sip newsletter

society for invertebrate pathology

Volume 21, Number 3

November 1989

XXII Annual Meeting

Society for Invertebrate Pathology
University of Maryland
College Park, Maryland
August 20–24, 1989

The 22nd Annual Meeting of the Society for Invertebrate Pathology was held at the Center of Adult Education on the campus of the University of Maryland. This is the second meeting held at the "Center" which was the meeting site for the IV International Colloquium of Insect Pathology held in August of 1970.

Examination of a list of registrants for the meeting provides some interesting statistics about the participants. There were 139 members, 48 nonmembers, 25 students, 20 companions and 16 invited speakers. There were scientists representing 15 countries other than the USA as determined by the addresses furnished by the registrants. The country and number of participants are as follows: Australia 4, Belgium 1, Brazil 2, Canada 15, China, Republic of, 1, Denmark 2, England 9, France 1, Germany, West, 4, India 1, Israel 1, Japan 3, The Netherlands 2, Spain 1, Switzerland 3, and U.S.A. 198.

Examination of the list also indicates that industry was represented by 24 different corporations. Donations were received from 12 of these corporations to help defray the meeting costs and supplement our social program. Our appreciation goes out to:

Abbott Laboratories, Inc.
Becker Microbial Products, Inc.
CIBA–Geigy
Crop Genetics International
Eco Science Laboratories, Inc.
E.I. DuPont de Nemours & Co.
Garst Seed Co.
Monsanto Company
Mycogen Corporation
Novo Laboratories, Inc.
Ringer Corporation
Sandoz, Inc.

The festivities began on Sunday evening, after the board meeting, with a mixer held at the "Center" patio. About 150 people enjoyed a variety of fruits, cheeses and other snacks as well as various beverages while renewing old acquaintances, talking shop and making new friends.

The formal program started Monday morning with a welcome by Dr. Raymond Miller, Vice Chancellor for Agricultural Affairs at the University of Maryland. During his speech, he stressed the importance of our discipline relative to the improvement of environmental quality. Next Dr. Donald Roberts gave the presidential address. The text of his remarks is presented elsewhere in the newsletter.

The Founder's Lecture, this year, was presented by Dr. Victor Sprague, Professor Emeritus at the University of Maryland. Dr. Sprague was selected as this year's speaker because of his many contributions to the field of protozoology. His lecture focused on the life of Dr. Richard R. Kudo who was Dr. Sprague's mentor and friend. Dr. Sprague received a plaque presented to him on behalf of the Society by Dr. Robert Granodos at the banquet on Tuesday evening.

The remainder of Monday morning initiated the scientific program. The first symposium was presented by four speakers representing the four pathogen groups. Each presented their views on the origin of invertebrate pathogens. The rest of the program, which ran from midday on Monday until noon on Thursday, consisted of five more symposia, two workshops, and seven sessions of contributed papers. On Tuesday the poster session was held in the "Center" causeway with twenty–one exhibitors participating. New items on the agenda this year were a neoplasia symposium and workshop. The workshop had about sixteen participants who were grateful to the Olympus Microscope Company for the loan of the equipment.

At the business meeting on Monday evening Dr. Dudley Pinnock presented a small slide show and discussion about our next international colloquium in Adelaide, Australia. Those who need more information about next year's meeting should contact him for further details.

Tuesday evening the banquet was held in the "Center" ballroom. After an excellent prime rib dinner, many participants danced until midnight to music provided by a D.J. and some tapes provided by our President, Don Roberts.

Wednesday afternoon was free time. Several members went to the National Arboretum while others toured the U.S.D.A. research faculty at Beltsville, Maryland. Some of the meeting participants, however, were resting up for the 5k race.

5 K Road Race

A record turnout of 26 runners and walkers participated in the Maryland Madness ("Dash–for–Glory") Race. The cross country course, around the University of Maryland golf course, was both scenic and challenging, and was a welcome relief from the 90°F temperature. The overall winner was John Greenplate, in a record breaking time of 18:14.

Category winners were:

Male under 40

1) John Greenplate 18:14*
2) Vance Kramer

Male over 40

1) Gerry Carner 18:46*
2) G. Skot

Male over 50

1) Al Undeen 23:43*
2) Martin Shapiro

Female

1) Joyce Knoblett 25.30*
2) Kathy Murray

Walker

1) Ann Cali*
2) Mary Fenton

Trophies were given to all category winners (*) and certificates were awarded to all course finishers. After the race a bar–b–que was held next to the campus faculty club where everyone was treated to renditions by "The Bluegrass Express." During a break in the music, Dr. Marty Shapiro announced the winners in the student competitions.

We want to thank all participants and the Insect Pathology Laboratory for their spirit and cooperation.

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 Annual General Meetings free, whether or not they attend. Application forms for membership in the Society may be obtained from the Treasurer, Mr. Fredrick G. Kern, Cooperative Oxford Biological Laboratory, 18 South Morris Street, Oxford, Maryland 21654, U.S.A.

Council Officers of the Society are:

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

Send News items and other contributions to:

David Tyrrell, Editor
SIP Newsletter
Forestry Canada
Forest Pest Management Institute
P.O. Box 490
Sault Ste Marie, Ontario P6A 5M7
CANADA

DEADLINE NEXT ISSUE: **November 30, 1989.**

Student Awards

Jennifer Woodring, Best Paper
Harry Kaya, Major Professor

Linda Bass (seated), Runner–up Paper
Earlene Armstrong, Major Professor

All students who presented oral research reports and displays were eligible for cash awards

The winners were:

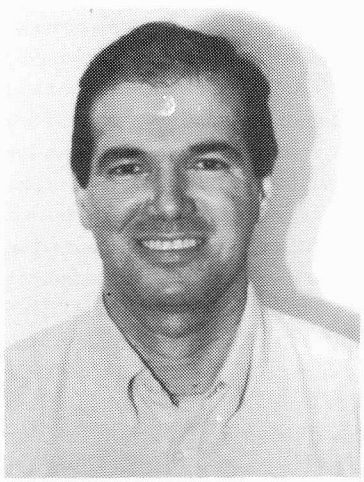
Oral Presentation

1) Jennifer Woodring
University of California, Davis, CA
2) Linda K. Bass
University of Maryland, College Park MD

Display Presentation

1) Bonifacio P. Magalhaes
Cornell University, Ithaca, NY

2) Martha A. Heath
University of Florida, Gainesville, FL



Bonifacia Magalhaes
Best Poster

Martha Heath
Runner–up Poster

We were much impressed by the quality of the presentations and would encourage more students to participate.

