



**IX International Colloquium on
Invertebrate Pathology
XIII International Conference on
Bacillus thuringiensis
&
39th Annual Meeting of the
Society for Invertebrate Pathology
Huazhong Agricultural University, Wuhan, China
August 27-September 1, 2006**

Meeting web site: <http://sip2006.hzau.edu.cn/>

Arrangements for the 39th Annual Meeting of the Society for Invertebrate Pathology to be held in Wuhan, China, are progressing well. The scientific program and housing will be on the Zhongnan Garden Hotel (ZGH); alternative housing is available in Huazhong Agricultural University. The International Academic Exchanges Center is also available (University web site: <http://www.hzau.edu.cn>). The Program and Abstracts will be provided in attendees' registration packets, and all attendees will be able to download them from the SIP2006 Meeting website <<http://sip2006.hzau.edu.cn/>> in the late July.

Scientific Program. The 39th Annual Meeting will begin with morning registration, the SIP Council Meeting, and an evening welcome mixer on Sunday, August 27, 2006. The full scientific program will take place Monday through Thursday. The scientific program will open Monday morning with the Founder's Lecture and Plenary Session, followed by afternoon symposia and posters. The

excursion and BBQ will be on Tuesday afternoon and evening, the banquet will be held on Thursday evening. Symposia and contributed paper sessions will be conducted throughout the meeting except Tuesday afternoon. The Division business meetings will be held on the evenings of Monday and Wednesday.

Registration/Abstract submission. The deadline for submission of abstracts and for regular paid registration has passed, but late registration at a slightly higher fee will be accepted until **July 31, 2006**. After August 1, walk-in registration will be accepted according to the fee schedule posted on the meeting web site. Please note that walk-in registration (after August 1) is more expensive for all participants.

On-line registration through July 31, 2006 is available at:

<<http://sip2006.hzau.edu.cn/register/index.php>> for those who prefer to register by email or fax, registration materials can be found in the February 2006 Newsletter. The meeting registration fee covers the scientific program and the social program (except the optional 5K fun run, excursion and T-shirt).

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Deadline for the next Newsletter is October 15, 2006

SIP Office

Please send all correspondence, membership applications and changes of address to our Executive Secretary, Margaret (Peg) Rotstein at:

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Note: Toll Free numbers for Canada & USA only

Deadline for cancellation. Refunds for cancellations will only be provided before July 31, 2006 with a 25% cancellation fee. After July 31, refunds cannot be guaranteed.

Accommodations. Rooms are available for all meeting attendees and travel companions in the Zhongnan Garden Hotel. The hotel is a three star class standard hotel that is popular for international meetings. It has its own entertainment center, business center for meetings and public events. It is located on Wu Luo Road No. 558 near Wuhan East Lake and the Yellow Crane Tower. There are 248 available rooms. Each room is equipped with a private telephone, air conditioning, a bathroom, and ethernet connection. Details about amenities, services, housing/suite floor plans, etc., can be found on the hotel website < <http://www.znhyfd.com>>. For a map of the housing area, please visit < <http://sip2006.hzau.edu.cn/accommodation/index.php>> The telephone number of Zhongnan Garden Hotel is +86-27-67817688, and the fax number is +86-27-87274500.

Alternative Hotel Housing. We will also supply some standard rooms in the Huazhong Agricultural University (HZAU) International Academy Exchanges Center, located in HZAU, about 25 minutes by bus from the Zhongnan Garden Hotel. During the meeting day, we will supply some special buses to transport meeting attendees from the HZAU International Academy Exchanges Center to Zhongnan Garden Hotel.

SIP NEWSLETTER

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The SIP Newsletter is published 3 times per year and is available on our homepage.

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 (MSWORD, if possible) streamlines publication and saves on costs. Please include a hard copy with any text sent via computer disk.

Deadline for the next Newsletter is October 15, 2006.

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.

Meals during the conferences. Meals will be free for all the registered participants during the conferences. Extra tickets for meals will be available; please contact the organizer.

Money change. The only currency used in China is Renminbi (RMB) and the unit is Yuan. 1 USD is about 8 Yuan and 1 Euro is about 10 Yuan. Money can be exchanged in the international airports. There are automatic changing machines in Wuhan.

Transportation from the Tianhe Airport to the Zhongnan Garden Hotel. Transportation from the airport on August 27 will be available to attendees at certain times. If you plan to take a taxi, make sure you have some Yuan available. Make sure the driver uses meter. In Wuhan, you need to pay 0.5 Yuan extra each taxi trip. Tips are not necessary anywhere in China, unless you are staying in a four- or five-star hotel.

