

NEWSLETTER

society for invertebrate pathology

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Therme International Hotel, Sapporo Japan

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

The scientific program, industrial exhibits, welcome party and banquet will all be held at the Therme International Hotel Sapporo, located 20 minutes from downtown. Therme has first-rate convention halls and facilities. It also features a hot spring and one of the world's largest water parks. The conference venue is located alongside the Barato River (tidal basin) in northern Sapporo, and is a convention and resort hotel ideal for those wanting longer stays.

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Deadline for the next Newsletter is May 20, 1998.

Scientific program: The program will follow the usual SIP format. The meeting will begin with a mixer on Sunday evening, August 23 and conclude at noon on Friday, 28 August. Plenary, symposium and contributed paper sessions will begin on Monday. Divisional business meetings and workshops are planned for Monday and Tuesday evenings. The SIP business meeting will be held on Thursday morning.

Plenary Sessions, Founders Lecture and Symposia: The following is a **tentative list** of plenary sessions, symposia and organizers:

Founders Lecture

Introduction: Jim Harper
Lecture: Jun Mitsuhashi
Honoree: Karl Maramorosch

Plenary Sessions

1. Defense mechanism (S. Natori)
2. Structure and function of Bt toxins and their receptors (D. Ellar)
3. Others

Symposia

- 1) *Bacillus thuringiensis* (Key persons: A. Klier, D. Ellar, T. Iizuka and R. Sato)
 - A. Novel isolated ICPs
 - B. Function of receptor molecules in insecticidal activity of Bt toxin
 - C. Function of receptor molecules in insecticidal activity of Bt toxin (S. Garczynski)
 - D. Bt resistant mechanisms and management strategies (J.W. Moar)
- 2) Entomovirus (Key persons: S. Thiem and M. Kobayashi)
 - A. Molecular aspects of host range
 - B. Mass production of viral insecticide
 - C. Novel approach to virus vector development
- 3) Insect cell cultures in pathological studies (K. Maramorosch and J. Mitsuhashi)
 - A. Contribution of insect cell cultures to microbial control of insect pests. (R. Granados)
 - B. Propagation of viruses in insect cell cultures. (T. Sato)

SIP NEWSLETTER

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Submissions to the following sections are solicited:

Forum: More substantial articles on current issues of concern, limited to approximately five pages.

Letters to the Editor: Issues of concern can be brought to light here.

Microbial Control News: Information on new discoveries, "News Releases", formation of companies etc. pertaining to microbial control.

We also depend on our members to supply us with information for the following sections: **Obituaries**, **Member News** (Retirements, Awards, Promotions), **Members on the Move** (New addresses), **Positions Available/Wanted**, **Meeting and Workshop Announcements**, and other **News Items**.

Send all submissions directly to the Editor. Submissions via e-mail or on computer disk (WP, MSWORD or ASCII) make our lives much easier and save on costs. Please include a hard copy of any text sent via computer disk.

Deadline for next Newsletter is May 20, 1998.

Disclaimer: The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her risk.

- 4) Symbiotic microorganisms (Key persons: H. Ishikawa and H. Noda)
1. Genetic properties and adaptations of *Buchnera aphidicola* to endosymbiotic association with aphids (P. Baumann)
 2. *Wolbachia* infections of insects: Evolutionary and applied considerations (S. O'Neill)
 3. Endosymbiotes of arthropod vectors (H. Noda)
 4. Dynamic endosymbiotic evolution in aphids (T. Fukatsu)
- 5) Entomogenous nematodes (Key persons: J.M. Webster, H. Kaya and N. Ishibashi)
- A. Ecophysiological Survival Strategies of Nematodes. Chair: Harry K. Kaya, Co-Chair: Nobu Ishibashi
1. Physiological basis for survival (D. J. Wright)
 2. Survival of mermithid nematodes (H. Y. Choo)
 3. Infection strategy for species maintenance (N. Ishibashi)
 4. Survival of formulated nematodes (P. Grewal)
 5. Post-application survival and behaviour (P. H. Smits)
- B. Nematode-Bacterial Symbiotic Relationships. Chair: John M. Webster, Co-chair: Kazu Futai
1. Gary B. Dunphy (McGill University, Montreal, Canada)
 2. Noel Boemare (University of Montpellier, France)
 3. Steven A. Forst (University of Wisconsin, Madison, USA)
 4. Eizo Kondo (Saga Univ., Japan)
 5. Ralf-Udo Ehlers (Univ. Kiel, Germany)
- C. Advances in Genetic Improvement of Nematode-bacterial Complexes. (title tentative) Chair: Ralf-Udo Ehlers, Co-chair: Eizo Kondo
1. Approaches to improve the control potential (R. Gaugler)
 2. Approaches for the improvement of the liquid culture potential (D. Segal)
 3. Improvements of desiccation and heat tolerance (I. Glazer)
- 6) Insect immune system (Key persons: M. Yamakawa, M. Ashida and H. Wago)
- A. Humoral and cellular immune responses in coleopteran insects (B.L. Lee)
 - B. Rel and GATA factors in immune gene control in *Drosophila* (Y. Engstrom)
 - C. The role of adhesion molecules in molluscan cellular immunity (T. P. Yoshino)
 - D. Host defence in marine mollusca with reference to cytotoxic and antibacterial substances (M. Yamazaki)
 - E. Cell adhesion molecules and their role in immunity in vertebrates and invertebrates (M.W. Jehansson)
- 7) Molecular biology associated with entomopathogens (Key persons: M. Himeno, Y. Kanda and Y. Matsuura)
- A. Entomopathogens as genetic source
 - B. Molecular breeding of invertebrate pathogens (including transgenic plants, microorganisms, bacteria, fungi, viruses etc.)
- 8) Fungi (Key persons; D. W. Roberts, S. Shimizu and M. Shimazu)
- A. Biology and utilization of an entomogenous fungal genus *Cordyceps*
 - B. Molecular biology of entomopathogenic fungi
- 9) Protozoa (Key persons: Dr. I. Kawarabata and Dr. S. Hayasaka)
- A. *Nosema bombycis* and silkworm pathogenic microsporidia
- 10) Marine invertebrate pathology (Key persons: D. V. Lightner and T. Sano)
- A. Diagnostic methods and highly possible preventive measures
- 11) Microbial control of orchard insect pests (Key persons: L. Lacey and Y. Kunimi)
- A. Microbial control of insect pests of citrus (C. McCoy)
 - B. Microbial control of insect pests of stored fruit (P. Vail)
 - C. Microbial control of insect pests of tree fruit in China (R.-S. Li)
 - D. Microbial control of orchard insects in South Africa (S. Moore)
 - E. Microbial control of insects attacking apple and pear (L. Lacey)
 - F. -awaiting title- (T. Kashio, Japan)

- G. Fungal control of longicorn and mulberry in Japan (Y. Ninomiya)
- 12) Microsporidia (Key persons: T. Kawarabata and L. Solter)
- 13) Entomophthorales (Key persons: J. Eilenberg)
- A. Richard Humber
- B. Neil Wilding
- C. Joergen Eilenberg

Call for Papers

Contributed Papers: Contributed papers are solicited for all topics related to Invertebrate Pathology.

Poster Sessions: Poster sessions will be held on both Wednesday morning and all day Thursday. There will be student paper and poster competitions, with generous cash awards provided by the Society.

Deadline for abstract submissions: April 10, 1998. April 10 will be the deadline for receipt of abstracts for plenary papers, symposia, contributed papers, posters and other program information. This deadline will allow us to prepare and distribute the program before the meeting. Abstracts and papers for the proceedings of symposia received after the deadline will not be printed.

The Program Committee solicits your contributions of abstracts for meeting presentations. Instructions can be found in the registration package included with this Newsletter (Supplement 1). Oral presentations will be limited to 12 minutes with an additional 3 minutes for questions. Because of concurrent sessions, chairpersons will be instructed to keep strictly to scheduled times. Projection equipment will consist of Kodak carousel slide projectors (5 cm x 5 cm slides) and overhead transparency projections. Poster boards will be approximately 1.2 m high and 1.5 m wide.

Social Events: The social events will begin Sunday evening with a mixer at the first floor restaurant in the Therme International Hotel Sapporo from 19:00 to 21:00. The 5-K race is scheduled for Wednesday morning in proximity to the Therme Hotel. After the 5-K race, we will be bussed with a box lunch to visit

the **Shikotsu-Toya National Park**. There are 2 options for the excursion. Refer to Supplement 1, page 8 for photos. Members must choose between these excursions. We may need to cancel an excursion if there are not enough people signed up for it.

1. Beside the Shikotsu Lake, there is Mt. Tarumae, which is an active volcano 1,041m above sea level. We will be bussed to the 700m point and then we can climb to the rim of volcano. It is about a one-hour walk to the rim. After returning to the bus, we will have the opportunity to enjoy the hot spring bath which is beside the Shikotsu Lake Hotel.

