

The logo for the Society for Invertebrate Pathology (SIP) features the lowercase letters 'sip' in a bold, white, sans-serif font. The letters are set against a solid black rectangular background.

newsletter

society for invertebrate pathology

VOLUME 23, NUMBER 2
June 1991

UPDATE ON THE ANNUAL MEETING FLAGSTAFF, ARIZONA AUGUST 4-9, 1991

QUESTIONS WE'VE BEEN ASKED:

TRAVEL: If you find that airfares into Phoenix are significantly less expensive from your location than fares to Flagstaff, we suggest you rent a car in Phoenix and drive to Flagstaff (approximately 3 hr). Budget Car Rental offers a compact car for 1 week for approximately \$109, unlimited mileage. If you wish to leave the car in Flagstaff or at the Grand Canyon Airport, there is a \$75 dropoff fee. If several of you arrive together in Phoenix, this may be a more economical way to travel. Budget: 1-800-527-0700, or the Phoenix office: 602-267-4000, extn. 191, ask for Stacey. Other car rental companies may have similar prices.

FAMILY RATES: If your family will accompany you, the following rates apply to persons living in Mountain View dormitory:

Children staying in the SAME room with parents:
Age 0-4 free; age 5-17 \$15.15 per day.
Children staying in their own separate room:
Age 5-17 \$24.75 per day.

Note this dorm has two beds per room and two rooms share a bath. This is an ideal arrangement if you are bringing your spouse and one or two children.

MEAL PRICES FOR PERSONS LIVING OFF CAMPUS:

Breakfast:	\$4.20
Lunch:	\$5.25
Dinner:	\$7.15

These prices apply to both children and adults, and permit you to eat all you want. Note that meals are included in your room rental fee if you live in Mountain View. Lighter meals will also be available at snack shops in the Union, and local restaurants provide another option.

POSTER SESSION:

The posters will be 32 x 40 inches, made of 1/8 inch foam. Bring pin fasteners. Posters will be on display in Mountain View lobby all week.

ACCOMPANYING PERSONS:

The fee for accompanying persons covers only the Sunday reception, Barbeque, Banquet and NAU's service charges. If these persons attend sessions, they are expected to register as a regular participant.

CHILDREN AT SOCIAL EVENTS:

The State of Arizona has rather strict laws concerning children and alcohol in public places. Alcohol will be served at our barbeque and banquet. We must assure the University that no persons under the age of 21 will be present at these functions in order to obtain permission to serve beer and wine on campus. Please help us conform to the rules in this matter. If you will need babysitting service, please let Betty Davidson know as soon as possible.

ALCOHOL IN THE DORMITORY:

The State of Arizona also has strict laws concerning alcohol in College dormitories. We are permitted to have alcohol in Mountainview Dormitory as long as it remains in your rooms and you are discreet. Open containers of alcohol **MAY NOT** be carried into public places (such as the dorm lobby) or out on the campus. So do your S.I.P.'ing in your rooms!

NONMEMBERS:

Several nonmembers have asked whether they may join the Grand Canyon Railway tour. Of course everyone is welcome on this trip. We have 150 places reserved, so this trip is first come, first served! We do not discriminate between nonmembers and members in acceptance of abstracts. However nonmembers should be aware that it is less expensive to join the Society than to pay the nonmember registration fee. Contact Don Roberts, Boyce Thompson Institute, Tower Road, Ithaca, NY 14853 for application forms.

FOR A CHANGE OF PACE:

The NAU Repertory Theatre will present three plays on the rotating schedule during our meeting. "Dracula" will be presented Saturday and Sunday evenings (Aug. 3 and 4), "Taking Steps" on Wednesday and Thursday, and "Two By Two" on Friday and Saturday. General admission is \$10, students \$6. More information will be available at the Registration Desk.

WHAT WILL THE WEATHER BE LIKE?