Expect a taxi to Zhongnan Garden Hotel to cost about 100 Yuan. Alternatively, take the airport express bus to Hankou Railway Station terminal (20 Yuan), then taxi to Zhongnan Garden Hotel for about 50 Yuan. Wuchang Railway Station to Zhongnan Garden Hotel is about 12 Yuan by taxi. More information is available at webpage <<http://sip2006.hzau.edu.cn/intro/communication.php>>.

There will be a PDF file for download from the meeting website in the early of August that provides some useful sentences in English and Chinese that will be helpful in Wuhan.

Social program/activities for accompanying persons.

The social program for the event includes the mixer, excursion, BBQ, and banquet. Further information about post-conference tours and a variety of day trips are provided in this newsletter and on the meeting web site <<http://sip2006.hzau.edu.cn/tour/index.php>>.

The welcome mixer will be held in Zhongnan Garden Hotel on the evening of Sunday, August 27 from 6: 30-9: 00 pm. Extra tickets are available for guests. Children 12 and under may attend free.

For the excursion, we will board luxurious coach buses on the afternoon of Tuesday, August 29. There will be two excursion tours: 1) the Yellow Crane Tower & Hubei Museum & Botanical Garden or 2) the Yellow Crane Tower & Guiyuan Zenist Temple & Botanical Garden. Please choose only one of the tours. The excursion is optional, guests are welcome, and a lunchbox is included in the fee.

The 5K Fun Run/Walk After the excursion, the 5K Race will be held at the Wuhan Botanical Garden and the trail is fairly flat. The BBQ also will be held at the Wuhan Botanical Garden after the 5K Race. The awards for the fun run/walk will be presented at the BBQ.

Selected Trips after meeting

There are now more options available for after-meeting trips and below we list two recommended trips routes:

1. Three -Day Tour of the Three Gorges

The total fee of the Three-Day Tour of the Three Gorges is about US\$ 200, including the round-trip bus fares from Wuhan to Yichang. The schedule is as follows:

Sept. 1: Leave Wuhan for Yichang at 12:30, dinner after arrival at 19:00. Pass by Gezhou Dam, and locks of five levels: lodging aboard boat.

Sept. 2: Take a boat to visit mini-Three Gorges, then back to cruise Qutang Gorge, crag carvings, and Kui Gate. Arrive at Fengjie, and then visit Baidi City: lodging aboard boat.

Sept. 3: Cruise back to visit the Goddess Peaks, High Gorge and Quiet Lake and the poetic and picturesque Xiling Gorge; pass by Three Gorges Dam and the locks (optional off board visit to Three Gorges Dam, Gezhou Dam); take a bus back to Wuhan after arriving at Yichang. The arriving time in Wuhan is not sure at the moment, but it will be in the evening of September 3.

2. Four-Day Tour of Xi'an

The total fee of four-Day Tour of Xi'an is about US\$ 280 including the round-trip flight from Wuhan to Xi'an. The schedule is as follows:

Sept. 1: Bus to Tianhe Airport, fly to Xi'an. Free activities.

Sept. 1: After breakfast, visit the terra-cotta warriors and soldiers, the Bronze Wagon, Huaqing Pool, "Xi'an Event "Museum, and Underneath Mausoleum of Qinshihuang.

Sept. 3: After breakfast, visit Hua Mountain (including special bus trip to the mountain and cable cars), Northern Peak, Hundred Miles Gorge, Thousand Miles Pillar, Ancient path, Western Peak, middle peak, Eastern Peak, Southern Peak, and then return to Xi'an.

Sept. 4: After breakfast, visit the ancient city wall, Big Wild Goose Pagoda Square, the Forest of Steles; in the afternoon, return to Wuhan by air.

Scientific Program

The list of scheduled symposia and workshops of the SIP 2006 meeting is presented in this Newsletter. The printed Program and Abstract book will be available only to those registered for the meeting. A PDF file of the Program and Abstract book will be available on the web to registrants by early August.

Presentations

Contributed oral presentations will be limited to 12 minutes with an additional 3 minutes for answering questions. Because of concurrent sessions, moderators will be instructed to keep to the scheduled times. Digital projection and PC computer equipment will be provided. The presentation must be in form of Microsoft PowerPoint for Windows. Invited speakers in the Plenary Session and most Division symposia will have 25 minutes for presentations and 5 minutes for questions. For symposia with more than four speakers, the 2 hours will be divided among the speakers.

PowerPoint slide presentations: Speakers are *strongly encouraged* to upload Power Point presentations prior to the start of the conference to the computer of the meeting place. A power point setup (only Windows accepted) will be available at the Hotel for checking uploads.

Fonts: Choose a standard font to ensure compatibility

Graphics: PowerPoint files will load faster if the graphics file size is kept to a minimum. We recommend a 200 dpi setting when scanning images or imbedding images in your presentation. Remember, viewing on screen is at 72 dpi.