Charles F. Reichelderfer

PRESIDENTIAL ADDRESS

Society for Invertebrate Pathology
August 20, 1989

The Society for Invertebrate Pathology (SIP) is in very good health. Our membership crossed the 1,000 point this past year. The field of invertebrate pathology is rapidly increasing in practical applications, both in pest control and in protection of aquaculture invertebrates and beneficial insects. Molecular biology methods are allowing us to answer questions we hardly dared ask only a few years ago. With the new scientific tools available to us today, additional scientists have joined us to work in the dynamic area of trying to unravel the puzzle of the pathological relationships between invertebrates and microorganisms.

Ours is truly an international society, and this is one of our strengths. The SIP council has elected to emphasize our international flavor by increasing, over the next few years, our meetings outside of North America. As you know, we will meet in Adelaide, Australia, in August, 1990. In addition, we are in the process of arranging to hold our Annual Meeting in Europe in 1992; and our 1994 International Colloquium will be held in Montpellier, France.

Choice of invertebrate pathology as a profession

While sitting around a table with a group of scientists recently, one of our group queried several of us as to how we had come to be biologists. The stories were quite varied. One surprise is that most of us at one point had intended to be engineers. There is another decision that those of us in SIP have made—that is, to be an invertebrate pathologist. I would be interested to know how this happened to you. I would also be interested to know if you consider yourself primarily an invertebrate pathologist or if the study of invertebrate disease is a sub–discipline for you. Those of you who know me well know that insect pathology is my primary field. My conversion to this aspect of biology was sealed when, as an undergraduate, I entered a cotton field that was littered with the decaying remains of a high population of leaf–feeding caterpillars. I had seen the population the previous week, and had assumed that the grower would use insecticides. The fact that a nuclear polyhedrosis virus had accomplished the same effect without the inconvenience of using a pesticide was a truly intriguing idea. My employer's response to my questions was that virtually nothing was known about these virus diseases of insect. I resolved at that moment that, should the opportunity arise, I would study the diseases of insects. After a fascinating introduction to mycology from an excellent teacher, Kent McKnight, and a PhD program with Edward Steinhaus and Mauro Martignoni at Berkeley, California; my wish of several years earlier to study insect diseases was finally realized.

I am very interested in the incidents and the personalities which cause a person to commit to invertebrate pathology. I think this information could be used in defining our field and how we might attract students. Our Society maintains an archival record of Society events. I propose that you, as individual members, write down the pivotal event in your career which brought you into the field of invertebrate pathology and submit this short document to our archivist, Wayne Brooks. As an alternative, you could send this to me at Boyce Thompson Institute where we will add your history to the Edward Steinhaus reprint collection housed at Boyce Thompson Institute. These notes from you might make a fascinating informally produced document.

Germplasm Conservation

Science, like all human enterprises, has its fads. One of the latest, germplasm conservation, is to be applauded, and in my opinion, should be encouraged—particularly by members of the Society for Invertebrate Pathology. The severe changes in ecological conditions being wrought by man have caught the attention of an enlightened few who fortunately are very verbal. They have called to our attention that native organisms in our changing environments are endangered and their germplasm should be conserved. This is a quite complicated matter for animals and higher plants, but conservation efforts are being mounted. For example, at the International Rice Research Institute, seeds of about 80,000 wild and domestic rices from all over the world are kept in cold storage and repropagated from time to time. The same is being done with some other plants, and expensive efforts are underway to maintain some animals species. Microorganisms are much less conspicuous than these larger organisms, and are not receiving the same attention. Nevertheless, their germplasm is no less uniquely evolved nor less worthy of being conserved. In fact, there are, without doubt, unisolated, unidentified strains of microorganisms which, aside from their intrinsic academic worth, could be exploited for the benefit of man. For example, cyclosporins were only recently isolated from soil microorganisms. These compounds have revolutionized the field of human organ transplant.

Our own field of invertebrate pathology relies heavily on novel genetic material. If you retrace the path taken by virtually every insect control project using microorganisms, you will note that an early step is to select the most efficacious microbial strain. Where do these strains come from? Particularly in overseas projects, we tend to conduct a survey of the area to isolate existing invertebrate pathogens, particularly of the target host. Very of-

ten we call upon existing culture collections to obtain an array of what we hope are promising pathogens of our target pest. As mentioned earlier, existing conservation groups do not regard the conservation of germplasm of microorganisms as a priority. These non–profit and governmental organizations provide funding for conservation efforts. It would be to the benefit of all of us working with invertebrate diseases to bring to the attention of these groups the very unfortunate omission of microbial pathogens of invertebrates from their projects. It will take some effort on our part to enlighten them as to this need. I propose that the Society for Invertebrate Pathology take a lead position in this effort. A more direct and immediate approach will be for us as individuals to be certain that our own collections of microorganisms are properly conserved. In the case of fungi, this is rather simply done by submitting your fungus cultures to an existing repository, namely the USDA/ARS collection of entomopathogenic fungi in Ithaca, New York, currently curated by Dr. Richard Humber. This collection now numbers approximately 3,000 isolates maintained in liquid nitrogen and/or lyophilization. Even this collection, however, could use more financial support. The other organisms need similar stable repositories. It is a common phenomenon for researchers to lose interest in a pathogen for a while and lose that microorganism, or for the microorganism culture to become contaminated by accident and lost. Also, following the death or retirement of some of our leading scientists, their culture collections are abandoned. I encourage you to submit cultures of your pathogens to collections that have at least an aura of permanence. Also, I encourage our members to collect—both from the field and from colleagues—invertebrate pathogens, and submit these to culture collections as well. One of these organisms that you save may prove to be the equivalent in impact to our field of the *Bacillus thuringiensis* var. *kurstaki* HD–1 strain. This isolate was the first truly financial success for microbial control.

