
18. Doug Streett	Bozeman, MT	25:55
19. Wendy Gelernter	Riverside, CA	26:12
20. Joyce Barmore	Ithaca, NY	27:09
21. Dewayne Torgeson	Ithaca, NY	27:50
22. Peter Lüthy	Zurich	27:54
23. Lerry Lacey	Gainesville, FL	29:28
24. Lorrie Russo	Ithaca, NY	29:49
25. Ralph Elston	Sequim, WA	30:49
26. Michael Whitt	Davis, CA	30:56
27. Rob Everich	Ithaca, NY	31:32
28. Esteban Cuebas-Incle	Ithaca, NY	32:16
29. Michael Ma	College Park, MD	33:57
30. Hugh Evans	Oxford, UK	39:19
31. Judy Johns	Riverside, CA	41:50
32. Ann Cali	Montclair, NJ	42:10

For those interested in obtaining a facsimile of the T-shirt that was awarded to runners participating in the 1st Annual SIP 5K road race in Ithaca, it is available at cost, plus postage and handling. The price should be ca. \$8.50 if a minimum order is secured; less if a larger order is made (refunds will be made in that case). Please



send \$8.50 (US) and shirt size to: Lerry Lacey, 7731 SW 56 Avenue, Gainesville, FL, 32608, USA.

This is a non-profit response to several requests of attendees of the annual meeting. With the exception of the race information, the shirt publicizes the SIP and represents four major groups of pathogens.

Lawrence A. Lacey  
Co-organizer, SIP 5K Race

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#### MICROBIAL CONTROL DIVISION MEETING MINUTES, 1983

Dr. J. Harper, Chairperson, called the meeting to order at 3:30 p.m. in Rm. G-3, Veterinary Research Tower, Cornell University, Ithaca, New York, on 9 August 1983.

Dr. Harper announced that the Microbial Control Division had 148 members as of July 1983. He stated that a report by Dr. D. Roberts concerning last year's M.C. Division workshop in Brighton had been published in a recent SIP Newsletter. Microbial control in developing nations was the subject of the Brighton workshop. Dr. Harper announced that the working group on safety is now an official working group within the Microbial Control Division and Dr. L. Lacey succeeded Dr. E. Davidson as chairperson of the group on 8 August 1983. There was no old business when requested by Dr. Harper.

Dr. Harper asked for a report by Dr. R. Soper from the nominating committee for new officers. The committee suggested the following candidates:

Chairperson:	Dr. C. Payne
Chairperson-elect:	Dr. D. Roberts
Secretary-Treasurer:	Dr. L. Lacey
Member-at-Large:	Dr. E. Davidson

Dr. Harper announced that all nominees had been contacted and would be willing to serve. He then called for nominations from the floor. It was moved, seconded, and passed unanimously by show of hands that nominations be closed in turn for each of the four offices. It was then moved, seconded, and passed unanimously by show of hands that the four nominees be elected by acclamation. Dr. Harper mentioned that Dr. D. Pinnock is still serving as the alternating-year Member-at-Large. There was no other new business when requested by Dr. Harper.

Dr. Harper adjourned the business meeting and turned the floor over to Dr. L. Lacey to chair the workshop entitled "Formulation of Microbial Control Agents".

J.R. Fuxa, Secretary-Treasurer

#### INSECT PATHOLOGY IN SOUTH AMERICA

This report was written basically on information which the author received by means of sending questionnaires to several institutes and universities in South America. It gives the general situation of insect pathology in this continent during the last few years.

The information obtained indicates that the activity in insect pathology research and teaching in a number of countries is growing. Countries which are most active in this science at the moment are Brazil, Colombia and Venezuela. Pathogens on which research is being done are, in order of importance, fungi, bacteria, viruses, nematodes and protozoa. Basically, insect pathology is directed to the field of agricultural entomology, and in addition, there are a few activities in veterinarian and medical entomology.