Naming files: Last Name_Session Title_Day Presenting (e.g., Bonning_Virus1_Monday or for symposia talks: Bonning_VirusSymp_Monday).

Uploading files: Before uploading files, check the presentation on a computer other than the one used to prepare the presentation to make sure there are no problems. DO NOT prepare presentations in MAC format because it is not compatible with the equipment at the meeting. There will be opportunities to review presentations in the Speaker Ready Room prior to giving presentations to ensure that it uploaded correctly. Just in case, however, bring presentations on a CD or memory stick as a back up. If presentations contain video clips, put the video clip file in the same folder with the related PowerPoint file and upload the entire file. Be sure to label the folder, the PowerPoint file, and the movie clips with the speaker's name in case they get separated during the upload.

Audio Visual Equipment:

The following audiovisual equipment will be available for use:

PC with Office XP Professional PowerPoint software

LCD/Data projector

Podium & microphone

Laser pointer

Use of personal laptops for presenting will not be permitted because this will cause unnecessary delays.

Speakers Computer Room

The Speakers Computer room will be located in Zhongnan Garden Hotel. There will be PCs available for uploading presentations. Speakers are encouraged to bring presentations on a CD or memory stick for uploading.

Instructions for poster presentations

The posters should be set up at the designated sites before 2 pm on the day of presentation. Posters size is to be 0.9 m (3 ft) wide and 1.2 m (4 ft) tall. Pushpins will be available for securing posters.

Exhibitors

Individuals or companies wishing to have exhibits at the meeting are advised to contact the chair of the organizing committee, sip2006@mail.hzau.edu.cn

Meeting Headquarters. We will a set-up meeting headquarters in the Speakers Computer Room.

Invitation letters. An electronic invitation letter can be downloaded at the website <<http://sip2006.hzau.edu.cn/login.htm>>.

Those requiring a official letter from the ministry with the "Red Seal" for obtaining visas should contact Long Mengxian, a member of the organizing committee responsible for visa assistance, at:

Email: sip2006@mail.hzau.edu.cn; Tel.: 86-27-87283455

Other Useful Information**Local maps:**

Map of Wuhan and introduction to the city:

<http://english.wh.gov.cn/>

Campus map:

<http://map.ewe.com.cn/>

Weather in Wuhan: August low and high temperatures average 25°C and 35°C, respectively. Highs can, however, reach into the high 40's (°C) during the day. The hotel's rooms do have air-conditioning. Bring sun block, sunglasses and a hat. Also bring an umbrella, as there are frequent rains. There are mosquitoes, so bring insect repellent.

Time Zone: Wuhan is in Beijing Standard Time.

Travel to and around Wuhan: See the meeting website for more information.

Contact Information for SIP Meeting



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MEETING SCHEDULE, SIP 2006

(PLEASE NOTE: this schedule is subject to change.)

Sunday, August 27
Registration (all day)
SIP Council Meeting (8:00-17:00)
Welcome Mixer 18:30-21:00

Monday, August 28
Registration
8:00-10:00 Opening Ceremony and Founder's Lecture

10:30-12:30
Plenary session: Microbial Control in Asia
Organizer: Wendy Gelernter
Microbial control and biotechnology research on Bacillus thuringiensis (Bt) in China. Da-Fang Huang. Biotechnology Research Institute,

Chinese Academy of Agricultural Sciences, Beijing, China

Microbial control in Japan. Yasuhisa Kunimi. Department of Bioregulation and Biointeraction, Graduate School of Agriculture, Tokyo University of Agriculture and Technology, Saiwai, Fuchu, Tokyo, Japan

Microbial control in South East Asia. Ole Skovmand. Intelligent Insect Control, Castelnau le Lez, France

Fungal biocontrol agents for arthropod pest control in India & Pakistan. Tariq M Butt¹, Len Copping². ¹Department of Biological Sciences, University of Wales, Swansea, UK; ²LGC Consultants, Saffron Walden, Essex, UK

14:00-16:00

Cross-Divisional Symposium: Monitoring and Managing for *Bt*-resistance: The Challenges for the next Decade

Organizers: Juan Ferre & Carlos Blanco

Resistance monitoring for Bt crops: A US EPA perspective. John A Glaser², Sharlene R Matten¹. ¹United States Environmental Protection Agency, Washington D.C.; ²United States Environmental Protection Agency, Cincinnati, Ohio

Monitoring pests of large geographies: How to get the best information when two countries are involved? Carlos A. Blanco¹, Craig Abel¹, Antonio P. Teran-Vargas². ¹USDA - Agricultural Research Service, Stoneville, Mississippi, U.S.A.; ²INIFAP, CESTAM, Cuauhtemoc, Tamaulipas, Mexico

Monitoring and Management Strategy of Helicoverpa armigera Resistance to Bt Cotton in China. Kongming Wu. State Key Laboratory for Biology of Plant Diseases of Insect Pests, Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing, China.