Germplasm Dissemination

There is another side to this germplasm issue which is vitally important to us at present. Many nations justifiably are concerned about the possibility of scientists bringing into their nations undesirable germplasm. The major area of concern is the introduction of new and devastating plant and domestic animal pathogens. The spread of diseases in aquaculture animals through commerce has become a serious worldwide problem which, in some cases, threatens commercial production. In these cases, the disease organism is unintentionally introduced into new nations in presumed healthy stock. The introduction of microorganisms for use in pest control, as mentioned before, has been a standard practice in trying to optimize insect control systems. The approach taken in the United States until recently was that the pathogens of insects were, as a group, quite specific to insect and permission was not needed for their release in the United States. This has changed. And this is a matter for our serious attention. The actions of US governmental agencies are very often emulated in other nations. It is important that we assist the primary US regulating agency, viz., the Animal and Plant Health Inspection Service (APHIS) of the USDA. Their work is done under the authority of the National Environmental Protection Act. APHIS has recognized that most insect pathogens are cosmopolitan and introductions of new strains of these organisms are probably of low risk to the United States. Nevertheless, all releases of exotic microorganisms must be granted permission by the government before their release into nature in the United States. At present, any field release totaling less than 10 acres is considered research mode only, and is fully under the jurisdiction of APHIS. Permission for these releases is based on acceptance by APHIS of an Environmental Assessment (EA) document prepared by the scientists desiring the release. APHIS must respond to requests for releases within 60 days. Larger treatment areas require Experimental Use Permits (EUP), which are the province of the Environmental Protection Agency (EPA). The EUP requires considerable safety and other data, and can be both expensive and time consuming to obtain. The EA required by APHIS calls for less information. The exact structure of the application is still in formation. Included is a possibility that certain insect pathogens are sufficiently cosmopolitan and have adequate histories of safety to non–target organisms to place them on a list of organisms excluded from AE requirements. In my opinion, certain organisms, such as virtually all nuclear polyhedrosis viruses, *Bacillus thuringiensis* isolates, and fungi such as *Beauveria bassiana* and *Metarhizium anisopliae* are specific to insects and are of low risk to US habitats. The center of APHIS's activities is at the Beltsville Agricultural Research Center of USDA in Maryland. I hope you take the opportunity to discuss this topic with people of the USDA such as the national program staff representative for biological control, Richard Soper, and Drs. Phil Lima and Dale Meyerderk of APHIS. I'm sure they would find your information and opinions very useful. We, as a group, support the concern of governments towards protecting their nations. Nevertheless, it is important that we do not strangle worthy endeavors in the process.

Conclusion

Our field is undergoing an exciting increase in sophistication and importance at present, and our Society is experiencing similar changes. Our international presence is increasing as is our number of members. We have problems—such as reducing the work load on our treasurer—but these problems are solvable. It is a pleasure to serve the Society in these prosperous times.

Donald W. Roberts

MICROBIAL CONTROL NEWS

The SIP Microbial Control Division is sponsoring this new section which will feature 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 to any of the Microbial Control Division executive (Mark Goettel, Ann Hajek, Michael McGuire, Larry Lacey or Richard Daoust). Of particular interest would be information on new developments in production or registration, formation (or closure) of companies, information on safety, etc.

First Fungal Epizootic in U.S. Populations of Gypsy Moth

An entomophthoralean fungal pathogen of the gypsy moth, *Lymantria dispar,* has caused epizootics throughout the northeastern United States this spring and early summer. Extensive mortality occurred in increasing gypsy moth populations. No such pathogen has previously been reported from gypsy moth field populations in North America. Based on isozyme analysis, this fungus has been identified by Richard A. Humber as *Entomophaga maimaiga,* a species originally described from Japan. In 1909 two infected gypsy moth larvae were imported to the Boston area from Japan and were used to initiate control efforts. In 1910 and 1911, Arthur Speare and R.H. Colley released this fungus in six Boston suburbs. However, they con-

sidered their releases a failure. Based on the present day distribution of *E. maimaiga* in the northeast, it seems that it had been successfully introduced in the Boston area and spread in the 79 years since its first introduction.

Ann E. Hajek,
USDA, ARS,
Plant Protection Research Unit, Ithaca,
New York, U.S.A.

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

In 1984, the Society produced a very successful Color Slide Atlas of Invertebrate Pathology. At the recent Microbial Control Division meeting in College Park, it was decided that the Division put together an atlas on microbial control. Such an atlas will attempt to cover basic techniques as well as milestones. Examples of bioassay may include methods for safety testing of non–insect hosts. Once completed, the atlas will be offered to all Society members at cost price.In order for this venture to be a success, we need contributions of material from society members. Selected slides will be duplicated and all submissions will be returned; however, to reduce duplicating and postage costs, if at all possible, please send duplicate slides rather than originals.Please include the following information:

1) a short description of slide, including scientific names of pathogen, host and crop (as the case may be),
2) place and year,
3) reference citation if slide is associated with a publication (authors, year, journal, volume #, pages)
4) Name, address and telephone number of submitter.

Please send all submissions to:
Mark Goettel,
Chairman, SIP Microbial Control Division,
Research Station,
P.O. Box 3000 Main,
Lethbridge, Alberta, T1J 4B1
CANADA

If you have any questions, please call me at 403–327–4561.