Summer in Flagstaff is very like winter in Phoenix - warm, sunny days, cool evenings, with the possibility of afternoon thunder showers. The temperature rarely exceeds 90F. Bring a jacket or sweater for the morning and evening. If you plan to engage in outdoor activities, you may need a sun hat and sunglasses.

SYMPOSIA AND SPECIAL SESSIONS XXIV Annual Meeting

Monday, August 5

Symposium on *Bacillus thuringiensis* var. *israelensis* - 15th Anniversary of the Discovery; Joel Margalit, Convenor and Chair

Symposium on Resistance to Microbial Control Agents; Pamela Marrone, Convenor and Chair

Symposium on Recent and Current Epizootics of Aquatic Invertebrates; Albert Sparks and Don Lightner, Co-convenors and Chairs

Tuesday, August 6

Symposium on Effects of Microbials on Non-Target Invertebrates; John Vandenberg, Convenor and Chair

Symposium on Microbial Control of Grasshoppers and Locusts; Mark Goettel, Convenor and Chair

Workshop/Panel Discussion on Evaluation of Regulatory Constraints and Risks in the Commercialization and Importation of Microbial Control Agents; Mark Goettel, Convenor and Chair

Informal Conference on Ecology and Entomopathogenic Nematodes; Randy Gaugler and Harry Kaya, Co-convenors and Chairs

Symposium on Foreign Introduction, Regulatory Guidelines, and Patenting of Microbial Control Agents; Clayton McCoy, Convenor and Chair

Thursday, August 7

Symposium on *Bacillus thuringiensis*; Martin Geiser, Convenor and Chair

Symposium on Pathogens and Diseases of Social Insects; Nabil Youssef and Roberto Pereira, Co-convenors and Chairs

There will be individual sessions of contributed papers on Fungi, Viruses, Protozoology, and other topics.

Martha Gilliam, Program Organizer
Carl Hayden Bee Research Center
2000 E. Allen Road
Phoenix

SIP Newsletter

The SIP Newsletter is produced four times a year by the Society for Invertebrate Pathology. Annual dues (U.S. Funds) for the Society are: regular members, \$15.00; and students, \$6.00. Members receive the SIP Newsletter and a copy of the Abstracts of all SIP General Meetings free, whether or not they attend. Application forms for membership in the Society may be obtained from the acting Treasurer, Dr. Donald W. Roberts, Boyce Thompson Institute, Cornell University, Tower Road, Ithaca, New York 14853, U.S.A.

Council Officers of the Society are:

President	Elizabeth W. Davidson, USA
Vice President	Christopher C. Payne, UK
Past President	Donald W. Roberts, USA
Secretary	Larry A. Lacey, USA
Treasurer (acting)	Donald W. Roberts, USA
Trustees	Peter Faulkner, Canada Toshihiko Iizuka, Japan Dudley E. Pinnock, Australia George G. Soares, Jr., USA

THANK YOU!

In a Society like ours, many people contribute their time and talents in ways which go unrecognized. Recently, several members have made important contributions to SIP for which we should all be grateful. These include:

-Denis Burges, Norbert Becker and Toshi Iizuka, who mailed flyers for the Flagstaff meeting to members in their regions.

-Norman Crook, who mailed Proceedings of the Adelaide meeting to European and UK members.

-Dudley Pinnock and his crew who mailed the Proceedings to everywhere except North America and Europe/UK, and organized the shipping of the Proceedings to the mailing points.

-Wendy Gelertner, who collected funds from biotech forms to support the Flagstaff meeting.

-Joe Maddox, who has taken care of printing the SIP stationery for many years.

-John Harshbarger, who has been Council's representative in discussions with a potential home office organization.

-Mabry Steinhaus, who has made a generous contribution to the Endowment, providing memberships to colleagues in soft money countries.

-Martha Gilliam, who has put in long hours on the program for the Flagstaff meeting.

-Michelle Montague, of the Boyce Thompson Institute, who has very efficiently taken over the mailing list and dues collection.

-There are undoubtedly others that I have omitted. This kind of volunteer help keeps the Society running.