What is the current situation in Australia for resistance to Bt cotton by Helicoverpa armigera? Sharon Joy Downes¹, Rod Mahon². ¹CSIRO Entomology, Australian Cotton Research Institute, Narrabri, NSW Australia; ²CSIRO Entomology, Canberra, Australia

Insect Baseline susceptibilities to Bt Cry toxins and the Bt resistance management in India. Govind T Gujar. Division of Entomology, Indian Agricultural Research Institute, New Delhi, India

Monsanto's global approach to resistance monitoring. Sakuntala Sivasupramaniam, Graham P Head, Vaughn T Ty. ¹Monsanto Company, Chesterfield, MO, USA

Effective IPM for the novel insect-control cotton, VipCot™. Ryan W. Kurtz. Syngenta Biotechnology, Inc., RTP, NC USA

Virology Division Symposium: Diseases of Aquatic Invertebrates

Organizers: Just Vlak and Zhengli Shi

The galaxy of crustacean viruses. Jean-Robert Bonami. Pathogens and Immunity, UMR5119, ECOLAG, INRA-CNRS Montpellier, France

Biology and molecular genetics of white spot syndrome virus. Xun Xu. Key Laboratory of Marine Biotechnology, The Third Institute of Oceanography, State Oceanic Administration, Xiamen, China.

Biology, genetics and ecology of taura syndrome virus. Jeff M. Lotz. Department of Coastal Sciences, Gulf Coast Research Laboratory, University of Southern Mississippi, Ocean Springs, Mississippi, USA

Biology, genetics and ecology of the yellow head virus complex. Peter J. Walker. Australia Animal Health Laboratory (AAHL), CSIRO Livestock Industries, Victoria, Australia.

Contributed papers: Fungi 1, Nematodes

16:30-18:30 Poster I

20:00-22:00

Division Meetings: Bacteria, Fungi, Microsporidia, Nematode, Virus (Virus Division meeting to be held in Wuhan Institute of Virology)

Division Workshop:

Microsporidia Division: Beneficial and Noxious Microsporidia of Asia

Organizer: Regina Kleespies

PCR diagnosis and phylogenetic analysis of several pathogenic microsporidia in field. Ping Zhang.

Studies on Nosema sp. (Microsporida) from beet armyworm Laphygma exigua in China. Guang-Wen Chen and Qu-Hou Chen.

Tuesday, August 29

8:00-10:00

Bacteria Division Symposium: Genetics and Characterization of Mechanisms of *Bt*-resistance Organizers: Juan Ferre & William Moar

Mutant alleles of a cadherin gene and Cry1Ac resistance in the cotton bollworm, Helicoverpa armigera. Yidong Wu, Haiyan Chen, Yajun Yang, Yihua Yang and Shuwen Wu Nanjing

Agricultural University, Nanjing, Jiangsu Province, China

Resistance and hypersensitivity to Bt crystal toxins. Raffi Aroian, Brad Barrows, Larry Bischof and Danielle Huffman. University of California, San Diego, La Jolla, CA, USA

The diversity of Bt-resistance genes in Lepidoptera. David G. Heckel. Max Planck Institute for Chemical Ecology, Jena, GERMANY

A proteomic approach to study resistance to Bacillus thuringiensis Cry toxins in Heliothis virescens larvae. Juan L. Jurat-Fuentes¹ and Michael J. Adang².

¹Department of Entomology and Plant Pathology, The University of Tennessee, Knoxville, TN, USA;

²Department of Entomology, University of Georgia, Athens, GA, USA

Virology Division Symposium: Field Performance of Insect Viruses

Organizer: Zhihong Hu

New developments in the use of codling moth granulovirus. Juerg Huber. Institute for Biological Control, Darmstadt, Germany

Abietiv: Field efficacy and registration of the balsam fir sawfly nucleopolyhedrovirus in Canada. Christopher John Lucarotti. Canadian Forest Service - Atlantic Forestry Centre, Fredericton, Canada

New strategies of using viruses to control agricultural and forest pests in China. Xiulian Sun, Zhihong Hu and Huiying Peng. State Key Laboratory of Virology, Wuhan Institute of Virology, Chinese Academy of Sciences, Wuhan, Hubei, China

Preliminary greenhouse trials with indigenous TnSNPV and AcMNPV isolates for cabbage looper (Trichoplusia ni) control in greenhouse vegetable production. Martin A. Erlandson^{1, 2}, Dave Gillespie³, Melissa Strom², Don Quiring³ and David Theilmann⁴.