LOGO CONTEST

The Society for Invertebrate Pathology, although organized in 1977, has never adopted a logo. We have routinely used the acronym "SIP" on our letterhead and meeting programs. Although not absolutely necessary to the functioning of the Society, it seems appropriate that we adopt a logo which represents our activities as invertebrate pathologists in addition to the acronym. Accordingly, we are inviting members to submit suggestions for logos. The drawings will be reviewed by a committee of members and, if they deem some of them appropriate, at least three will be included in the next ballot (early 1990) for final selection by the member–ship. Please send your drawing(s) to Dr. Donald W. Roberts, Insect Pathology Resource Center, Boyce Thompson Institute, Tower Road, Cornell University, Ithaca, New York 14853, USA.

5TH INTERNATIONAL COLLOQUIUM AT ADELAIDE

To Members in UK and Ireland

Quantas have been appointed the Official International Carrier for the above event and have contacted me about potential special rates for delegates from the British Isles. They need to know how many people are likely to be interested in going to Adelaide and the subsequent trip to the barrier reef.

If you are interested in exploring this offer please contact me immediately and I will forward information to Quontas.

Denis Burges
21 Withdean Avenue
Goring
WORTHING
Sussex
BN12 4XD
England

An Invitation to New Zealand

To all insect pathologists planning to attend the Adelaide Colloquium in August 1990: we'd be most pleased to have any interested researchers visit our laboratory in Auckland, New Zealand, during the week before the conference.

We are the Insect Pathology Team of Entomology Division, DSIR:
Louise Malone, molecular biology of microsporidia,
Peter Wigley, scarab diseases, bioassays and bee pathology,
Chris Chilcott, *Bacillus thuringiensis*
Steve Dhana, Susan Fredericksen and Helen Murray, technical support,
Deidre Dahlberg and Martin Stockdale, technical trainees.

We are situated at DSIR's Mt Albert Research Centre, along with two molecular biologists working on B.t., two nematologists, and about 85 other entolomologists, working on systematics, horticulture and agriculture.

Auckland is a beautiful harbour city, with probably the greatest number of sailboats per head of population for any city in the world. We are surrounded by beaches, calm and sheltered on the east, surf beaches on the west. Native forest fringes the city to the west. We are only 3 hours by road from the Bay of Islands in the north and Rotorua (thermal area) in the south. Accommodation ranges from modest ($NZ70 per single room) to sumptuous ($NZ270).

If your're interested, write for further details to:

Louise Malone
Entomology Division
DSIR, MARC,
Private Bag'
Auckland,
NEW ZEALAND.

MEMBERS IN THE NEWS

L.O. HOWARD DISTINGUISHED ACHIEVEMENT AWARD

The highest recognition award given by the Eastern Branch of the Entomological Society of America, the L.O. Howard Distinguished Achieve-

ment Award, was presented this year to our Society's President, Donald W. Roberts of Boyce Thompson Institute. The award is given "to recognize significant contributions to entomology and sustained excellence during one's career." In Don's case, it was based on his extensive research and review publications, his organizational activities in insect pathology in both the USA and internationally, and his direction of graduate students. He was nominated by Drs. Raymond Carruthers and Ann Hajek of the USDA in Ithaca.

DR. ALOIS HUGER RECEIVES NATIONAL AWARD

Dr. Alois Huger of the Institute fur Biologische Schadlingsbekampfung der biologischen Bundesanstalt in Darmstadt, West Germany was recently awarded the prestigious "Federal Cross of Merit, First Class" by the West German Government. Dr. Huger's research on the Rhinocerous (*Oryctes*) beetle virus has led to widespread use of this virus in successful control of this pest of coconut in the South Pacific region. In addition, Dr. Huger discovered and has been instrumental in development of *Bacillus thuringiensis* subsp. *tenebrionis*, which has insecticidal activity toward beetles. In his many years of active research, Dr. Huger has worked in several different areas of insect pathology, and recently has extended his interests to plant pathology.

MEMBERSHIP LIST

The Society will soon distribute a new membership list to each of its members. If you have reason to believe that your address is incorrectly recorded in the Society's records, please contact Fred Kern, our Society's treasurer, immediately. His telephone number is (301) 226–5193 and his fax number is (301) 226–5925. His address is National Marine Fisheries, Oxford, Maryland 21654, USA.

POSITIONS VACANT

GRADUATE RESEARCH ASSISTANTSHIP.: M.S. or Ph.D. To study causes of early larval mortality in the alfalfa leafcutting bee. Microorganisms and abiotic factors associated with developing larvae will be explored. Competitive stipend and out–of–state tuition waver. Logan is located in a beautiful mountain valley. Utah State has a diverse biological sciences program. USDA–ARS and USU are AA/EEO employers. Please contact John D. Vandenberg, USDA–ARS Bee Biology and Systematics Lab., Utah State University, Logan, Utah, 84322–5310. Phone 801–750–2524.

ASSISTANT PROFESSOR IN INSECT PATHOLOGY: The Department of Entomology, University of Alberta, invites applications for a tenure track position of Assistant Professor in Insect Pathology (salary range $34,970 to $51,434). The successful applicant will be expected to establish a research program on interactions (at the molecular to organismic level) between pathogenic microorganisms and their insect hosts, and to teach at both the undergraduate and graduate level (usually 1 course per term). The appointment will be consistent with the Department's strong programs in basic entomology and evolutionary biology, and with our objective of applying scientific principles to solution of problems in agriculture and forestry.

Applicants must hold a Ph. D. in Insect Pathology (working on viruses, bacteria or microsporidians) or closely related discipline, and preferably have postdoctoral experience. In accordance with Canadian Immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. To apply, send C.V., a statement of research interests and goals, and names and addresses of three referees, at least one of whom is currently associated with the applicant, to R. H. Gooding, Chairman, Department of Entomology, University of Alberta, Edmonton, Alberta, Canada T6G 2E3 by Nov. 15, 1989. Position to be filled by July 1, 1990. The University of Alberta is committed to the principle of equity in employment.