THANKS FRIENDS!

Elizabeth W. Davidson, President.

INDUSTRIAL CONTRIBUTORS TO THE 1991 ANNUAL MEETING

The Society is grateful for the financial support of the following companies toward our Annual Meeting. This support has covered a large proportion of the costs of the banquet, barbeque, and other social functions.

Ecogen, Inc.
2005 Cabot Boulevard West
Langhorne, PA 19047-1810

Crop Genetics International
7249 National Drive
Hanover, MD 21076

Mycogen Corporation
5451 Oberlin Drive
San Diego, CA 92121

Sandoz Crop Protection
975 California Avenue
Palo Alto, CA 94303

Biosys
1057 East Meadow Circle
Palo Alto, CA 94303

AgriSense
4230 West Swift, Suite 106
Fresno, CA 93722

Monsanto
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Becker Industries
9464 N.W. 11th St.
Plantation, FL 33322

MICROSPORIDIA DIVISION

Report on activities 1990 - 1991.

The 1990 Annual General Meeting of the Microsporidia Division was held in Adelaide during the Fifth International Colloquium on Invertebrate Pathology on 23 August 1990. The meeting was called to order at 1300 by Dr Tony Sweeney in the absence of the Chairman, Dr. Jimmy Becnel. Dr. Wayne Brooks presented a report from the nominating committee. Dr. Ann Cali was nominated for the position of Vice Chairman and Dr. Al Undeen was renominated to serve a further term as Secretary. Both nominees were elected unopposed.

A letter from Dr. Becnel, transferring the position of Chairman to Dr. Sweeney, was read. The new Chairman thanked Dr. Becnel for his efforts and effective work on behalf of the Division. His most noteworthy achievement was his proposal and support of Dr. Victor Sprague as the 1989 Founders Lecturer.

Dr. Ronny Larsson was thanked for an excellent presentation at the 1990 microsporidian workshop in taxonomy. It was suggested that future workshops should be scheduled early in future SIP meetings to permit time for informal follow-up discussions between members. Dr. Ann Cali will organize the 1991 workshop for the Flagstaff meeting.

Dr. Earl Weidner was congratulated by all members present for winning the 1990 5k fun run.

Translation of Issi's Monograph

Dr. Sweeney read correspondence between Dr. Becnel and Dr. Jerzy Lipa concerning the translation of Dr. Issi's monograph on the microsporidia into English. Dr. Lipa agreed to undertake this task for an honorarium of \$1000 (US). This proposal was formally put to the members as a motion during the 1990 business meeting in Adelaide. It was unanimously carried.

Subsequently, Dr. Lipa was commissioned to undertake this translation. He did an enormous amount of work to complete this task in February 1991 to a very high standard. This will prove to be an excellent contribution to the study of microsporidia by ensuring that this work will now be widely available to English speaking scientists. The sincere thanks of the members of the Division has been formally conveyed to Dr. Lipa.

The translation was sent on computer disk to Dr. Undeen who will arrange for printing and distribution to members of the Division free of charge. Other members of the Society can obtain copies from Dr. Undeen for a nominal charge of \$10 for full members and \$5 for student members.

MICROBIAL CONTROL NEWS

The SIP Microbial Control Division is sponsoring this section which features short news items on microbial control. If you have any information which you would like to contribute under this heading, please submit one or two paragraphs to the Newsletter Editor or Mark Goettel, Chairman, Microbial Control Division, P.O. Box 3000 Main, Lethbridge AB, Canada, T1J 4B1, (FAX. 403-382-3156, TEL. 403-327-4561). Articles do not constitute formal publication and therefore should not be cited without permission of the author(s).