In general, the use of *Bacillus thuringiensis* is well spread in the different countries in both commercial and experimental production. In the past, some experimental trials have been done with *B. thuringiensis israelensis* against mosquito larvae in Colombia, Venezuela, and in Brazil, Central Amazon Basin.

Like in other parts of the world, the entomopathogenic fungus, *Metarhizium anisopliae*, occurs frequently here too. This fungus has received special attention in Brazil for the control of the Gramineaceous spittlebugs (Homoptera: Cercopidae). Intensive studies on biological control were stimulated by the enormous outbreak of these pests. They are considered a limiting factor in the production of sugar cane and pasture. Spittlebugs exist from the southern part of the United States to the north of Argentina. In Brazil alone, 150 million hectares are attacked by the "Cigarrinhas-das-Pastagens", as it is called locally. The principal pest of the sugar cane are the leaf spittlebug *Mahanarva posticata* and the root spittlebug *M. fimbriolata*, and the important pests of pasture are *Zulia entreriana*, *Deois* spp. and *Aneolamia selecta*. Already in 1969 studies on the feasibility of using *Metarhizium anisopliae* were initiated effectively in Brazil by the late Dr. Pietro Guagliumi, FAO entomologist. Presently Brazil is one of the leading countries in research and commercialization of this important fungus for the control of agricultural pests. Five private laboratories are producing *M. anisopliae*, registered by the Brazilian government. In addition, there are two cooperatives in the States of Pernambuco and Alagoas which produce the fungus and supply it at no cost to interested parties.

In the CEPLAC - Centro de Pesquisas do Cacau, Itabuna-Bahia, in their insect pathology laboratory, activity is concentrated on fungi and nematodes which attack spittlebugs. Also, there are facilities for maintaining colonies of these insects in controlled conditions. Both laboratory and field research is carried out, with the purpose of determining the feasibility of the use of applications of insect pathogens. Techniques are developed for producing the pathogens on a large scale. In 1977, a rhabditoid nematode pathogenic to the frog hopper, *Mahanarva fimbriolata*, was discovered and has been identified as *Caenorhabditis elegans*. This nematode can be cultivated on larvae of the greater waxmoth, *Galleria mellonella*. Because of the high virulence of this nematode, studies are under way for its commercialization as an effective control agent. The nematode attacks other frog hopper nymphs, like *Deois* and *Zulia*. Research is being developed in order to check for the viability of utilizing the nematode as a vector of pathogenic fungi, since studies revealed good tolerance between the both types of pathogens.

Studies on the genetics of *Metarhizium anisopliae* are done in the Department of Genetics and Evolution of the University of Campinas, Brazil, where studies have been undertaken to control the vectors of Chagas Disease with this fungus. Besides Brazil, research has been done for some years in Trinidad, West Indies, against *Aneolamia varia saccharina*, a serious pest of rice and sugar cane, with *M. anisopliae*. Natural infection occurs there on a low level.

In Venezuela, where spittlebugs are also a problem, *M. anisopliae* is found naturally in *Aneolamia varia sontica*. Field tests are being undertaken for possible control in the future with this fungus. Further, a mermithid nematode has been found in the nymphs of *A. varia sontica*. Regular evaluations are made with a view to find a possible agent for biological control.

There are other fungi also which receive attention. For example, *Nomuraea* is being used against pests on soybeans in Brazil, and *Hirsutiella* against the citrus rust mite

*Phyllocoptruta oleivora* in citrus orchards. In Colombia, *Cordyceps* sp. is found on *Erinnyis ello*, a serious pest of Cassave.

Concerning virus diseases, the main emphasis is on granulosus virus of *Diatraea saccharalis* (Brazil), *Laspeyresia pomonella* and *Epinota aporema* (Chile), and *Erinnyis ello* (Colombia). These viruses are produced for experimental use. In the south of Brazil, in the state of Paraná, a nuclear polyhedrosis of *Anticarsia gemmatalis* is studied and used in a pest management program for soyabeans.