2. There is a famous hot spring area, Noboribetsu, which is about a 1h 30m drive from Sapporo. In Noboribetsu, there is a nice walk, about 1h long, called "Jigokudani" which means Hell Valley. After the walk we can take a dip in the hot spring at the "Daiichi-takimotokan" Hotel, which has the world's largest indoor/outdoor bath.

After enjoying these activities, members of both excursions will meet at the Sapporo Factory which belongs to the makers of the famous Sapporo Beer where we will have dinner from 19:00 to 21:00 hrs.

On Thursday evening, the banquet will be held in the dining hall at the Therme. The student, founder's lecture and 5-K awards will be presented at the banquet. The entertainment will include performances of traditional Japanese dance and taiko-drumming.

Optional Companion Tours: An optional companion tour, at an additional cost, has been planned. On Tuesday morning, a tour to the Historical Museum of Hokkaido (Kaitaku Kinenkann) which features cultural displays of the native tribe "Ainu" and traditional old houses (like Williamsberg, Virginia), will be available. The museum is one hours drive from Therme. If your companion is interested in this tour, please indicate this on the registration form.

Accommodation: The Therme International Hotel Sapporo has 304 guest rooms, consequently it should be able to accommodate most, if not all, of the delegates. Please note that the number of single

bedrooms is limited. We recommend you book as early as possible before the deadline of April 10. Members may also reserve accommodation at another first class hotel or a much less expensive hotel (second class) in downtown Sapporo. It is about a 30 minute bus ride to the Therme from the bus stop near Sapporo JR station. You can use a Therme Bus free of charge. The hotel rate includes breakfast. For lunch on Monday, Tuesday, Thursday and Friday and for dinner on Monday and Tuesday, members will have to buy tickets for each meal. Please indicate this on the registration form by circling the days on which you require meal tickets. Conference registrations and hotel reservations will be made by Kinki Nippon Tourist Co. Ltd.

Registration: The registration fee includes coffee breaks, Mixer on Sunday and Thursday evening Banquet. There will be an extra charge of 10,000 yen for the Excursion options and this fee includes both lunch and dinner as well as drinks at the Sapporo Factory. The deadline for early registration is 10 April. There will be a late fee for registration forms received after April 10. Only payments in "yen" will be accepted. Payments can also be made by major credit cards.

Refund Policy: Refunds for registration fees (minus 5,000 yen handling fee) will be available with delivery of a cancellation notice prior to July 15. Full refund of room deposit will be made if your reservation is cancelled 48 hours prior to arrival.

Travel Information (access to Therme): Sapporo is located approximately 40 kilometers from The Chitose International Airport. However, direct flights from foreign countries to this airport are few. KLM from Amsterdam and Korean Air from Seoul are available.

Daily flights from North America, Europe and other foreign countries to Narita and Kansai Airport (Kan-ku) are available. Connections from these two airports to Chitose Airport are easy. Representatives of Kinki Nippon Tourist Co. Ltd. will be available at Chitose Airport on Saturday and Sunday. More detailed information will be available in the next SIP Newsletter. A bus from Chitose Airport to the

Therme International Hotel Sapporo is available and the JR underground from the airport to Sapporo Station (not Shin-Sapporo Station) is also available. These express trains leave about every 20 minutes, and take 36 minutes. The Therme bus service is near the north gate of Sapporo Station (we will supply a map in the next newsletter). Renting a car in Sapporo is not recommended because of serious traffic congestion.

Nature in Hokkaido: Hokkaido is blessed with a rich natural environment with magnificent scenery and a wide variety of plants and animals. Its flora and fauna are different from those elsewhere in Japan, as it is located on the border of the temperate and subarctic zones. Many natural habitats remain in the forests and wetlands of Hokkaido. This is home for many wild animals such as the brown bear and red-crowned crane.

Mountains: Hokkaido has two distinct volcanic zones. The first is the Chishima Volcanic Zone, reaching from Shiretoko Peninsula to the Daisetsuzan mountain range. It encompasses Mt. Meakandake and Mt. Tokachidake. The second is the Nasu Volcanic Zone running from western Hokkaido to Honshu. Mt. Komagatake, Mt. Yotei, Mt. Usu and Mt. Tarumae are all in this zone. Volcanic activity has created many caldera lakes such as Lake Mashu, Lake Shikotsu and Lake Toya. Hot springs are plentiful.

Forest: North of Kuromatsunai Lowland at Oshima Peninsula, mixed forests are common, composed mainly of the conifers yezo spruce and Sakhalin fir, and the deciduous trees Japanese linden and oak (*Quercus mongolica*). Most of Hokkaido is situated in the transition zone between the broad-leaf temperate forests and the coniferous boreal forests.

Shore: The coasts of the peninsulas are rugged cliffs created by the erosive action of the ocean's waves, but these are a contrast to Hokkaido's coast line of gentle hills. These rugged peninsulas, such as Shiretoko, Shakotan, Motta, Yakoshi, and the Chikyu Point area (near the city of Muroran) are generally included within natural park boundaries. Elsewhere, sandy shores support coastal grasslands, including

wildflower meadows, with coastal forests composed mainly of oak (*Quercus mongolica*) and Daimyo oak in some places.

Life in Hokkaido: Hokkaido is an attractive place where a beautiful natural environment, plants, animals and people all exist together. Its charm is created by the combination of a comfortable living environment, unique cultural activities and a variety of thriving industries.



Old Government Buildings, Sapporo

Geography of Hokkaido: Hokkaido is surrounded by the Pacific Ocean, the Sea of Japan and the Sea of Okhotsk. The island features a diversity of breathtaking mountain scenes, extensive wetlands, natural lakes and marshes with beautiful landscapes.

It has a cool, dry climate, and is not bothered by rainy seasons or typhoons. Although it is at the northern end of Japan, its latitude is about the same as those of many major American and European cities. With such geographic conditions, it is positioned as a base to connect the North with the Asian Pacific regions.

Please refer to Supplement 1 in this Newsletter for further information. Latest information is available at the meeting and SIP Homepages:

“<http://shin.agr.hokudai.ac.jp>”

“<http://sip.home.ml.org>”

Or contact:

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Microbial Control Division Workshop at the VIIth International Colloquium on Invertebrate Pathology and Microbial Control

The Microbial Control Division is sponsoring a Workshop entitled "**Recent Advances in Microbial Control Products**," organized by Denis Burges and John Vandenberg. The purpose of the Workshop is to acquaint SIP members with activities on the leading edge of microbial control product registration and marketing.

We invite representatives from companies or government agencies to participate by giving an update on products that are newly marketed, recently registered, nearing registration, or in the "pipeline". **We especially encourage representatives from Asian and Pacific Rim countries to participate, although presentations from companies around the world are welcome.** This is an excellent opportunity for companies to highlight recent work to an audience of microbial control researchers and professionals. Anyone interested in giving a short presentation at this workshop, should contact **John Vandenberg** at the address below.

\$\$\$ STUDENT TRAVEL AWARDS for Sapporo from the Microbial Control Division \$\$\$

The Microbial Control Division announces two travel awards (US \$500 each) for students needing financial assistance to attend the VIIth International Colloquium on Invertebrate Pathology and Microbial Control in Sapporo, Japan, August 23-28, 1998. Students from any country may apply according to the instructions below.

Award recipients are not required to be members of SIP or the Division of Microbial Control. The student must make an oral or poster presentation at the meeting and be the first or second author in order to receive the award. The subject matter must pertain to the interests of the Division of Microbial Control. The awards will be presented at the meeting, but arrangements for receiving the money in advance of the meeting may be possible.

Student applicants must provide the following information:

1. Name, address, institution and degree program.
2. Title, authors and abstract of the presentation.
3. A letter of recommendation from the supervisor.
4. A copy of transcripts of undergraduate and graduate course work (or a list of courses and grades).
5. List of any previous presentations at scientific meetings.
6. List of publications.

Applications will be judged by a committee of Microbial Control Division officers. **Awardees will be notified by the Chair of the Division before the 10 April deadline for early registration and abstract submission.** Send application materials by any combination of E-mail (preferred), fax or air mail to:

John D. Vandenberg
E-mail: JDV3@CORNELL.EDU
Fax: 607-255-2459
Mail: USDA-ARS,
US Plant, Soil & Nutrition Lab.
Tower Road, Ithaca, NY 14853, USA

DEADLINE for receipt of application materials:
March 15, 1998.

FINAL REQUEST: Those who receive this newsletter in early to mid-February may know of students in other countries who may not receive the newsletter until much later. If so, please do those students a favor by bringing this announcement to their attention by other means (phone call, fax or E-mail). They, and we, thank you. JDV

Don't Forget to Pay Your Dues for 1998

Dues notices for 1998 were mailed out by FASEB last year. If you haven't yet received your 1998 notice or have misplaced it, please contact FASEB as soon as possible at Membership Services, SIP, 9650 Rockville Pike, Bethesda, Maryland 20814 USA. Fax.: 301-530-7049; E-mail: staff@dues.faseb.org. This is especially important this year as we are to change service providers at the end of March. We wouldn't want to lose you in the shuffle.