RESEARCH FELLOWSHIPS: The University of Adelaide invites applications from both women and men for the following research fellowships (two positions) in the Department of Entomology at the Waite Agricultural Research Institute:

BACTERIAL ECOLOGIST (Position No: 6767): The appointee will join a small team working on the microbial control of the sheep blowfly, and take charge of a project on the ecology of fleece bacteria. Applicants should have a Ph.D.degree or equivalent and experience in bacteriology, preferably in bacterial ecology.

PROTOZOOLOGIST (Position No: 6868): The appointee will take charge of a project already in progress on the biological control of sheep blowfly by protozoa, particularly the microsporidan *Octosporea* spp. Applicants should have a Ph.D.degree or equivalent and experience in protozoology, preferably with emphasis on parasite/host interactions.

Both positions are available immediately until 30 June 1990, then subject to further extension dependent on continued funding. Information about the general conditions of appointment and selection criteria may be obtained from the Senior Assistant Registrar (Personnel) at the University. Salary per annum: $31,259 x 7 – $40,622

Applications in duplicate, quoting relevant reference number and giving full personal particulars (including whether candidates hold Australian permanent residency status), details of academic qualifications and names and addresses of three referees should reach the Senior Assistant Registrar (Personnel) at the University of Adelaide, GPO Box 498, Adelaide, South Australia, 5001, Telex UNIVAD AA 89141, Facsimile 08 224 0464 not later than 31 October 1989. The University reserves the right to make enquiries of any person regarding any candidate's suitability for appointment, not to make an appointment or to appoint by invitation. The University of Adelaide is an equal opportunity employer.

Further information concerning the duties of the position may be obtained from the Chairman, Professor D. E. Pinnock, Department of Entomology, telephone (08) 372 2269.

GRADUATE RESEARCH ASSISTANTSHIP: A graduate research assistantship in invertebrate pathology will be available beginning January 1 1990 in the Department of Entomology, University of Maryland, College Park, Maryland 20742.

The assistantship provides a 12 month stipend plus remission of fees to work towards the M.S. or Ph.D. degree in Entomology. Research will involve some genetic aspects of the toxicity of new isolates of Bacillus thuringiensis or a model concerning the fate of *B. thuringiensis* applied to field crops. Applicants should contact Dr. Charles F. Reichelderfer, Department of Entomology, University of Maryland, College Park, Maryland 20742, (301) 454–7138.

GAHAN REGENTS' FELLOWSHIP: The Department of Entomology at the University of Maryland announces a competition for the second Gahan Regents' Fellowship. This research fellowship, which begins on

September 1, 1990, provides a 3 year, 12 month stipend for work towards the M.S. or Ph. D. degree in Entomology. The fellowship also includes $5,000 per year for research associated expenses.

Applicants must submit a proposal for an intended research project (maximum, 5 pages), in addition to three letters of support, official transcripts and G.R.E. scores. Applicants are encouraged to contact individual members of the entomology faculty at the University of Maryland concerning research objectives and the writing of proposals for the competition. Deadline for application is February 1, 1990.

For more details, contact Dr. Charles Reichelderfer or Dr. Charles Mitter, Department of Entomology, University of Maryland, College Park, MD 20742.

FORTHCOMING MEETINGS

Fourth International Colloquium On Pathology in Marine Aquaculture

The 4th PAMAQ will be held in Vigo (Spain) from Monday, September 17 through Friday, September 21, 1990.

Scientific Program: The following topics are to be included: Diseases caused by viral, microbial, parasitic and chemical agents in Mollusca, Crustacea, Finfish and other marine and estuarine animal groups.

Abstracts: The call for abstracts will appear in the next circular, to be published in October 1989. It will be mailed to all who request a copy. The deadline for receipt of abstracts in March 30, 1990.

Presentations: The meeting will consist of plenary lectures by invited speakers as well as contributed poster demonstrations and oral communications.

Social Events: There will be a reception, a banquet and an excursion during the week of the Colloquium.

Languages: English and French will be the official languages.

Accommodations: Single and double rooms will be reserved for the attendants on request.

For further information contact:

Dr. Antonio Figueras
Instituto de Investigaciones Marinas CSIC
Eduardo Cabello 6
36208 VIGO (Pontevedra)
SPAIN
Phone: 34 86 23 19 30 Fax: 34 86 29 27 62

NEWS FROM PREVIOUS MEETINGS

FIFTH ANNUAL S.I.P. 5 K RACE RESULTS GAINSVILLE

There were 15 runners on a sandy road about one half of which was in the shade and the rest in the blazing sunlight of a 90 degree plus day (31° C). Gerry Carner was first overall and first in the 40 and over age group; Michael Kent was first in the 40 age group and Ann Cali was first woman. The only saving grace of the race was the cold spring to plunge into afterwards.

Al Undeen

SIXTH ANNUAL S.I.P. 5 K RACE RESULTS SAN DIEGO

The Sixth Annual Society for Invertebrate Pathology 5K Race was held on the afternoon of August 17, 1988 on the University – San Diego campus. The race went off under ideal conditions of temperature and humidity. The field consisted of some of the most talented athletes in the world (of invertebrate pathology).

The field was unexpectedly small, with only twelve having the stamina to make it to the starting line. An inauspicious beginning. However, the competitors who sprinted off at the start, bent for glory, soon made this a S.I.P. 5K to remember. Gerry Carner set a blistering pace and finished well ahead of all the others, winning the overall and over–40 1st place trophy in the excellent time of 17:29.1, the pride of the Men's Over–40 set. Ann Cali, the S.I.P. 5 K veteran, demonstrated that persistence and stamina win out in the end. Ann, drawing from her incomparable experience at this event, obliterated the women's field. Such was her dominance that many had the impression that no other women had even competed! Great job, Ann! Vance Kramer finished second and won the Under–40 Men's title.