The use of nematodes for biological control in South America is limited to two species: *Neoaplectana carpocapsae* and *Romanomermis culcivora*. The latter was used successfully in experimental field trials in Colombia (1979) to control mosquito larvae. As in other parts of the world, *N. carpocapsae* receives more attention also in South America. The majority of the applications are directed to agricultural entomology, but some work has also been done in medical entomology, for example in Venezuela. In 1981, there was the first field trial with this nematode against the triatomine bug, *Rhodnius prolixus*, one of the vectors of Chagas Disease, this being the first work of its kind in Latin America. The experiments were carried out in San Carlos, State of Cojedes, where experimental houses were constructed. Experimental trials were carried out with this nematode also in Trinidad, 1981, in collaboration with the Commonwealth Institute for Biological Control, for controlling a serious pest of sugar cane, *Aeneolamia varia saccharina*.

Besides countries where, until now, only experimental work has been done with this nematode, there are countries where activities are rapidly growing using this control. These countries are Colombia, mainly against the fall armyworm, *Spodoptera frugiperda*; Bolivia against the fall armyworm and also *Dysdercus* sp. in cotton; and in French Guyana where the nematodes were imported from France by the Entomological Laboratory of the O.R.S.T.O.M. This laboratory is also studying nematodes belonging to the families Allantonematidae, Heterorhabditidae, Mermithidae, and also pathogens of Noctuidae. In Chile *Neoaplectana carpocapsae* is used in experimental trials for controlling pests of fruit trees, such as *Naupaectus xanthographus* and *Grapholita molesta*. *Neoaplectana carpocapsae* was already introduced by Dr. S.R. Dutky during his visit in 1956 to this country. Surinam started with *Neoaplectana carpocapsae* in 1981, because of the problems in controlling larvae of *Castnia deadalus* which seriously damage oilpalm reducing production by up to 30%. Plans are made further to test this nematode against *Castnia licius*, a pest on sugar cane and banana.

In 1981, research on pathogenes of blackflies was started at the Centro de Estudios Parasitológicos de Vectores (CEPAVE) in La Plata, Argentina, in collaboration with the USDA. This research is being continued and will also concentrate on pathogenes of mosquitoes. Disease organisms were found in 25 species of blackflies. The pathogenes included bacteria, fungi, nematodes, microsporidia and viruses. Microsporidia and nematodes are the most common parasites in blackflies.

More emphasis on insect pathology is beginning in the CIRPON, Argentina, and in the CIAT, Colombia. The Centro de Investigaciones sobre Regulaciones de Poblaciones de Organismos Nocivos, in San Miguel de Tucumán, Argentina, has started recently a new section on insect pathology. At the moment research is done on entomopathogenic fungi of Coccidae. In the Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia, where all kinds of pests on cassave are studied, more attention will be given to inset pathogenes in the future.

For the last group of pathogenes, the protozoa, very little research has been done.

Teaching facilities in insect pathology in South America are mainly concentrated in Brazil, Colombia and Venezuela. However, during 1979 and 1980, some highlights were given on Microbial Control in Postgraduate Courses in the Faculty of Agronomy of the Universidad Nacional de Río Cuarto in Córdoba and in the Faculty of Science of the Universidad de Buenos Aires. Both courses were limited only to theory, and the last one was more of the extension type.

In 1978, an intensive course on insect pathology was given at the Department of Biology, Universidad del Valle, in Cali, Colombia. In this year a textbook was published on insect pathology, as an outgrowth of the lectures of this course. In 1982, a second edition of this textbook (KUNO, MULETT and de FERNANDEZ, 1982) appeared. Presently a course on insect pathology is given, also at undergraduate level, and this textbook serves basically for both theory and practical work.

During the years 1980-1981 and 1981-1982, in Venezuela, a course on insect pathology with laboratory work was given at the Universidad Central de Venezuela, Faculty of Agronomy, Maracay, as part of the Postgraduate Program in Entomology. Also in Venezuela, the Instituto Venezolano de Investigaciones Científicas (I.V.I.C.) offers a course on Virology at the under- and postgraduate level, with laboratory. Some research is done on insect viruses.