New Journal in Biological Control

A new journal, "Biological Control" is being launched by Academic Press. The journal encompasses biological control of viral, microbial, nematode, insect, mite, weed and vertebrate pests in agriculture, aquatic, forest, natural resource, stored product, and urban environments. Biological control of arthropod pests of human and domestic animals is also included. Ecological, molecular, and biotechnological approaches to the understanding of biological control are welcome. The editors are R. Charudattan, H. K. Kaya, W.J. Lewis and C.E. Rogers. Manuscripts should be submitted in quadruplicate to: Biological Control, Editorial Office, Sixth Floor, 1250 Sixth Avenue, San Diego, CA 92101. More information can be obtained by calling Academic Press at 619-699-6742.

Directory of Industries Involved in the Development of Microbial Control Products.

The Microbial Control Division requests your assistance in the preparation of this directory. We request information on pathogens being developed as well as other microbial control related activities, e.g. safety testing, formulation etc. The directory should prove useful to scientists and extension personnel who require industry contacts and information on experimental product development, availability, and testing. Once completed, the Directory will be distributed to respondents and Society members.

Approximately 200 questionnaires were mailed to industry representatives in the last 3 months. The following companies have responded as of 1 June: Agricultural Genetics, Andermatt Biocontrol, Becker, Bioenterprises, Biosys, Bozeman Bio-Tech, Chr. Hansen Biosystems, Crop Genetics Int'l, Ecoscience, Entotech, Espro, Esso, Fairfax, FPMI, ICI Canada, ICI UK, IITRI, INCITEC, M & R Durango, Monsanto, Mycogen, Mycotech, NOVO Nordisk, Necessary, Philom Bios, Plant Genetic Systems, Sandoz, Zoecon.

A difficulty arose in that on the questionnaire it was stated that you need only to fold, staple and mail; however, it turns out that

international postal regulations require that international mail be placed in an envelope. Consequently, if you followed my instructions yet your company is not included on the list above, it is probably because the questionnaire was confiscated by the post office. PLEASE REMAIL YOUR QUESTIONNAIRE! Sorry for the inconvenience. Also, if you haven't received a questionnaire and you would like to be included in the directory, please contact me and I'll forward one to you. A draft copy of the directory, with plenty of extra questionnaires will be available at the meetings in Flagstaff. Thank you for your cooperation.

Color Slide Atlas of Microbial Control: Bioassay, Production and Application Methods

We have approximately 200- 300 slides submitted to date. A draft will be made available for inspection at the Flagstaff meetings. I'll try and include any slides that I receive before the meetings, so please don't hold back! For more information, please refer to back issues of the Newsletter

Microbial Control Division: Call for Nominations

The terms for the Microbial Control Division executive expire at the meetings in Flagstaff. Positions for Secretary, Chairperson-elect and 3 members at large need to be filled. Chairman-elect, Mickey McGuire assumes the position of Chairperson for 2 years. If you are interested or would like to nominate someone, please let me know ASAP. Elections will take place at the Division's Annual Luncheon Meeting in Flagstaff, August 8.

Mark Goettel, Chairman

First experimental use permits issued for recombinant microbial insecticide

During the spring of 1990, the U.S. Environmental Protection Agency approved two Experimental Use Permits (EUPs) on a total of 8,000 acres of vegetable crops, for Mycogen Corporation's lepidopteran active product, MVP® Bioinsecticide. Because MVP was developed using techniques in genetic engineering, these EUPs represent the first regulatory approval of recombinant biological pesticides for on-farm, non-crop destruct uses.

MVP is based on the CellCap® encapsulation system, Mycogen's patented process for improving the field performance of naturally occurring isolates of *Bacillus thuringiensis* (Bt). To develop MVP, a naturally occurring Bt *kurstaki* isolate with high levels of activity against the diamondback moth, the European corn borer and other caterpillar pests was selected in screening programs. The delta endotoxin gene responsible for production of the desired endotoxin was then transferred to a non-pathogenic isolate of *Pseudomonas fluorescens* (Pf). When the transformed Pf cells are grown in fermentors, the biotoxin is produced and forms a crystal within the cell. Unlike Bt, however, the Pf cells do not lyse at the completion of their growth cycle. When the crystal bearing Pf cells reach maturity,

they are killed while still in the fermentation tank, using a patented chemical treatment. This process fixes the Pf cell wall, causing it to become thicker and more rigid through cross linking of cell wall components. The rigid wall of the dead Pf cell therefore serves as a protective biological microcapsule for the enclosed endotoxin. Because the final product is dead, environmental concerns regarding the release and spread of living recombinant organisms have been alleviated.