Other noteworthy performances included a third place finish by 12 year–old Scott Patterson in the Under 40 division. The Anchor Steam Beer Award for the most creative finish went to Tony Sweeney, who won the award hands down, finishing in a respectable 27 or so minutes while crossing the finish line from the opposite direction.

Catagory placings were:

Male under 40

1)	Vance Kramer	18:45.6
2)	Herman van Mellaert	20:57
3)	Scott Paterson	23:24.5
4)	Peter Smits	23:24.7
5)	Ted Andreadis	23:50
6)	Roger Frutos	27:10
7)	Jimmy Becnel	28:01

Male over 40

1)	Gerry Carner	17:29.1
2)	John Aronson	21:23
3)	Al Undeen	21:55
4)	Tony 'Pathfinder' Sweeney	?27:30?

Female

1)	Ann Cali	49:06

George Soares

ENTOMOPATHOGENIC NEMATODE SYMPOSIUM

The First International Symposium on Entomopathogenic Nematodes in Biological Control was held August 20–22, 1989, at the Asilomar Conference Center in Pacific Grove, California. The Symposium was sponsored by the USDA – Competitive Research Grants Program and by industry. The primary purpose of the meeting was to promote the exchange of information and ideas among academic, government and industry scientists having a special interest in the development of steinernematid and heterorhabditid nematodes as biological control agents. There were 109 registered participants from 16 countries and 20 companies. The Symposium opened with an introductory address by L. Ehler, who attempted to provide a theoretical framework for entomopathogenic nematodes in biological control,

and was followed by sessions on Biology and Taxonomy (G. Poinar, J. Curran, R. Akkurst), Ecology (H. Kaya, C. Womersley, N. Ishibashi), Commercialization (M. Friedman, R. Georgis, M. Klein, R. Bedding), and Biotechnology and Genetics (R. Gaugler, K. Nealson and G. Dunphy). The Symposium concluded with W. Hominick's summary paper, which offered several proposals and priorities for future cooperation, as well as closing remarks by the organizers, R. Gaugler and H. Kaya.

PUBLICATIONS

PROCEEDINGS OF BIOTECH MEETING

The proceedings of a conference entitled "Biotechnology, Biological Pesticides and Novel Plant–Pest Resistance for Insect Pest Management" are now available free of charge. The meeting was held in Ithaca, New York in July 1988. The proceedings were edited by D.W. Roberts and R.R. Granados and can be obtained by contacting either editor or Michelle Montague, Insect Pathology Resource Center, Boyce Thompson Institute, Tower Road, Cornell University, Ithaca, New York 14853, USA. Michelle's telephone number is (607) 254–1256.

BIOLOGY OF CHRYSOMELIDAE

edited by

P. Jolivet, E. Petitpierre, and T.H. Hsiao

Chrysomelidae along with Curculionidae and Bruchidae are the most important phytophagous Coleoptera. At least 35,000 species of leaf beetles belonging to 19 sub–families have now been described and probably more remain to be discovered, especially in the Tropics. Many species are familiar agricultural pests. The Colorado potato beetle, flea beetles, and the corn rootworms are but a few of the well–known pests. Because of their economic importance and biological and biological diversity, chrysomelids are an important taxonomic group for scientific inquiry. This book is the first attempt to compile information on various aspects of biology of the Chrysomelidae. It includes topics on host relationships biogeography, reproduction, ecology, ehtology, natural enemies, defense mechanisms, cytogenetics and evolution of the group. The subject will be of particular interest to biologists, ecologists and entomologists.

Contents

Hardbound, 1988,640 pp. ISBN 90–6193–655–1

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REPRINT COLLECTION

Dr. Mauro E. Martignoni recently donated his voluminous reprint collection, several scientific periodicals, and many books to the University of Mexico. For the benefit of SIP members who may not know Mauro, he was one of the seven founders of our Society, back in 1967. He also served SIP in various capacities since its organization.

The reprint collection contains approximately 4000 titles. It includes publications on general invertebrate pathology, viral diseases of insects, in-

vertebrate tissue culture, and history of insect pathology and biological control. Complete sets of publications by Enrico Masera, Andre Paillot, Edward Steinhaus, and Constantin Vago are part of the collection. The reprint collection was started by Dr. Martignoni around 1950, and it is fully catalogued by author and by subject.

The collection is stored at the new Centennial Science and Engineering Library of the University of New Mexico, in Albuquerque, where it is available for study. For further information, please contact

Ms. Diana Northrup
Biology Librarian
Centennial Science and Engineering Library
The University of New Mexico
Albuquerque, New Mexico 87131

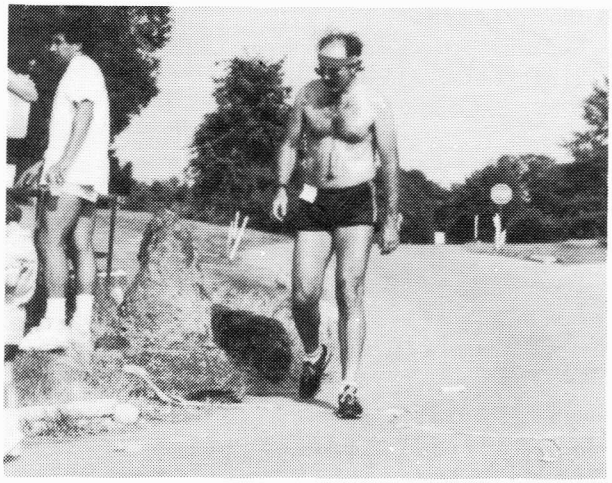
Dr. Martignoni is also willing to assist in reprint searches. His address is