FROM THE PRESIDENT

I trust you all had a good holiday season and are now well along into a productive new year. This will be a busy year for the Society because we will elect a new slate of officers and convene an International Colloquium in Sapporo. In addition, we expect to have a new set of ByLaws and modifications to the Society's Constitution approved by the Council in August. We will also be changing our management service provider this year. Here I will devote a few lines to each of these important items.

Election of New Officers. The November Newsletter contained the biographies of candidates running for SIP offices this year. Please read these carefully, and be sure to vote and return your ballots on time. The ballots and voting instructions will be mailed by mid-February to all active members, and must be returned by mid-May.

International Colloquium. As detailed in this Newsletter, the Society will convene the VII International Colloquium on Invertebrate Pathology and Microbial Control in Sapporo, Japan, from August 23-28, 1998. This will be held in conjunction with the IVth International Conference on *Bacillus thuringiensis*. Sapporo is a beautiful city on the mountainous island of Hokkaido in northern Japan, and the venue for the meeting will be the very modern and opulent Therme International Hotel. In addition to excellent meeting facilities, the hotel

grounds contain a wide variety of hot baths, swimming pools, and saunas for relaxation as well as a water sports park. The attractiveness of the location combined with a strong scientific program covering all aspects of invertebrate pathology and microbial control should make this an excellent meeting, one not to be missed.

Some members have raised concerns regarding the high cost of attending the meeting. The costs will be higher than our typical annual meeting, but similar to the costs of attending other recent and upcoming international meetings. Given the current U.S. Dollar/Yen exchange rate, the registration fee for full members will be \$230, \$115 for students, and \$90 for companions. Keep in mind this will include several key meals and what I'm sure will be an excellent reception on Sunday. Room rates will be about \$85 for a single, and \$60 per person for double occupancy. These hotel rates are lower than those for most three star European hotels and medium quality hotels in most major American cities.

I do not have the space to make other currency conversions, but I think for other than the Asian countries that suffered recent steep currency devaluations, the meeting costs will not be unreasonable. If with the airfare, the meeting still seems expensive, consider the personal cultural enrichment to be gained, the reduced price of sushi and sashimi (not to mention the rice), and view it as a subsidized vacation (add a few days, and if you can not charge much of the cost to a grant, remember that in many countries it can be used as a tax deduction!).

1999 Meeting. While I'm on the subject of meetings, I will mention that it has been decided to hold the 1999 annual meeting during the latter part of August at the campus of the University of California at Irvine. This is a very attractive site located only a few miles from the Pacific ocean, and is close to the resort towns of Laguna Beach and Newport Beach. The campus is of historical interest to the Society because Edward Steinhaus, the first president of the Society, was the founding dean of the biological sciences at UCI.

Revision of the ByLaws and Constitution. The changes being considered are designed to bring the ByLaws into line with current Society practices, which have evolved over the years. One potential change that would affect the way the Society is governed would be to change the membership of the Council by replacing the four Trustee positions with the chairs of each of the Divisions. This would make the Council somewhat larger, but should result in better representation of the membership. I welcome any thoughts or comments you may have on making such a change in the Society's governance.

New Service Provider. With respect to changing our management services provider, we currently have three bids from possible service providers. The Council will select one of these within the next month or so, and we anticipate making the transfer by April 1 of this year.

I will close by mentioning that I received a very kind letter from Tom Angus over the holidays thanking the Society for selecting Tom and Art Heimpel as the 1997 honorees for the Founders' Lecturer Award. Tom mentioned that a very pleasant ceremony was held at the Forestry Pest Management Institute in Sault Ste Marie at which he was presented with the commemorative plaque, followed by, appropriately, a reception and party.

Sorry we could not be there Tom, but the honor was certainly deserved. Tom and Art's research on *Bacillus thuringiensis* demonstrating the critical role of the parasporal body in insect mortality was a milestone along the way toward commercially successful bacterial insecticides, and the development of transgenic insecticidal plants, a new technology and industry currently transforming insect control practices in many major crop systems. It is the Society that is honored by having had Tom and Art as very active members while being early pioneers in Bt research.

Brian A. Federici

EDITORIAL

Microbial Control: What have we accomplished and where are we heading?

Despite some successes and lots of enthusiasm and optimism during the last decade, and some predictions for a rosy future, the time has come to re-evaluate the development of pathogens as microbial control agents. The playing fields are constantly changing. Fiscal restraint, new partnerships between traditionally "public good" institutions (i.e. government and academia) and profit motivated industry, enthusiasm for molecular biology or "biotechnology" over more traditional disciplines such as ecology at both academic and industrial levels, and the re-evaluation of ethics in bio-control have all affected the way we conduct research. The time is ripe to ask a few questions. What have we accomplished and where are we heading? Are we heading in the right direction? What is an acceptable risk? Must all bio-control be tailored for "commercialization?"

Several upcoming meetings, both announced in this and recent issues of the SIP Newsletter, will attempt to answer some of these questions. In the meeting entitled "**The Future of Fungi in the Control of Pests, Weeds and Diseases**" mycologists of all persuasions will join with others for a discussion of important issues concerning the relevance of fungi as biocontrol agents.

The meetings will provide an opportunity to outline strategies for the development of fungi as "sustainable, environmentally benign agents" for crop protection. A whole day of this three-day meeting is devoted to risk assessment and registration which underlines the importance that the organizers have placed on this issue.

The second meeting is a workshop entitled "**Alternative Paradigms for Commercializing Biological Control.**" The workshop will focus attention on creating a new mind set for developing and implementing biological control because the organizers feel that the existing paradigm for commercializing biological control is failing badly. It

is based on a chemical model which emphasizes major crops and cheap, stable products that are easy to scale-up and use. Biocontrol agents don't necessarily fit this model. In the next decade, biological control will either begin to play a meaningful role in crop protection or become a "curiosity relegated to organic farming." Industry, growers, extension personnel, researchers and, might I add, regulators, must "come together and think "outside the mold" to realize the former."

At the same time, even the "ethics" of biological control are being challenged. Do we know the risks and potential detrimental consequences of biocontrol? Are risks too great? In a Special Issue of the Journal "Agriculture and Human Values" entitled "**Ethical Issues in Biological Control**" guest editor Jeffery Lockwood invited authors to submit articles "to explore the consequences of different strategies of biological control, their effectiveness, and especially, their ethical implications."

The issue contains 10 articles which "suggest that there is a remarkably rich set of ethical issues having direct relevance to the development and practice of biological control." "In assessing the environmental risks of new agricultural methods and technologies, society should not freely trade economic gains for ecological damage, but rather seek practices that are compatible with ecosystem health." But how can we accomplish this as a profit motivated, free enterprise system?

Much can be gleaned from the article entitled "Cuba: Ethics, biological control, and crisis" by Peter Rosset. Due to the collapse of trade relations with the former USSR, Cuba was left in an economic crisis. Cuba responded with alternative agricultural technology, much of which depends on biological control. "The apparent ability of Cuba to overcome a food crisis without significant use of pesticides stretches our concept of the possible. It thus helps to refute the most common argument - that we couldn't "feed the hungry" without pesticides - against taking the "ethical" position in real-world pest management policy debates." Interesting reading.

Mark S. Goettel

MICROBIAL CONTROL NEWS

Thermo Ecotek Completes Acquisition of Novartis' BT Product Line

Waltham, Mass., Nov. 18, 1997 - Thermo Ecotek Corporation (ASE-TCK) announced today that its wholly owned subsidiary, Thermo Trilogy Corporation, has completed its acquisition of the sprayable Bt biopesticide product line of Novartis AG, Novartis Crop Protection, Inc., and Sandoz Agro, Inc., for approximately \$19 million in cash and the assumption of certain liabilities. The Bt product line has worldwide annual sales of approximately \$21 million. This acquisition also includes a production facility in Wasco, California.

"I'd like to welcome the employees of Novartis to the growing Thermo Ecotek family," said Brian D. Holt, president and chief executive officer of Thermo Ecotek. "The addition of the Bt products nearly doubles our biopesticide business, providing us a more complete integrated pest-management program to offer growers and consumers worldwide."

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

<http://www.thermo.com/subsid/tck.html>.

MEMBERS ON THE MOVE

Christian Luz has recently joined the Federal University of Goias, Brazil, as Associate Professor where he will be conducting research on vector control using entomopathogenic fungi. Previously, Christian was at CENARGEN, Brasilia, as consultant with Myrian Tigano working on control of Triatominae, vectors of Chagas disease. Christian's new address is:

DMIPP, IPTSP, UFG, CP 131
74001-970 Goiania, GO, Brazil
Fax: ++ 55 (0) 61 202 3066
E-mail: wolf@ipe.ufg.br

Dr. William H. McGaughey, Research Entomologist and Research Leader of the Biological Research Unit, U.S. Grain Marketing Research Laboratory, USDA, Manhattan, Kansas, retired in 1997 after a 30-year career with the Agricultural Research Service. Bill had been leader of the Agricultural Research Service's primary research program on stored-grain entomology for the last 16 years, and had done research on microbial control of stored-grain pests for 25 years.