¹Agriculture and Agri-Food Canada, Saskatoon Research Centre, Saskatoon, SK, Canada; ²Department of Applied Microbiology and Food Science, University of Saskatchewan, Saskatoon, SK, Canada; ³Agriculture and Agri-Food Canada, Pacific Agri-Food Research Centre, BC, Canada; ⁴Agriculture and Agri-Food Canada, Pacific Agri-Food Research Centre BC, Canada

Contributed papers: Fungi 2, Microsporidia



Hubei Province Museum

10:30-12:30

Microbial Control Division Symposium: Novel Approaches for Dealing with Difficult Data

Organizer: Surendra Dara

Analysis, interpretation, and avoidance of difficult data in bioassay. S. P. Wraight. USDA-ARS Plant Protection Research Unit, U.S. Plant, Soil and Nutrition Laboratory, Cornell University, Ithaca, NY, USA

Top reasons why papers have been rejected for publication. Mark S. Goettel¹, Quirico Migheli² and Charles H. Pickett³. ¹Lethbridge Research Centre, Agriculture & Agri-Food, Lethbridge, AB, Canada; ²Dipartimento di Protezione delle Piante, Università degli Studi di Sassari, Sassari, Italy; ³Biological Control Program, California Department of Food and Agriculture, Sacramento, CA, USA

Lost to industrial secrecy, statistical insignificance and short attention span: dark, dead, and dated data. Jeff Lord. US Department of Agriculture, Agricultural Research Service, Manhattan, Kansas, USA

Hard lessons and perspectives of laboratory bioassays and field trials with entomopathogenic fungi. Jarrod E. Leland¹ and Debbie Boykin². ¹USDA-ARS, SIMRU, NBCL, Stoneville, MS, USA; ²USDA-ARS, Midsouth Area Statistician, Stoneville, MS, USA

Contributed papers: Bacterial 1, Virus 1

Afternoon:

Excursion: Yellow Crane Tower & Hubei Museum; or Yellow Crane Tower & Guiyuan Zenist Temple

5K Fun Race at Wuhan Botanical Garden

BBQ at Whan Botanical Garden

Wednesday, August 30**8:00-10:00****Fungus Division Symposium: Ecology of Entomophthorales****Organizer: Ming-Guang Feng**

Host-pathogen interaction in Entomophthorales in agro-ecosystems: initiation of epizootics and relationship between host species and fungal genotype. Jørgen Eilenberg, Annette Bruun Jensen and Charlotte Nielsen. Department of Ecology, The Royal Veterinary and Agricultural University, DK, Frb C, Denmark

Persistence and spread of Entomophaga maimaiga infecting Lymantria dispar. Ann E. Hajek¹, Charlotte Nielsen² and Patrick C. Tobin³. ¹Department of Entomology, Cornell University, Ithaca, NY, USA; ²Royal Veterinary & Agricultural University, Copenhagen Denmark; ³USDA, Forest Service, Morgantown, WV, USA

Intraguild interactions involving Entomophthorales. Judith K. Pell¹, Jason Baverstock¹, Ariel W. Guzman Franco¹ and Helen E. Roy². ¹Plant and Invertebrate Ecology Division, Rothamsted Research, Harpenden, Hertfordshire, UK; ²Department of Life Sciences, Anglia Ruskin University, Cambridge, Cambridgeshire, UK

Transmission of obligate aphid pathogens (Entomophthorales) with host dispersal flight: from biological hypothesis to confirmation. Ming-Guang Feng. Institute of Microbiology, College of Life Sciences, Zhejiang University, Hangzhou, Zhejiang, China

Nematode Division symposium: Emerging Pest Targets for Entomopathogenic Nematodes**Organizers: David Shapiro-Ilan & Richou Han**

Emerging pest targets for entomopathogenic nematodes in China. Richou Han, Li Cao, Guohong Wang and Jinghua Chen. Guangdong Entomological Institute, Guangzhou, China

Entomopathogenic nematodes and emerging pests in Latin America: the quest for a sustainable world. S. Patricia Stock¹, Jesus Alcazar², Luis G. Leite³, Juan C. Lopez-Nunez⁴, Mayra Rodriguez-Hernandez⁵. ¹Dept. Entomology, University of Arizona, USA. ²Centro Internacional de la Papa, Peru. ³IB/Lab. Controle Biológico. Campinas, Brasil. ⁴Cenicafe, Manzanales, Chinchina, Colombia. ⁵Centro Nacional de Sanidad Agropecuaria, Cuba