The University of Campinas, Brazil, offers postgraduate courses in the Department of Genetics, on a regular basis in Insect Virology, Biological Control of Pests with Pathogens, and Genetics of Microorganisms. All these courses have lectures as well as laboratory.

Courses for agricultural technicians are given in Bolivia and French Guyana.

Universidad Central de Venezuela      Henri Wassink  
Facultad de Agronomía,                      Regional Correspondent  
Instituto de Zoología Agrícola,  
Maracay, Edo. Aragua.

The textbook on Insect Pathology: PATHOLOGIA DE INSECTOS, con énfasis en las enfermedades infecciosas y sus aplicaciones en el control biológico. (KUNO, MULETT, and de HERNÁNDEZ, 1982), can be ordered by sending a check for U.S. \$18.00 to the order of José Mulett Chavez, Departamento de Biología, A.A. 2188, Cali, Colombia, S.A.

#### INSECT PATHOLOGY SHORTCOURSE IN ECUADOR

A five-day shortcourse on insect pathology and microbial control was taught by James H. Harper, Auburn University, Alabama, George O. Poinar, Jr. and Roberta Hess Poinar, University of California, Berkeley, and Henri Wassink, Universidad Central de Venezuela, Maracay on June 13-17, 1983 in Guayaquil, Ecuador. The course was sponsored by the Facultad de Ingeniería Agronómica of the University of Guayaquil and was held on the campus of that faculty.

Participants in the course were postgraduates and enrollment was limited to 35 persons. They were teachers, entomologists from private companies, government agency research entomologists, pesticide dealers, and others, and included individuals from six different provinces of Ecuador including the Galapagos Islands. The course consisted of lectures on the major pathogen groups and their role in pest management programs, laboratories on symptomatology, infection techniques, diagnosis of the major pathogen groups, and field trips to collect diseased

insects and to visit sugar cane and banana plantations which had operational biological control programs.

All attendees received certificates following completion of the course.

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#### XVIIth INTERNATIONAL CONGRESS OF ENTOMOLOGY

The 17th International Congress of Entomology will be held on August 20-26, 1984 at the Congress Centrum Hamburg, Germany F.R. The scientific program of the congress includes a special section on insect pathology. Dr. J. Huber and Dr. A. Krieg from the Institute for Biological Control, Darmstadt, are organizers of this section. They are very much looking forward to the possibility that many members of the SIP will attend the meeting. Any contributions (also in the form of posters) covering the field of insect pathology are welcome. To the regret of the organizers no funds are available from the Congress to cover the costs of participation of foreign visitors. They should investigate the possibility of support from other sources.

For further information, please contact the section organizers or better directly to the Congress Secretariat at the following address:

Secretary General  
XVII International Congress of Entomology  
Zoologisches Institut der Universität  
- Biologiezentrum -  
Olshausenstr. 40/60  
D-2300 Kiel 1  
Germany F.R.

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#### INVENTORY OF MICROSPORIDIAN CULTURES

An inventory of viable microsporidian cultures has been prepared by Dr. S. Jaronski for the Division of Microsporidia. Copies will be mailed to members of the Division by Christmas. If you have not received a copy by March 31, 1984, contact the undersigned.

Gary G. Wilson  
Forest Pest Management Institute  
Canadian Forestry Service  
P.O. Box 490  
Sault Ste. Marie, Ontario  
Canada  
P6A 5M7

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#### 1985 MEETING OF THE SOCIETY FOR INVERTEBRATE PATHOLOGY

The 18th Annual Meeting of the Society for Invertebrate Pathology will be held on August 5-9, 1985 at the Forest Pest Management Institute, Canadian Forestry Service, Environment Canada, Sault Ste. Marie, Ontario, Canada.

Dr. Terry J. Ennis is the Chairman of the Local Arrangements Committee.