Bill is recognized for his research on *Bacillus thuringiensis* for controlling insect pests of stored grain products, and especially for his research on the potential for insect resistance to B.t. toxins. His research program was responsible for the data supporting the first registration of B.t. for use on stored grain in 1979. In 1985, he was the first to discover that insects could develop resistance to B.t. delta-endotoxins. Subsequently, his research team described two different physiological mechanisms of insect resistance to B.t.

During his research career, Bill published approximately 100 research papers, most of them dealing with B.t. Several are recognized as pioneering papers that stimulated world-wide research on the potential for insect resistance to B.t. transgenic plants.

Bill has retired to his farming and ranching interests and his antique farm machinery hobby in the Flint Hills near Manhattan, Kansas. His present address is:

4171 Deep Creek Road
Manhattan, KS 66502, USA
Tel: 785-539-6872
E-mail: mcgaugh@ksu.edu

Joel P. Siegel has recently moved to Fresno, California where he will be employed at the Horticultural Crops Research Laboratory as an Insect

Pathologist. Previously, Joel was at the Illinois Natural History Survey where he was employed as a Research Scientist in the Medical Entomology Laboratory. Joel's new address is:

Horticultural Crops Research Laboratory
USDA/ARS
2021 South Peach Avenue
Fresno, CA 93727, USA
Tel: 209-453-3055
Fax: 209-453-3088
E-mail: siegel@mail.qnis.net (current)

Rosalind James has moved to the USDA-ARS Subtropical Agricultural Research Center, in Weslaco, Texas. She will be conducting research on the epizootiology of fungal pathogens of the sweet potato whitefly. Rosalind will also work to develop biological control programs for the whitefly, coffee berry borer, and other pests using entomopathogenic fungi and nematodes.

Previously, Rosalind was a Research Associate for the Tree Genetic Engineering Research Cooperative at Oregon State University in Corvallis, where she was involved in the development of genetically engineered insect-resistant poplars using Bt-toxin genes. This work included studies on the genetics of Bt-resistance in the cottonwood leaf beetle. Prior to that, she worked with **Bruce Lighthart** at the EPA Environmental Research Laboratory in Corvallis, Oregon, investigating the potential impact of microbial pesticides on beneficial insects. Rosalind's new address is:

USDA-ARS-SARC
Beneficial Insect Research Unit
2413 E. Hwy. 83
Weslaco, TX, 78596-6344, USA
Tel: (956) 969-4856
E-mail: rjames@rsru2.tamu.edu..

Peter Gothro has recently accepted a position with Sun Pacific Biologicals, Inc. in Santa Cruz, CA. Duties include overseeing the production, formulation, packaging, and distribution of entomopathogenic nematodes, in addition to running the laboratory (washing the dishes, sweeping the

floors, making the media, ...). Pete brings to this position years of practical laboratory and field work with fungi and nematodes.

Sun Pacific Biologicals, Inc. is a joint effort between Sunrise Mushrooms of Watsonville, CA, Sunrise Spawn of Santa Cruz, CA, and Western Pacific IPM of Langley, B.C. to develop a ready supply of high-quality insect pathogens for the agriculture industry, beginning with entomopathogenic nematodes.

Immediately prior to beginning at SPB, Pete was involved with the design and construction of a brewpub in Parkdale, Oregon, spending several months designing and testing recipes. He also worked closely with the brewhouse equipment manufacturer on the design, construction, and installation of the brewing equipment. If you're ever near the Hood River valley, you owe it to yourself to make the trip to the Elliot Glacier Public House at the foot of Mt. Hood.

Pete may be contacted at:

Sun Pacific Beneficials, Inc.
PO Box 2109
Watsonville, CA 95077-2109, USA
Tel: 408.426.2059 (Laboratory)
Tel: 800.498.7660 (Corporate office)
Fax: 408.426.0477
E-mail: gothro@got.net

Moving?

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

PUBLICATIONS

Supplemental Issues of JIP: Request for Topic Suggestions

The possibility of publishing supplemental issues of the Journal of Invertebrate Pathology on topics of interest to the members of SIP was discussed at the Council Meeting at Banff. These issues would consist of groups of papers dealing with cutting-edge subjects of interest and importance to our membership, as well as to the broader scientific community. This would provide a new venue for publication of papers on exciting areas of our work. Some of the details remain to be worked out, but both Carol Reinisch (JIP Editor-in-Chief) and Chuck Crumly (senior Editor, Life Sciences, Academic Press) have expressed interest in the concept.

The SIP Publications Board would greatly appreciate your input regarding potential topics for future supplemental issues of the Journal. We hope to start developing this project soon and your ideas will be very helpful to the process. Please contact:

Bob Anderson
University of Maryland Center for Environmental
Science
Chesapeake Biological Laboratory
P.O. Box 38
Solomons, MD 20688, USA
Tel: 410-326-7247
Fax: 410-326-7210
E-mail: anderson@cbl.umces.edu

Invertebrate Cell Culture: Novel Directions and Biotechnology Applications (Karl Maramorosch and Jun Mitsuhashi, eds.) 1997. Science Publishers, Inc. P.O. Box 699, Enfield, NH 03748. 296 pp.

This edited volume comprising 33 chapters, divided into 9 sections, includes contributions by some of the best known experts in the field. The book provides readers with a well balanced cross-section of current developments, focusing attention on such topics as the biochemistry and physiology of cultured

invertebrate cells, aspects of virus infection, novel cultivation methods, assays of viruses affecting shrimp and insect cells, engineering of invertebrate cells for the production of baculovirus pesticides, application of microgravity to *in vitro* cell cultivation and other aspects of biotechnology. The large body of information brings into sharp focus the significant achievements accomplished recently in laboratories in Africa, America, Europe and Asia. The information in this book will be of value for many years to those who desire an overview of the state of the art.

Field Manual in Preparation

A book entitled "Field Manual of Techniques for the Application and Evaluation of Entomopathogens" is in preparation. Co-editors **Lerry Lacey** and **Harry Kaya** have invited a group of international scientists to author the chapters. The manual will be published by Kluwer Academic Publishers (The Netherlands). Expected publication is early 1999.

Specialist Directory

A Directory of Specialists Involved in the Development of Fungi as Biocontrol Agents of pests, weeds and diseases is being compiled by **Tariq Butt** and **Mark Goettel**, in association with the Society for Invertebrate Pathology and the British Mycological Society. A form was published in the last SIP Newsletter (Vol. 29, No. 3) and is also available on the SIP Homepage. Deadline for submission of questionnaires is **10 April, 1998**. For more information, contact:

Dr. Tariq M. Butt,
IACR - Rothamsted,
Harpenden, Hertfordshire,
AL5 2JQ, U.K.
tel: +44 (0)1582 763133 ext. 24431
fax: +44 (0) 1582 760981
E-mail: Tariq.Butt@bbsrc.ac.uk

Entomophaga Replaced by BioControl

BioControl is a new journal published by the International Organisation for Biological Control. BioControl is the international continuation of Entomophaga and publishes basic and applied research on all aspects of biological control of invertebrate, vertebrate and weed pests and plant diseases. To expand the journal's scientific area, the aims and scope have been rewritten and several highly qualified scientists have joined the editorial board, including SIP members **Ann E. Hajek** and **Ralf-Udo Ehlers**. SIP member, **Heikki M.T. Hokkanen** has been named Editor in Chief.

Attractive features of this new journal will be: exciting science; rapid publication; free online searching across all articles; no page charges; 75 free offprints; wide circulation; and inclusion in all major indexing and abstracting services.

Contributions to its development in the form of research paper, reviews, ideas for subjects to investigate, or constructive criticism are welcomed. Please send your high quality submissions to:

Journals Editorial Office, BioControl
Kluwer Academic Publishers
P.O. Box 990
3300 AZ Dordrecht
The Netherlands
Tel: +31 78-6392549 Fax: +31 78-6392254
<http://www.wkap.nl>

Manual of Techniques in Insect Pathology

L. A. Lacey (ed.) 1997. 409 pp.

ISBN 0-12-432555-6. For a full description see Vol. 29, No. 1, February 1997.

US and Canada: \$110 (US dollars)
Call toll free: 1-800-321-5068; Fax: 1-800-874-6418
E-mail ap@acad.com
Web site: <http://www.apnet.com/>
Academic Press, Marketing Department
525 B Street, Suite 1900
San Diego, CA 92101-4495

UK/Europe: £70 (pounds sterling)
Academic Press, Marketing Department
24-28 Oval Road
London, NW1 7DX, UK.
Tel: +44 (0) 171 4822893;
Fax +44 (0) 171 267 0362

Academic Press is offering a 20% discount for the Manual to members of SIP.