New and upcoming target pests for entomopathogenic nematodes in North America. David Shapiro-Ilan¹, and Parwinder Grewal². ¹USDA-ARS, SAA Byron, GA USA. ²Ohio State University, Wooster, OH USA

Current and future uses of nematodes in Western Europe. Michael J. Wilson¹, Cyrille Verdun², Ehlers Udo Ehlers³. ¹University of Aberdeen, Aberdeen UK. ²Becker Underwood Ltd, West Sussex, United Kingdom. ³Christian-Albrechts University Kiel, Raisdorf, Germany

Emerging pest targets for entomopathogenic nematodes in Asia outside of China. Ho Yul Choo⁸, Dong Woon Lee², Sang Myeong Lee³, S. Yamanaki⁴, Sudershan Ganguly⁵, Vacheree Somsook⁶. ¹Dept. of Applied Biology & Environmental Sciences, Gyeongsang National University, Jinju, Gyeongnam, Korea; ²Dept. of Applied Biology, Sangju National University, Sangju, Kyungpook; ³Southern Forest Research Center, Forest Research Institute, Jinju, Gyeongnam; ⁴Arysta Lifescience Cooperation, St. Luke's Tower, Chuo-ku, Tokyo, Japan; ⁵Division of Nematology, Indian Agricultural Research Institute, New Delhi, India; and ⁶Biological Control Research Section, Entomology & Zoology Group, Plant Protection Research & Development Office, Dept. of Agriculture, Bangkok, Thailand.

Contributed papers: Bacterial 2, Virus 2**10:30-12:30****Microsporidia Division symposium: Microsporidia in Silk Moth****Organizers: Gernot Hoch & Leellen Solter**

Nosema bombycis and the silkworm industry. James J. Becnel. U. S. Department of Agriculture, Agriculture Research Service, Center for Medical, Agricultural and Veterinary Entomology, Gainesville, Florida

Diversity among microsporidian parasites causing silkworm pebrine disease. Ji-Ping Liu¹, Judith E. Smith² and Ling Zeng¹. ¹South China Agricultural University, Wushan, Tianhe, Guangzhou, China; ²Leeds University, Leeds, UK

From Nosema bombycis rDNA organization to revise the Nosema isolates in Taiwan. Chih-Yuan Wang, Wei-Fone Huang and Chung-Hsiung Wang. Department of Entomology, National Taiwan University, Taipei, Taiwan

Impact of Nosema sp. infection on nutritional physiology and growth of the tasar silkworm Antheraea mylitta. Sudhansu Sekhar Rath, Mrinal Kanti Singh and Suryanarayana N. Central Tasar Research and Training Institute, Piska Nagri, Jharkhand, India

**Contributed papers: Bacterial 3, Virus 3,
Microbial Control 1**

14:00-16:00

**Bacterial Division Symposium: Bacteria in Bio-control
in Asia: Natural and Bio-tech Strains**

Organizer: Ray Akhurst

Application of mosquitocidal Bacillus sphaericus and the resistance management in China. Zhiming Yuan. Wuhan Institute of Virology, Chinese Academy of Sciences, Wuhan, China

Transgenic bacteria expressing combinations of genes from Bacillus thuringiensis. Arieh Zaritsky and Eitan Ben-Dov. Ben-Gurion University of the Negev, Department of Life Sciences, Ben-Gurion University of the Negev, Be'er-Sheva, Israel

Microbial control of scarabs in Japan. Shin-ichiro Asano¹, Hisanori Bando¹, Noriko Shisa², Katsuyoshi Takeuchi² and Toshihiko Iizuka³. ¹Division of Applied Biosciences, Graduate School of Agriculture, Hokkaido University, Sapporo, Hokkaido, Japan; ²SDS-Biotech KK, Tukuba Research and Development Center, Tsukuba, Ibaraki, Japan; ³Hokuren Agricultural Research Institute, Naganuma, Hokkaido, Japan

Toxicity of Bacillus thuringiensis crystal proteins against plant root-knot nematode. Ziquan Yu, Suxia Guo, Ziniu Yu, Ming Sun. State Key Laboratory of Agricultural Microbiology, College of Life Science and Technology, Huazhong Agricultural University, Wuhan, PR China

Contributed papers: Virus 4, Fungi 3

16:30-18:30 Poster II

20:00-22:00 Divisional Meeting: Microbial Control

Thursday, August 31

8:00-10:00

**Bacterial Division Symposium: Bt Performance
Enhancement**

Organizer: Yu Cheng Zhu

Synergistic Effect of inorganic salts to improve the biological activity of Bacillus thuringiensis subsp. aizawai NT0423 against Plutella xylostella. Jae Su Kim. Dongbu Hannong Co. Ltd., Daejeon, Korea; ²Seoul National University, Seoul, Korea1.