Field trials conducted during 1988 - 1990 have demonstrated that MVP has increased residual activity (two to five fold) when compared to conventional Bt products. When evaluated for control of the diamondback moth on cole crops, MVP performance has been superior to that of other registered biological and synthetic chemical insecticides in 95% of all trials.

Based on these positive results, Mycogen plans market introduction in summer, 1991, pending EPA approval. Other products based on the CellCap system, including beetle-active, beet armyworm-active and mosquito-active materials, are also being developed.

Wendy Gelernter, Mycogen Corporation, San Diego, CA
Tucson, AZ 85719

5th ICIP FUN RUN - ADELAIDE AUSTRALIA
Wednesday August 22, 8:30 am.

This event, which was in fact the eighth SIP Fun Run, was held around the picturesque Torrens Lake, adjacent to the Adelaide Convention Centre. Twenty-five runners assembled for the start, and at the starter's whistle, took to the course in rather cool conditions. As has happened previously, the overall winner was in the Men's Over 40 class - Earl Weidner breezed to the finish line to take first place with a time of 17min 23seconds. David Dall took out the Men's Under 40 class (18:01), while Pam Marrone won the Ladies' class (22:17). One notable effort was that of Joan Vickers, who ran from her hotel at St. Peters (about 4km away), competed in the event, and then ran back to her hotel instead of crossing the finish line.

At the Colloquium Banquet on Thursday evening, the class winners were presented with trophies, while all participants were awarded a "Diploma in Fun Running". Special thanks must go to Jane Scarborough, Cathy Smalridge, Tammy Greatrex and Alisen Brooks, who helped organise and conduct the event.

David Cooper

RESULTS

Time Overall Position

Ladies Section

Pam Marrone	22:17	17
Judy Mikl	25:18	21
Sandra Kern	47:53	=23
Joan Vickers	(DNF)	-

Men over 40

Earl Weiner	17:23	1
George Soares	17:34	2
Norman Crook	17:51	3
SKovmand Ole	18:28	6
Al Undeen	19:54	8
S. Kramer	20:42	9
Arthur Aronson	21:01	10
R. Smith	21:05	11
G. Schaub	21:17	13
Harry Evans	22:06	14
ManfredAEbert	22:08	15
Jerry Ensign	23:29	19
Max Bergoin*	25:18	22
Fred Kern	47:53	=23

Men under 40

David Dall	18:01	4
Vance Kramer	18:13	5
Michael Brownbridge	19:51	7
Peter Smits	21:15	12
Walter Schurter	22:15	16
Dwight Lynn	22:36	18
Roger Frutos*	24:48	20

* = Late starter

ADVERTISEMENT

Translation of Issi's Monograph on Microsporidia

This work has now been translated into English by Dr. Jerzy Lipa on behalf of the Division on Microsporidia. It will be sent to members of the Division free of charge. Other members of the society may purchase this for a cost of \$10 for full members and \$5 for student members. Copies may be obtained from:

Dr. A.H. Undeen
U.S. Dept. Agriculture
Medical and Veterinary Entomology Research Laboratory
P.O. Box 14565 Gainesville
Florida 32604