1997 Slide Atlas of Basic Invertebrate Pathology

A **completely new** slide atlas on basic invertebrate pathology is available for purchase. This atlas is about **basic invertebrate pathology** and includes 200 slides, 40 from each of the major groups generally included in this field of study (viruses, bacteria, fungi, protozoa, nematodes).

Slides principally include transmission and scanning electron micrographs, light micrographs, histology sections, pictures of pathogens, infected, dead, and healthy hosts, and life cycle schematics. Figure legends describing each slide are included with each slide set.

The Slide Atlas costs \$60 (U.S.). Please send a check or money order made out to "Society for Invertebrate Pathology." **If you pay with a check, the check must be drawn on a bank with a U.S. affiliation.** An order form was published in the last SIP Newsletter (Vol. 29, No 3).

Mail order and payment to:
Dr. Ann E. Hajek, Department of Entomology,
Cornell University, Ithaca, NY, U.S.A. 14853-0901. Tel: 607-254-4902, Fax: 607-255-0939
or E-mail "aeh@cornell.edu"

Microbial Control of Grasshoppers and Locusts (M.S. Goettel and D.L. Johnson, eds), *Memoirs of the Entomological Society of Canada. Volume 171, 400 pp.* (For a full description see Vol. 29, No. 3, November, 1997).

Cost, including postage:

Canada: \$Cdn 45.00; USA & elsewhere: \$US 45.00

Send your order to:

Entomological Society of Canada
393 Winston Ave., Ottawa, ON, Canada K2A 1Y8
Fax: 613-725-9349
E-mail: entsoc.can@sympatico.ca

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

A second edition of the Directory of Industries Involved in the Development of Microbial Control Products is being compiled by the Microbial Control Division. The first edition was published in 1991 and is well out of date, even though there is still demand for it. The new directory will be made available to the Society membership and any other interested parties. In order for this venture to be a success, we need feedback from all industry involved in the area of invertebrate microbial control or use of pathogen genes in transgenic organisms intended for invertebrate pest control.

A questionnaire was published in the last 2 Newsletters, was distributed at our meetings in Banff and is available on our homepage (<http://sip.home.ml.org>). The submission deadline was 15 January, 1998. However, there are still numerous companies that have not yet responded. **Don't miss out on this opportunity to advertise your products and expertise free of charge.** The Directory is used by many researchers and users to identify companies and products which lead to collaborations, product development and sales. For more information or a copy of the questionnaire, please contact:

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

Agriculture and Human Values, Special Issue: Ethical Issues in Biological Control, Vol. 14, No.3 Sept. 1997. Guest Editor, Jeffrey A. Lockwood.

For requests on the purchase of this issue, contact:

Wilma van der Klooster
Kluwer Academic Publishers
Order Department
P.O. Box 322
3300 AH Dordrecht
Tel: 31 78 6392457
fax: 31 78 6546474
e-mail: wilma.vanderklooster@wkap.nl

Contents.

- Altieri, M.A., P.M. Rosset and C.I. Nicholls. Biological control and agricultural modernization: Towards resolution of some contradictions.
- Bentley, J.W. and R.J. O'Neill. On the ethics of biological control of insect pests.
- Duan, J.J. and R.H. Messing. Biological control of fruit flies in Hawaii: Factors affecting non-target risk analysis.
- James, R.R., Utilizing social ethic toward the environment in assessing genetically engineered insect-resistance in trees.
- Jennings, B.H. The killing fields: Science and politics at Berkeley, California, USA.
- Lockwood, J.A. Competing values and moral imperatives: An overview of ethical issues in biological control.
- Ricard, J.L and T.J. Ricard. The ethics of biofungicides - A case study: *Trichoderma harzianum* ATCC 20475 on Elsanta strawberries against *Botrytis cinerea* (gray mold).
- Rosset, P.M. Cuba: Ethics, biological control, and crisis.

Van Driesche, R.G. and M. Hoddle. Should arthropod parasitoids and predators be subject to host range testing when used as biological control agents?

Wilkinson, R. and G. Fitzgerald. Public perceptions of biological control of rabbits in New Zealand: Some ethical and practical issues

POSITIONS AVAILABLE

Assistant Professor in Biology

Tenure-track Assistant Professor in biology with specialty in parasitology beginning 1 September 1998. Ph.D. required; postdoctoral and teaching experience desirable. Responsibilities: share in teaching and ongoing revision of an introductory biology course emphasizing molecular, cellular, and genetic principles; develop a research and teaching program in parasitology; pursue extramural funding; supervise M.S. theses. Send letter of application, brief statements of teaching philosophy and research interests, curriculum vitae, three letters of recommendation, and transcripts by 16 February 1998 to:

Chair, Department of Biology and Microbiology
University of Wisconsin-Oshkosh
Oshkosh, WI 54901-8640 USA
Tel: 920-424-1102; Fax: 920-424-1101
E-mail: zilinsky@uwosh.edu
<http://www.uwosh.edu/departments/biology/>.

The University of Wisconsin-Oshkosh is an Affirmative Action/Equal Opportunity Employer.

Don't Forget to Vote

Ballots have been or soon will be mailed out by FASEB to all paid-up members. This is your opportunity to ensure that the best possible candidates are elected for Council. Candidates for SIP Offices and Honorary Membership were featured in the last Newsletter (Vol. 29, No. 3, November, 1997). Exercise your right as a member of the Society. Vote and return your ballots before the deadline.

FUTURE MEETINGS & WORKSHOPS

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

For further information please see Vol. 29, No. 3, November, 1997 and/or contact the Local Organizer:

Dr. Chris Jackson,
School of Biological Sciences
University of Southampton
Bassett Crescent East
Southampton SO16 7PX. UK.
Tel. +44 (0)1703 593205
Fax +44 (0)1703 594269
E-mail: cwj@soton.ac.uk

VI Symposium of Biological Control - VI SICONBIOL, Rio de Janeiro, Brazil, May 24 - 28, 1998.

The organizing Committee is working hard to make the Symposium another exciting technical and scientific event in a series that has helped make history. Biological Control has grown tremendously, making it a diversified field enjoying great demand and formidable progress. The Symposium will be held at the Convention Center of the Hotel Glória. Equipped with an excellent infrastructure, the Hotel is located close to numerous other hotels, restaurants, and various services. Among invited foreign speakers are SIP Members, **Colin Berry, Armelle Delecluse, Lerry Lacey and Al Yousten.** **Deadline for submission of abstracts is 10 March.**

For more information refer to the meeting homepage "www.dbbm.fiocruz.br" or contact

Executive Secretariat

PJ Eventos Feiras & Congressos
Rua José Risetto, 1023 - Santa Felicidade
82015-010 Curitiba - Paraná - Brasil
Tel, Fax: 55-41- 372 - 1177
E-mail: pj@compuserv.com.br

Alternative Paradigms for Commercializing Biological Control Workshop, Hyatt Regency Hotel, New Brunswick, New Jersey, USA, May 31 - June 2, 1998

The workshop will focus attention on creating a new mindset for developing and using biological control, and fostering closer cooperation among industry, researchers, and extension personnel interested in biocontrol.

The existing paradigm for commercializing biological control has stumbled, badly. Fueled by lavish venture capital and enthusiasm for bio-technology, a flush of biocontrol companies went public in the 1980s to exploit the potential biologicals offered as environmentally benign alternatives to chemicals. The widely predicted demand for biologicals never materialized and companies disappeared or downsized. Biocontrol now makes up less than 2% of the global pesticide market. Even this fraction is threatened as new pesticide chemistries and transgenic plants come on-line.

The current paradigm for commercializing biocontrol is based on a chemical model which emphasizes major crops and cheap, stable products that are easy to scale-up and use. Biocontrol agents fit this model poorly. A new paradigm is needed for the next century; one based on biological realities. We need new strategies to over-come the inherent production, formulation, and distribution problems of biologicals.

Biological control is at a crossroads. The early vision of biologicals becoming significant pest management tools has faded. No foreseeable technology appears likely to change this reality. In the next decade, biological control will either begin to play a meaningful role in specialty crops or become a curiosity relegated to organic farming. Industry, growers, extension, and researchers must come together and think "outside the mold" to realize the former.

Session I: Analysis of Current Paradigm is a critical self-examination centering on strengths, weakness, successes, and failures of the current paradigm for using biological control and biopesticides. This

session will focus on biological properties and the existing mindset. Speakers will offer perspectives from industry, extension, and growers.

Session II: Analysis of Alternative Paradigms considers specific case histories of alternative biological models. This large session will include breakouts for small group discussion of points raised in this workshop. Breakouts will identify, discuss, and propose solutions to resolve important obstacles in the advancement of biocontrol. The real business of the Workshop will be completed within the breakouts.