Dr. Mauro E. Martignoni
P.O. Box 14892
Albuquerque, New Mexico 87191

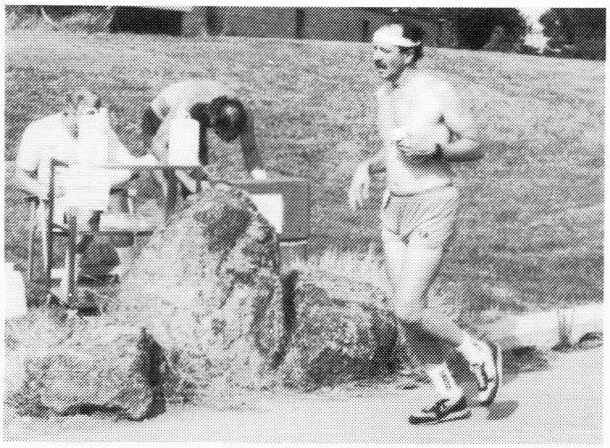
1989 SIP 5K RACE

1	GREENPLATE, John	18:14	9.	LYNN, Dwight	24:44	18.	SHERROD, Dan	32:10
2.	CARNER, Gerry	18:46	10.	KNOBLETT, Joyce	25:30	19.	HACKETT, Kevin	34:53
3.	SKOT, G.	20:22	11.	SMITH, Bob	25:41	20.	GELERTNER, Wendy	35:32
4.	KRAMER, Vance	20:49	12.	BECNEL, James	25:48	21.	RHEAUME, Lisa	44:33
5.	SKOVMAND, Ole	22:12	13.	ANDREADIS, Theodore	26:28	22.	CALI, Ann	54:52
6.	SOARES, George	22:38	14.	SHAPIRO, Martin	26:50	23.	FENTON, Mary	54:52
7.	YOSHINO, Tim	23:35	15.	VAN MELLAERT, Herman	28:00	24.	RIEDL, Karen	1:03:00
8.	UNDEEN, Al	23:43	16.	CLARK, Ed	30:01	25.	BLUMENTHAL, Virginia	1:03:48
			17.	MURRAY, Kathy	30:18	26.	RIEDL, Michele	1:03:48

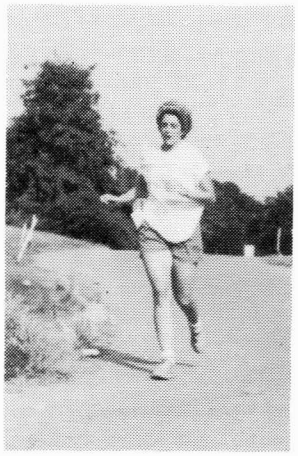
"Oh, my God, here they come!"(Guess who got caught with their pants down?)



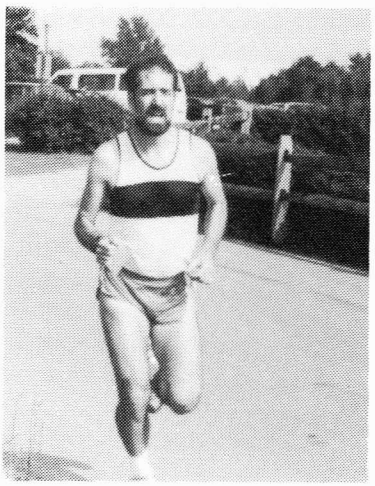
ED CLARK (7th over 40) "I retire"



BOB SMITH (6th over 40)
"Darn it, Undeen beat me to the beer"

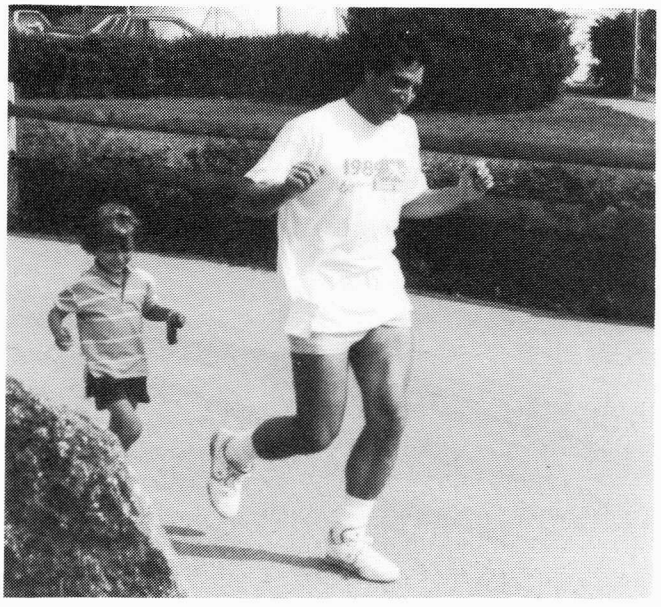


WENDY GELERNTER (3rd woman)
"This sure isn't San Diego"



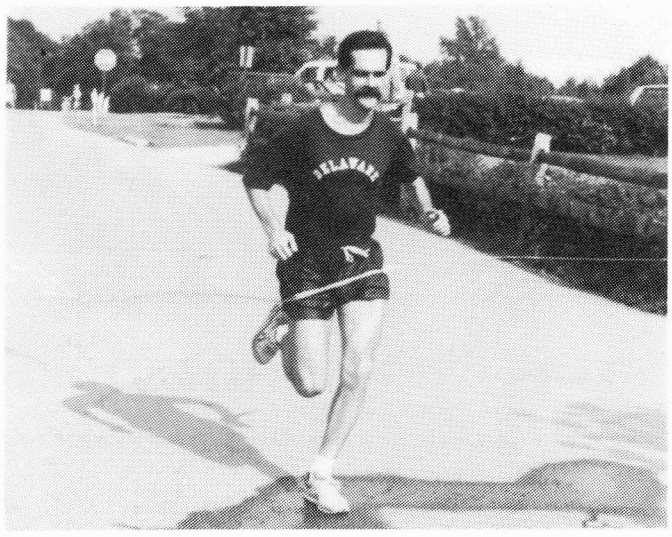
GEORGE SOARES (4th over 40)

"It's about time you finished"