A novel function of Bacillus thuringiensis CryIC toxin on insect peritrophic matrix. Christina Nielsen-LeRoux^{1,2}, Christophe Buisson¹ and Didier Lereclus¹. ¹INRA, Unité Génétique Microbienne et Environnement, INRA, la Minière, Guyancourt; ²Pasteur Institute, Département de Microbiologie, Institut Pasteur, Paris, France

Potential use of proteinase inhibitors for insect control and Bt resistance management. Yu Cheng Zhu. USDA-ARS-JWDSRC, Stoneville, Mississippi, USA

Improved genetically engineered bacteria for controlling mosquito larvae. B. Federici¹, D. Bideshi, H. W. Park, J. Johnson, M. Tang, M. Wirth, Y. Sakano. Department of Entomology and Interdepartmental Graduate Programs in Genetics and Microbiology, University of California, Riverside, CA, USA

**Contributed papers: Virus 5, Microbial
Control 2**

**10:15-10:30 Edward A. Steinhaus, Instigator,
Catalyst, and Founder.** Elizabeth W. Davidson. School of Life Sciences, Arizona State University, Tempe, AZ, USA

10:30-12:30 SIP Annual Business Meeting

Student Awards Committee Meeting

14:00-16:00

**Cross-Divisional Symposium: Nematodes and
Bacteria: from Pathogenicity to Mutualism**

Organizers: Raffi Aroian & Parwinder Grewal

Bacterial toxin - nematode interactions: using Bt toxins to control parasitic nematodes. Anderson Tan, Raffi Aroian, Xiang-Qian Li. University of California, San Diego, La Jolla, CA, USA

Elucidating the molecular mechanisms of bacteria-host interactions using the C. elegans pathogenesis model. Man-Wah Tan. Departments of Genetics, and of Microbiology and Immunology, Stanford University School of Medicine, Stanford CA, USA

David Clarke. Bath University in England.

Virulence of Moraxella osloensis, a bacterium associated with the slug-parasitic nematode Phasmarhabditis hermaphrodita, to the slug Deroceras reticulatum. P. S. Grewal.

Department of Entomology, Ohio State University, Wooster, USA

**Contributed papers: Virus 6, Microbial
Control 3**

16:30-18:30 Contributed papers: Bacterial 4

19:00 SIP Banquet and Awards Ceremony at the Zhongnan Garden Hotel



First Yangtze Bridge in Wuhan

ADDITIONAL MEETING ANNOUNCEMENTS



Microbial Pesticide Research Group, College of Life Science and Technology,
Huazhong Agricultural University

Microbial Pesticide Research Group of College of Life Science and Technology at Huazhong Agricultural University

The Microbial Pesticide Research Group of College of Life Science and Technology, Huazhong Agricultural University, Wuhan, China, directed by Prof. Ziniu Yu, is part of the State Key Laboratory of Agricultural Microbiology. This group has focused research interests on the bio-pesticide and molecular biology of *Bacillus* in the past thirty years, and some microbe pesticides and genetic engineering products have been developed. The group has been accredited by the government to develop industry standards and Chinese National standards for *Bacillus thuringiensis*. The research foundation was

primarily granted by the National Basic Research Program of China, Chinese National Program for High Technology Research and Development and the National Nature Science Foundation of China. In addition, broad international cooperation and academic communications have been practiced.

More than 350 articles and 12 books have been published. To present, 130 and 40 members have earned M.S. and Ph.D. degrees, respectively, and eight post-doctoral researchers have completed work at BMB.

Research Fields

1. Resource of *Bacillus thuringiensis* (novel strains and genes);

2. Molecular biology, genomics and proteomics of *Bacillus*
3. Gene engineering of *Bacillus thuringiensis* and biosafety assessment;
4. New fermentation technology, fermentation kinetics and metabolism engineering of *Bacillus thuringiensis* biopesticides;
5. Downstream technology and formulation of *Bacillus thuringiensis* biopesticides;

Staff

Prof. Ziniu Yu- microbial genetic engineering
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to Basil Arif "the facilities are second to none and the labs are beautiful". So this will be a good opportunity for all of us to visit the Institute. Basil, who has been promoted as "Virology Division Social Organizer", has suggested that from the Institute we all go to an area where we can eat and drink but most of all enjoy the talent of local artists who will sing at the table for 10 Yuan. What we need in order to organize such an interesting professional and social evening is a head count of how many people from the Virology Division would be interested in participating. Please send an e-mail message to jem@ifas.ufl.edu with the subject "Yes to Virology Division Meeting".