Session III: Development of Alternative Paradigms will focus on solutions and implementation. It will center on reports from breakout group chairs, following by an extensive open discussion, and finishing with conclusions and potential opportunities.

Poster Session: Attendees are encouraged to present posters about their activities with biocontrol.

Proceedings: Conference speakers and session breakout leaders will provide summaries to be published in electronic format on the WWW.

For further information visit the workshop website at: "<http://www.rci.rutgers.edu/~insects/design.htm>" or contact:

Dr. Randy Gaugler (program) at
rgaugler@rci.rutgers.edu,

Dr. George Hamilton (posters) at
hamilton@aesop.rutgers.edu,

Dr. Lisa Reed (registration) at
lreed@aesop.rutgers.edu

Alternative Paradigms Workshop,
Department of Entomology,
Rutgers University, New Brunswick, NJ 08903-0231
USA,

Tel: (732) 932-9459; Fax: (732) 932-7229.

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

For more information see Vol. 29, No. 3, Nov., 1997 or contact:

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

Workshop on Pathogens of Insects and Microbial Control at the 6th European Congress of Entomology, Ceske Budejovice, Czech Republic, August 23 - 29, 1998

This workshop will consist of oral presentations, round table talks and posters. We would appreciate if you send information about your participation (filled form of the Final Circular) to Dr. Tomas Soldan. **Deadline is February 28th, 1998.**

The workshop is being organized within the VIth European Congress of Entomology, August 23 - 29, 1998. Information about the Congress registration, hotel reservation etc. can be obtained from:

Dr. Tomas Soldan
VIth European Congress of Entomology
c/o Institute of Entomology, Academy of Sciences,
Branisovska 31
CZ-370 05 Ceske Budejovice, Czech Republic
Tel: +4203840822; Fax: +4203843625
E-mail: soldan@entu.cas.cz

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

For more information see Vol. 29, No. 3, Nov., 1997 and contact the following if you have the intention to participate in the conference:

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

International Congress of Entomology (ICE), Foz de Iguacu, Brazil, August 20 - 26, 2000.

Insect Pathology and microbial control will be a prominent part of the program. Brazil has been a favorable environment, scientifically and politically, for the development of microbial control agents as alternatives to conventional insecticides. **Flavio Moscardi** (whose own program on the use of NPV for control of velvet bean caterpillar has been very successful) is the scientific program chair. The pathology session of ICE will accommodate up to 11 half day symposia.

The ICE 2000 program committee is now accepting symposia proposals. The themes that have been proposed by **Bonifacio Magalhaes** and **Lerry Lacey** are listed below.

Session 11 - General and Applied Insect Pathology (this is not a single symposium -- it represents 11 half day symposia)

Convenor: Lawrence Lacey
Counterpart: Bonifacio Magalhaes

1. Highlights of Insect Pathology from 1950-2000: a half century of progress;
2. Insect pathogens as classical biological control agents;
3. Large scale production and use of microbial control in crops;
4. The use of insect pathogens for control of tree fruit insect pests;
5. Microbial control of insect pests in forestry;
6. Recent advances in the use of microbial control agents for control of medically important insects;

7. Interaction of microbial control agents and beneficial arthropods in the context of integrated pest management;
8. The role of genetic engineering in insect pathology and microbial control;
9. Microbial control in the 21st Century: synergistic combination of technologies and integration of control strategies;
10. Approaches for the use of entomopathogens for insect pest control;
11. Regulation, registration and risk assessment.

If you are interested in organizing or contributing to any of these suggested themes, please contact **Flavio Moscardi** at:

EMBRAPA - CNPSO
 Caixa Postal 1061 - Londrina
 Parana, Brazil 86001-970
 Tel.: 55 43 371 6209; Fax.: 55 43 371 6100
 E-mail: moscardi@cnpso.embrapa.br

Information on the Congress itself can be obtained from:

Decio Luiz Gazzoni
 Caixa Postal 231
 86001-970 Londrina - Brazil

Tel.: 55-43-3716213; Fax.:55-43-3716100
 Home Page: <http://www.embrapa.br/ice>

EDITOR'S NOTES

Many thanks to all those who contributed to this issue of the Newsletter. Special thanks to John Bonner, Lorraine Braun, Betty Davidson, Mike Dimock,

Toshi Iizuka, Don Roberts and Lee Solter for providing photos of the Banff meetings and Peg Johnson for proofreading the text. Karen Toohey did the typing and layout.

The next Newsletter will be printed and mailed out by our new service provider, who is yet to be selected. We ask you for your patience during this transition period.

The Editor

When Did You Receive Your Newsletter?

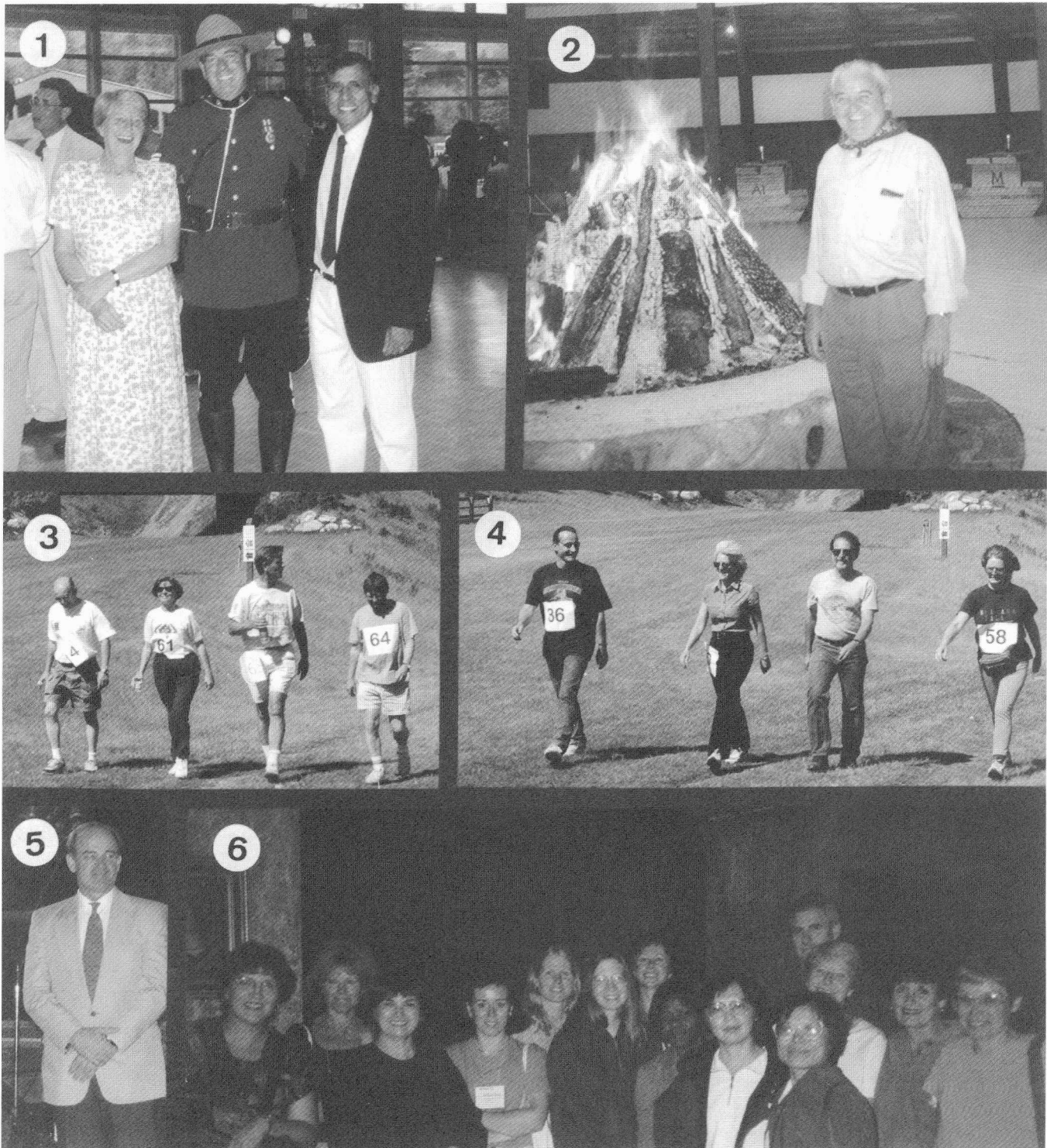
In an effort to improve our service to you, we need to know how long it takes for the Newsletter to reach you. We'd like to improve our delivery time, but at reasonable cost.

For the most part, delivery times for the November issue were much improved, however, due to some late submissions and technical problems at FASEB, the Newsletter was not sent out until 1 December. Nevertheless, delivery times to South American members were not acceptable. Consequently we will test sending this Newsletter to our South American members using a different method.

Please send me a short E-mail message or postcard if you received this Newsletter after February 25. Please include the postmark date and place which was on the Newsletter envelope.