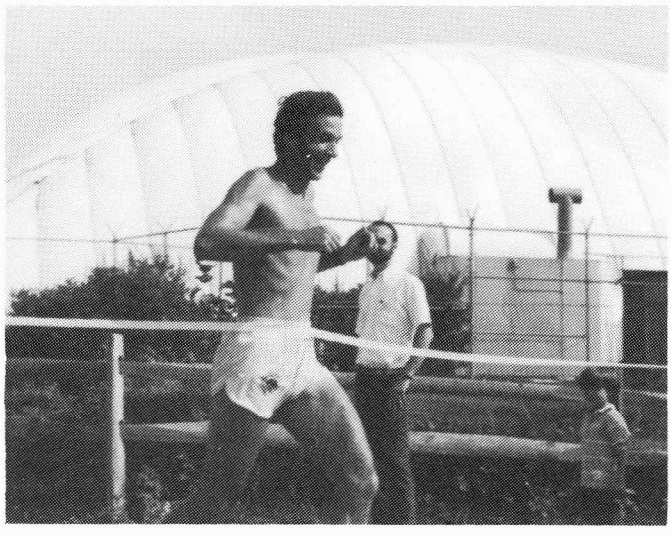
TED ANDREADIS (5th under 40) "Piece of cake"

"Only mad dogs and Englishmen would run in this weather"



JOHN GREENPLATE The winner (overall and under 40)

JOYCE KNOBLETT (1st woman)

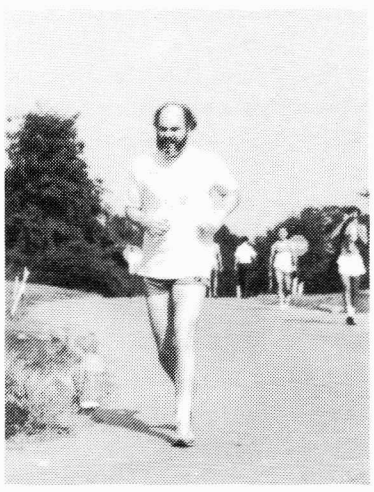


GERRY CARNER "Whee, the pressure's off–the streak broken" (2nd overall, 1st over 40)

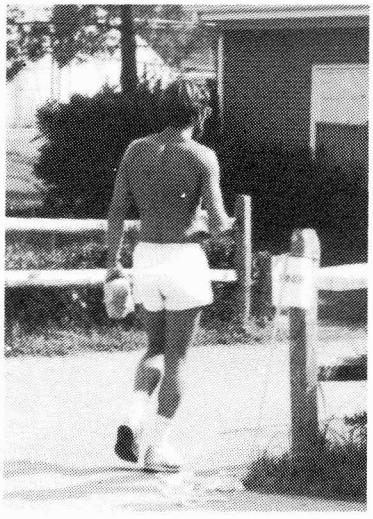
AL UNDEEN (1st over 50) "Where's that pesky Shapiro?"

MARTIN SHAPIRO (2nd over 50)
"Smile, everybody's watching"

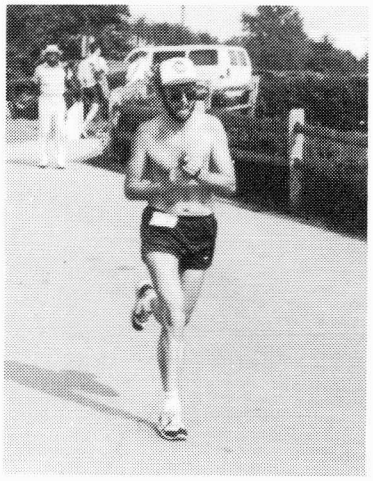
HERMAN van MELLAERT
(6th under 40)



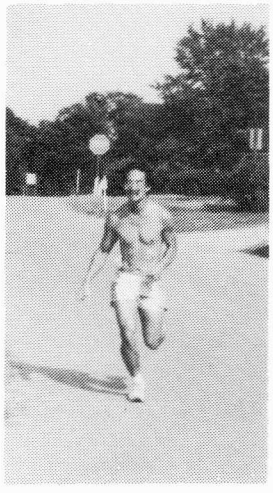
KEVIN HACKETT (9th over 40)
"I'm sprinting, I"m sprinting"



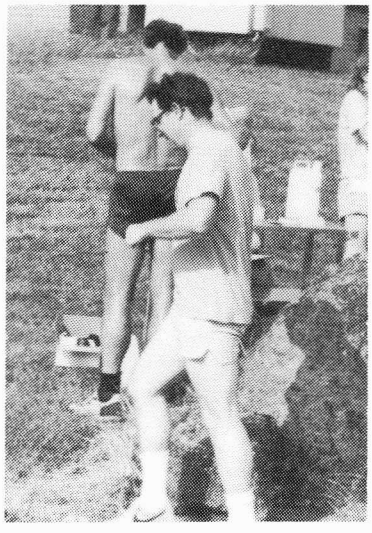
OLE SKOVMAND (3rd over 40)



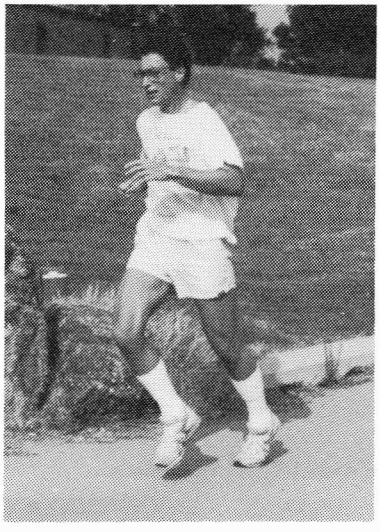
DWIGHT LYNN (3rd under 40)
"I don't trust that timekeeper"



TIM YOSHINO
(5th over 40)



DAN SHERROD (8th over 40)



JAMES BECNEL (4th under 40)

"What do you mean she's disqualified"

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