As mentioned previously (SIP Newsletter Vol. 13, No. 2, pp. 15-16, April 1981), the Forest Pest Management Institute (FPMI) was formed by bringing together the Insect Pathology Research Institute (IPRI) and the Chemical Control Research Institute (CCRI). For many years IPRI has been involved in research on insect pathology and microbial control of insects. Researchers like Angus, Bergold, Bird, Cameron, Faulkner, Hayashi, Heimpel, Ishihara, Krywienczyk, Luthy, MacLeod, Soper, Stairs and Vaughn who are well known to most invertebrate pathologists have worked at the IPRI at one time or other. While Angus, Bird, Cameron, Krywienczyk and MacLeod stayed at IPRI until their retirement, the others moved to other laboratories around the world: Bergold (Venezuela), Faulkner (Queen's Univ., Kingston, Canada), Hayashi and Ishihara (Japan), Heimpel and Vaughn (USDA, Beltsville, Maryland), Luthy (Switzerland), Soper (USDA, Ithaca, N.Y.), and Stairs (Ohio State Univ., Columbus Ohio).

In recent years names like Arif, Cunningham, Fast, Kaupp, Morris, Perry, Sohi, Tyrrell and Wilson are known to most insect pathologists, although there is a large contingent of other researchers at FPMI: Cadogan (field efficacy); de Groot (high value stand protection); Fleming (biological systems analysis); Grant (pheromones); Helson (toxicology), Kingsbury and Holmes (environmental impact); Reynolds, Prasad and J. Feng (herbicides); Payne (spray cloud behaviour); Percy (cell biology); Retnakaran (insect growth regulators); A. Sundaram (pesticide formulations); K. Sundaram and C. Feng (chemical accountability of insecticides) and Turgeon (insect ecology and biology). Like any other research institute, FPMI has researchers moving, retiring, joining and going on sabbatical leave as given below. Continuing staff development in the rapidly evolving fields of physiological and microbial control agents is essential if the Institute is to remain at the forefront in the development of these agents for Canadian forestry use.

Dr. Richard Fleming has joined the Institute as Biological Systems Analyst. He will be conducting studies on the modelling of forest insect populations and interactions. He will also be working with staff members on the application of Systems Analysis to a variety of entomological, pathological, chemical pesticide, and application technology problems. Before joining FPMI, Richard worked with the CANUSA (CANADA-USA) Spruce Budworm Group at Cornell University, Ithaca, N.Y., modelling the Maine spruce budworm population.

Nicholas Payne, the new professional in the Spray Cloud Behaviour project, comes from Ecological Physics Research Group at the Cranfield Institute of Technology, Cranfield, England. He will be conducting research and computer simulation on the behaviour of emitted spray clouds as well as their interaction with the forest canopy.

Phillip Reynolds has taken up duties as Project Leader of the Institute's Herbicide Research Program. Phillip was previously with Columbia Gas System in the U.S.A. where he was responsible for the System's right-of-way management program including herbicide usage. He has also had experience in forest ecosystem studies, tree physiology and forest biomass studies. He will be responsible for the herbicide testing and applications aspect of the project, while Raj Prasad will be carrying out screening, mode of action and physiological studies.

Dr. Basil Arif has returned from Career Development Leave at the Institute of Genetics, University of Cologne, West Germany, where he undertook studies in the biochemical characterization of viruses, as well as in genetic recombination of viruses. This training and experience

will be of great value in applying biotechnology to the development of insect specific viruses for pest control.

Dr. Gary Grant has recently returned from the University of Southampton, England where he was on Career Development Leave studying the role of pheromones in long and short range mating attractiveness, and their use in insect control.

Dr. Arthur Retnakaran is on development Leave at CSIRO in Canberra, Australia, gaining expertise in biochemical effects of Insect Growth Regulators, on chitin formation and development.

Dr. Jean Percy will be spending the next year on Development Leave at the University of Texas at Austin, where she will be studying the development of larval insect tissues and the associated cellular changes.

In the management area, Errol Caldwell has assumed the duties as Program Manager, Chemical Control Agents. Errol came to the FPMI from Agriculture Canada, where he was Pesticides Officer in the Registration Section. He has replaced Jack Armstrong, who moved to the Canadian Forestry Service Headquarters in Ottawa as Pesticides Advisor.