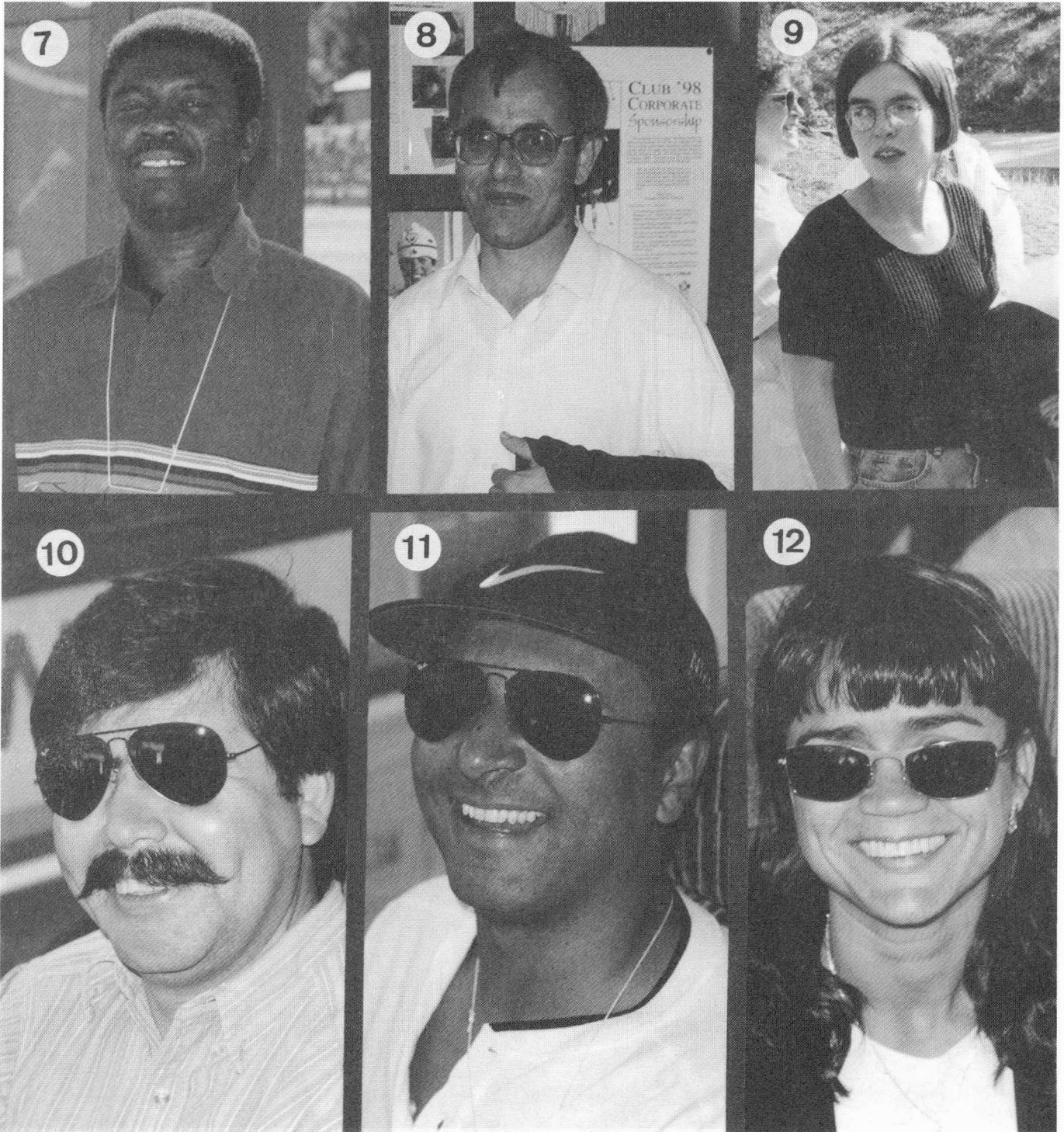
The Editor

Deadline for next issue. Please submit all material by **May 20, 1998** for publication in the June, 1998 issue.



1. Dr. and Mrs. Bob Granados with Sergeant Peterson of the RCMP; 2. Candido Santiago-Alvarez keeping warm by the fire at the BBQ; 3. 5-K racers? Basil Arif, Doreen Winstanley, Just Vlak and David Dent; 4. More runners? Chris Lomer, Wendy Gelernter, Lerry Lacey and Veda Undeen; 5. Brian Federici; 6. Companion tour of the Banff Springs Hotel.

More Photos from Banff



7. George Kyei-Poku; 8. Behnam Amiri Besheli; 9. Silvia Fernandez; 10 - 12. The SIP "mod squad" Jorge Ibarra, Francisco Delgado and Eliane Quintela.

More Photos from Banff

**VIIth International Colloquium on
Invertebrate Pathology and Microbial Control
&
IVth International Conference on *Bacillus thuringiensis***

August 23 - 28, 1998

Sapporo, Hokkaido, Japan

Registration Forms

Abstract Submission Guidelines

Membership Application Form

Abstract Submission Guidelines

Absolute Deadline for Receipt of Abstracts: April 10, 1998

Please help us by submitting your abstracts and symposium manuscripts as early as possible before April 10, 1998. Due to possible scheduling problems we reserve the right to limit the number of submissions or request that submissions be given as a poster rather than an oral presentation. Since articles will be prepared electronically, there is no fixed form to follow. Please E-mail your abstract as an attachment in WP, MSWORD or ASCII Text. If this is not possible, please mail a diskette. In addition, please ensure to mail 2 hard copies with this form.

Please adhere to the following guidelines:

Each line must not exceed a total of 80 characters and spaces. The number of lines for each section is limited as follows:

Title:	No more than 2 lines
	Capitalize ONLY those words that must be capitalized
Authors:	No more than 2 lines
	Put the last (family) name of the presenting author all in CAPITAL LETTERS.
	All other names should appear in upper and lower case letters
Affiliation:	No more than 4 lines
Abstract:	No more than 30 lines

Additional Information for Symposium Speakers

Symposium Manuscripts will be restricted to 6 printed pages (A4 size - 46 lines of 100 characters including spaces per page) and will be published in a separate Proceedings Volume. Please use the general guidelines as for the Abstracts and include a maximum 250-word summary at the beginning of your article. Include headings and sub-headings as appropriate and end with the References section.

Tables and Figures for Symposium Articles should be sent as separate pages. Each Figure should have a descriptive legend. In addition to submission via e-mail or disk, hard copies of all figures, tables and text should be accompanied with this form.

ABSTRACT SUBMISSION FORM

Name & address: _____

I am submitting __ (how many?) abstract(s) for presentation/publication in the program.

The abstract(s) and symposium papers are for presentation as:

Contributed Paper	_____	Student Paper	_____
Poster student	_____	Poster	_____
Symposium Paper	_____		

I have sent the abstract(s) or symposium article by electronic mail:

YES () NO () (not available) ()

I have sent the abstract(s) or symposium article on diskette:

YES () NO () (not possible) ()

I also enclose two printed copies of my abstract. If this is a Symposium paper, I also include hard copies of tables and figures.

Submit electronic and printed copies of your abstract, with your name, address, phone, Fax number and e-mail address to:

Shin-ichiro Asano
Hokkaido University, Faculty of Agriculture
N9W9 Kita-ku Sapporo, Hokkaido, JAPAN

Fax: 81-11-716-0879 , E-Mail: sangaku@abs.agr.hokudai.ac.jp (or hban@abs.agr.hokudai.ac.jp)

Conference Registration and Accommodation Reservation		
Conference Name	1998 VIIth International Colloquium on Invertebrate Pathology and Microbial Control, IVth International Conference on <i>Bacillus thuringiensis</i>	
Conference Dates	August 23 to 28, 1998	
Accommodation	THERME INTERNATIONAL HOTEL SAPPORO Tel: Call 81-11-773-2211 / Fax: 81-11-773-4411	
Personal Data		
Family name:	First name:	() M () F
Affiliation/Company:		
Name Desired on Registration Badge:		
Address:		
City/Province/State:	Postal/Zip Code:	
Business Phone:	Fax Number:	
E-Mail:		
Emergency Contact (Telephone Number):		
I am a member of the SIP: () Yes () No		
I am a full time student at:		
Please send Confirmation to the Above Address? () Yes () No		
If no please indicate correct address:		
Registration: All in Japanese Yens		Amount
Regular Member*	30.000 yen	
Student Member*	15.000 yen	
Companion** Name: _____	12.000 yen	
Non-member	35.000 yen	
5-K Runner (with T-shirt): size ()	2.000 yen	
T-shirt only : size (number) Medium(), Large(), Extra Large()	1.500 yen each	
Late Fee (after April 10)	5.000 yen	
Excursion Fee Course*** : A() or B()	10.000 yen	
Companion Tours: Tuesday Morning Tour	6.500 yen	
Total Registration in Japanese Yens		Total: _____ Yen
Deadline for Early Registration: April 10, 1998. Deadline for refunds: July 15, 1998.		
*Registration Fee provides: Admission to all Scientific Sessions Registration Package coffee breaks reception and Banquet		
**Registration for Companion provides: Coffee breaks, Sunday reception, Banquet		
***Course : A(Lake Shikotsu and Mt. Tarumae), B(Noboribetsu Hot Sprig and Hell Valley).		
Accommodation Reservation:		
Please indicate desired room category and occupancy (including breakfast)		
Therme International Hotel Sapporo :		
Single () 11.000 yen / night, Twin beds () 8.000 yen / night (per person)		
Extra Bed () 5.000 yen / night (per bed)		
Other Hotels in downtown (First Class)		
Keio Plaza Hotel :		
Single () 14.000 yen / night, Twin beds () 12.000 yen / night (per person)		