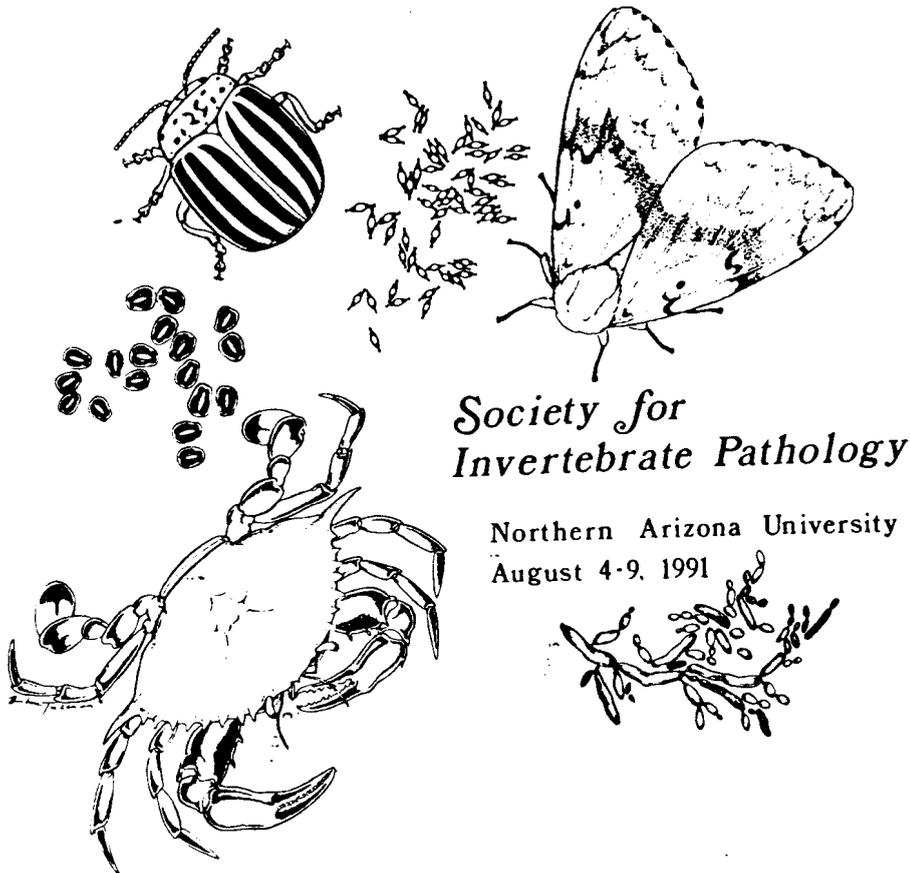
FROM THE EDITOR

I have to thank Leo van der Geest for pointing out that I had inadvertently misnumbered the two most recent issues of the Newsletter. The second issue in 1990 should be Volume 22 Number 2, while the issue previous to this was Volume 23 Number 1. Volume 23 Number 1 was an 18 page issue that included material which would ordinarily have been published in the fall of 1990, but for various reasons was delayed and rolled into the one issue in early 1991.

This issue of the Newsletter is my last as Editor, and also marks the end of an eleven year period during which the Newsletter has been published from the Forest Pest Management Institute in Sault Ste. Marie. Sardar S.Sohi took over the Editorship in 1980, and passed over this responsibility to Gary G. Wilson in 1984, and I assumed the Editorship with the first issue in 1987. Who will be the next Editor? Watch for an announcement at the Annual Meeting. Contract

negotiations are currently under way under a heavy veil of secrecy! In the interim, contributions for the next Newsletter can be sent to me and I will forward them to the next Editor.

I would like to thank Mary Welton and Kathy Humphries who have worked hard to ensure the prompt mailing of each issue as it was received from the printers, and who have also had a large hand in retyping much of the copy, although the recent introduction of transfer of copy by computer disc has reduced this task somewhat. Thanks are also due to other members of the FPMI staff, including Norma Digasparro for help with some of the typing, and Karen Jamieson, Vicky Mervyn and Brenda Canduro, who have helped me give a more professional look to the Newsletter over the past couple of years, and last but not least to our management at FPMI for providing all three Editors with the time, facilities and understanding to enable the Newsletter production to proceed.



*Society for
Invertebrate Pathology*

Northern Arizona University
August 4-9, 1991

Printed in Canada