Terry J. Ennis  
Program Manager, Biorational Control Agents  
Forest Pest Management Institute  
Sault Ste. Marie, Ontario, Canada

#### TWO VIRUSES GRANTED TEMPORARY REGISTRATION IN CANADA

Virtuss, a preparation of Douglas-fir tussock moth nuclear polyhedrosis virus, and Lecontvirus, a preparation of redheaded pine sawfly nuclear polyhedrosis virus, were recently granted temporary registration status by Agriculture Canada after petitions were reviewed by staff of the Departments of Health and Welfare, Fisheries and Oceans, Environmental Conservation and Environmental Protection. Further safety testing and environmental studies have been suggested by evaluators in order to obtain a full registration for these products. Both products carry a restricted label and can only be used by, or under the supervision of, federal or provincial forest service employees.

Virtuss is almost identical to a USDA Forest Service product called TM BioControl-1 which was registered by EPA in 1976. The Americans use Douglas-fir tussock moth larvae to propagate this virus. Dr. M.E. Martignoni, USDA, Forest Service, Corvallis, Oregon kindly supplied the Douglas-fir tussock moth multicapsid nuclear polyhedrosis virus used at the Forest Pest Management Institute, Sault Ste. Marie, Canada to produce Virtuss in white-marked tussock moth larvae. It has been shown by restriction endonuclease analyses of their DNAs that the virus in Virtuss is the same as the virus in TM BioControl-1.

Both Virtuss and Lecontvirus contain virus-infected larvae which are freeze-dried and ground to a fine powder. Preparations are standardized and checked for the presence of other microorganisms which may be present as contaminants. Virtuss contains 5% polyhedral inclusion bodies (the active ingredient) and the remainder of the preparation is milled insect parts.

Lecontvirus, in its powder form, contains a smaller proportion of polyhedral inclusion bodies relative to milled insect parts and the active ingredient represents only 0.05% of the preparation. For ease in measuring and

mixing dosages, Lecontvirus is distributed to clients as an emulsifiable oil concentrate. The oil used for this purpose is Abbott's Dipel 88® blank carrier vehicle (used for their *Bacillus thuringiensis* product).

Virtuss and Lecontvirus are the first and only viral pesticides registered in Canada.

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#### EUROPEAN PINE SAWFLY VIRUS REGISTERED BY EPA FOR USE IN THE USA

The nuclear polyhedrosis virus (NPV) of the European pine sawfly, *Neodiprion sertifer*, was registered by EPA on March 4th, 1983. The virus preparation has been named Neochek-S. It is the third NPV registered in the USA for use on forest insect pests, the other two being gypsy moth and Douglas-fir tussock moth NPVs. Congratulations to Dr. Frank Lewis and his team at the USDA Forest Service Laboratory at Hamden, Connecticut who assembled the petition!

Pioneering work with this virus was conducted in Canada in the early 1950s by Dr. F.T. Bird following importation of a sample of the virus from Sweden. At that time, European pine sawfly was a major pest of Christmas tree plantations in southern Ontario. Currently, this sawfly is a minor pest in Canada due to extensive use of virus along with parasite releases in the 1950s and 1960s.

In Finland, European pine sawfly NPV is commercially available from a state-owned chemical company, Kemira Oy. In the United Kingdom, research on this virus has been conducted at the Institute of Virology, The Natural Environment Research Council, Oxford, and a British commercial company has expressed interest in registering, formulating and marketing a viral product.

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#### INFECTION PROCESSES OF FUNGI

Available free of charge from the Rockefeller Foundation, this book is the report of an international conference organized by the Boyce Thompson Institute in March 1983 to compare the invasion of organisms with waxy surfaces, viz. plants and insects, by pathogenic fungi. The disciplines of plant and insect morphology, physiology, and pathology and of fungal morphology and physiology are all represented among the authors of the 19 papers collected here.

To obtain a copy, please write to:  
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The Rockefeller Foundation  
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# SEASON'S GREETINGS