Sapporo Station Hotel :	
Single () 10.000 yen / night,	Twin beds () 9.000 yen / night (per person)
Extra Bed () 6.500 yen / night (per bed) (Second Class)	
Chisan Hotel Sapporo-Honkan :	
Single () 8.500 yen / night,	Twin beds () 7.500 yen / night (per person)
Toyoko Inn :	
Single () 8.200 yen / night,	Twin beds () 5.800 yen / night (per person)
If sharing please indicate preferred roommates _____	
Children: There is no extra charge for an infant who needs to sleep with their parents except for the charge for breakfast (1.000 yen a day).	
Pre and Post Conference Rate is the same for participant but Please note Pre and Post Conference rooms are very limited.	
() Smoking (limited availability) () Non Smoking	
Lunch tickets (1.500 yen): Monday, Tuesday, Thursday, Friday	Amount: _____
Dinner tickets (2.500 yen): Monday, Tuesday	Amount: _____
Special Requests:	
THERE IS LIMITED ACCOMMODATION AVAILABLE FOR THIS CONFERENCE. PLEASE RESERVE EARLY TO AVOID DISAPPOINTMENT. AFTER JUNE 24, 1998, RESERVATIONS WILL BE TAKEN ON A SPACE AVAILABLE BASIS ONLY.	
The above rates include accommodation, conference and housekeeping gratuities. The above rates do not include applicable taxes (5% GST).	
Arrival Date:	Departure Date:
Check in is after 3:00pm and Check out is by 12:00pm	
Payment: For Registration and Accommodation	Total: _____ Yen (in Japanese funds)
For Registration: please remit full amount of:	
For accommodation: we do not require advance payment, however we DO REQUIRE your credit card information, OR a Cheque made payable "THERME INTERNATIONAL HOTEL SAPPORO", equivalent to one nights stay (same as Pre and Post Conference Room only rate), in order to guarantee your reservation. Rooms that are not guaranteed will be released at 10:00 pm. No charge will be applied if your reservation is cancelled 48 hours prior to arrival.	
Payment (by Card):	
() Visa Card () Master Card () American Express Card	
Account No.: _____ - _____ - _____ , Good Thru: _____ / _____	
Amount: _____ yen	
Name of Holder:	Date:
Signature:	
Please complete this Form and return by Fax to your official travel agent, as follows; KINKI NIPPON TOURIST CO., LTD SAPPORO EKIMAE BRANCH "ICIP 1998 Sapporo" DESK FAX: +81-11-716-5501	
ALL FEES ARE IN JAPANESE YEN ONLY. Exchange rates vary daily. Check with your bank for the current exchange rates. (\$1.00 = 120 yen / in Sep. 1997)	

VII th ICIP 5-K Race
Sapporo Therme
10:00 AM
Wednesday, August 26, 1998

Name: _____

Affiliation: _____

Address: _____

I wish to compete in the following category:

<u>Category</u>	<u>Male</u>	<u>Female</u>
Runner, under 35	_____	_____
Runner, 35 and over	_____	_____
Walker	_____	_____

The course we have chosen is level so you can enjoy running and (or) walking according to your physical ability on the banks of the Barato River which runs alongside the Therme.

Prizes will be awarded to fastest finishers in these categories and to a few randomly selected contestants.

CERTIFICATION: I intend to participate in the SIP 5-K race on August 26, 1998. I affirm that I am in proper physical condition to participate in this race and in consideration of acceptance of this entry, I hereby release sponsors, race officials, organizers, and organizations affiliated with this race from all claims of injury or damage to person or property, including death, resulting from my participation in this event.

Signature: _____

Fees: Race plus T-shirt: 2.000 yen
 T-shirt only 1.500 yen
 T-shirt size: Medium: _____ Large: _____ Extra Large: _____

Please enter the appropriate fee on the Meeting Registration Form

Submit completed form to:

Toshihiko Iizuka
 Faculty of Agriculture, Hokkaido University,
 Sapporo 060, JAPAN
 Phone & Fax: 81-11-706-2423
 E-Mail: tiizuka@abs.agr.hokudai.ac.jp (or hban@abs.agr.hokudai.ac.jp)

SOCIETY FOR INVERTEBRATE PATHOLOGY 1998 Membership Form

BACKGROUND INFORMATION			
NAME			
First:	Middle Initial:	Last:	
Organization:			
Street Address or PO BOX:			
City:	State:	Country:	Zip Code:
Phone:	FAX:	E-mail:	
Please check appropriate box:	<input type="checkbox"/> above is new address	<input type="checkbox"/> new member	<input type="checkbox"/> renewal

ANNUAL DUES Jan. 1998 - Dec. 1998 (Please check appropriate box):	
Membership (founding, charter and regular member)	<input type="checkbox"/> \$30.00
Student membership (<i>Complete Certification Below</i>)	<input type="checkbox"/> \$15.00
Division of Microsporidia	<input type="checkbox"/> \$2.00
Division of Microbial Control	<input type="checkbox"/> \$2.00
Division of Virology	<input type="checkbox"/> \$2.00
Division of Bacteria	<input type="checkbox"/> \$2.00
Journal of Invertebrate Pathology (special member price, plus \$3 handling) (Canadian subscribers add GST number + 7%)	<input type="checkbox"/> \$198.00 <input type="checkbox"/> \$ _____
Society contribution (For General Operations):	<input type="checkbox"/> \$ _____
Endowment contribution (To Support Foreign Memberships):	<input type="checkbox"/> \$ _____
TOTAL DUE:	<input type="checkbox"/> \$ _____

CREDIT CARD INFORMATION:

PLEASE TYPE OR PRINT LEGIBLY

VISA (*Must have 13 or 16 numbers*)
 MASTERCARD (*Must have 16 numbers*)
 AMERICAN EXPRESS
 Card Number _____ Name on Card _____
 Expiration Date _____ Authorized Signature _____

PLEASE RETURN THIS FORM WITH YOUR PAYMENT
 (US CURRENCY ONLY) (Checks to be drawn on U.S. Bank)
 Make Checks Payable to: **Society for Invertebrate Pathology**
Please Mail Form to: James Becnel, USDA/ARS CMAVE, P.O. Box 14565, Gainesville, Florida,
 U.S.A.
 Telephone (352)374-5961; FAX (352)374-5922; EMAIL: jbecnel@gainesville.usda.ufl.edu

STUDENT MEMBERSHIP (Please Print Student's Name) I certify that _____ is a candidate for an advanced degree in a field related to the study of Invertebrate Pathology
 Institution _____ Department _____
 Signature of applicant's major research advisor: _____

Program, Proceedings and Abstracts

The Proceedings and Abstracts of the VIIth International Colloquium on Invertebrate Pathology and Microbial Control and IVth International Conference on *Bacillus thuringiensis* will be published as separate volumes and will be made available to delegates at registration in Sapporo. The complete program will appear in the June issue of the SIP Newsletter and will be posted on our homepages ("<http://shin.agr.hokudai.ac.jp>" and "<http://sip.home.ml.org>") as soon as it is available.

Key Dates to Remember

Deadline for Submission of Abstracts : April 10, 1998.

Absolute Deadline for Receipt of Symposium Manuscripts : April 10, 1998

Deadline for early Registration : April 10, 1998

Deadline Registration Cancellations : July 15, 1998

Contacts

Toshihiko Iizuka. Chair, Local Organizing Committee
Faculty of Agriculture, Hokkaido University
Sapporo 060, Japan
Tel & Fax: +81-11-706-2423
E-mail: tiizuka@abs.agr.hokudai.ac.jp

For matters concerning **Registration and Accommodation:**

Kinki Nippon Tourist Co.,LTD
Sapporo Ekimae Branch "ICIP 1998 Sapporo" Desk
FAX: +81-11-716-5501

Consult the following homepages for the most up to date information:

"<http://shin.agr.hokudai.ac.jp>" and "<http://sip.home.ml.org>"



View of Mount Tarumae (an active Volcano) from Lake Shikotsu
Excursion Choice "A"



Walking Course at the "Hell Valley" of Noboribetsu
Excursion choice "B"