May 1 was the extended deadline for travel awards submission announced on April 25th by Stephen Wraight. After the judging by the Divisions for the Martignoni Travel Award, the Virus Division will judge the student travel award applications. The winners of the Division awards will be done shortly after that so that the winners can make travel plans.

During the SIP meeting in Wuhan, we will have Virus Division officer elections.

The following members have been nominated:

Chair Elect: Bryony Bonning

Secretary/Treasurer: Zhihong (Rose) Hu

Member at large: Rollie Clem

If you would like to nominate other members to any of the three open positions, Chair Elect, Secretary/Treasurer and Member at Large, this must be done prior to the meeting in Wuhan. Please, ask another Virus Division member to second your nomination and send any nominations and seconds to Jim Maruniak at jem@ifas.ufl.edu

The current Virus Division officers are:

Chair: James Maruniak (USA) 2004-2006

Chair Elect: Johannes Jehle (Germany) 2004-2006

Secretary/Treasurer: Marlinda Lobo de Souza (Brazil) 2004-2006

Member at Large: Linda King (UK) 2004-2006

Member at Large: Madoka Nakai (2005-2007)

Thank you and see you in Wuhan!

James Maruniak

SIP Virology Division Chair

SIP Officers 2006-2008 2006 Election Results

President	Wendy Gelernter
Vice President	Mark Goettel
Secretary	Jenny Cory
Treasurer	Jimmy Becnel
Trustees	Jørgen Eilenberg
	Rose Zhihong Hu

Congratulations!

Virus Division News for Wuhan

The Virology Division will have a treat this year. Xinwen Chen and Zhihong (Rose) Hu, are arranging for our business meeting on the evening of Monday, August 28 to be held in the Wuhan Institute of Virology. According

2006 SIP FOUNDER'S HONOREE



Dr. Shangying Gao is one of the founders of Chinese virology. He created the first virology research institutions, a microbial profession and a virology profession in China. His research method for the silkworm pus virus tissue culture, completed in 1958, is a pioneering work of invertebrate tissue culture and insect virus research. The "Theory and applied research on insect viruses," had a significant impact at home and abroad. In 1980, Dr. Gao was recruited to the China Academy Society (CAS) council. The professor has worked for 56 years in the teaching and research of microbiology and virology.

Dr. Gao was born March 3, 1909 into a cultural family in Tao, Jiashan, Zhejiang Province. When he was 7 years old, he began his education in a countryside primary school. After graduating from a secondary school in 1926, he studied in Suzhou Dongwu University, majoring in biology with a chemistry option. He studied very hard, spent much time in the library, and especially liked biological books. His studies laid a solid foundation for his later dedication to the life sciences. He obtained a Bachelor of Science degree from Dongwu University in 1930. In the same year, a relative recommended that he apply for a Laonishi University scholarship in Florida where he acquired a BA in literature. In the autumn of 1931, he transferred to the Yale University Graduate School. In the first two years, he worked as a laboratory assistant and studied under the guidance of professor L.L. Woodruff to obtain a doctoral degree. His several American friends hoped that he would work in the US, but he knew that. At that time, the motherland needed someone who had acquired scientific knowledge. In

February 1935, before returning home, Dr. Gao left Yale University for Europe to learn more about advanced technologies and to inspect the status of technology development in western countries. At that time, he engaged in short-term scientific research at London University in England.

In August 1935, at 26 years of age, Dr. Gao returned to the motherland and taught at the National Wuhan University. From 1935 to 1945, he taught general biology, protozoan science, invertebrate science, microbiology, and soil biology. In addition to teaching, he was actively engaged in scientific research. He worked every day in the laboratory with his assistant, and always ate the self-provided dry food in the laboratory at noon. Under conditions of minimal teaching and research budgets and a difficult work environment, he worked tirelessly, producing more than 20 articles on protozoan physiology and microbial nitrogen-fixing bacteria in Chinese physiology journals, *Wuhan University Journal*, *New Agricultural Science*, a German protozoan journal, *Science*, and other internal publications.

In 1937, Shangyin Gao married Niancui Liu, a teacher at Wuhan University. Their common ideals and unwearied pursuit of careers gave them each a partner in life, and also provided Dr. Gao a right hand in science. In 1945, Dr. Gao received permission from the university to visit the US for a second time. He undertook research on viruses in the laboratory of W.M. Stanley, the famous biochemist, virus expert and Nobel Prize winner. Dr. Gao thus began his half-century of work in virus research. In 1947, he returned to China and founded the first virus laboratory in the country.

In May of 1949, Wuhan City was liberated. Dr. Gao applied himself to microbiology and virus teaching. He taught undergraduate courses and actively recruited graduate students, training groups of outstanding specialists. He organized and presided over many important research projects such as structure and function of biological macromolecule genes and transformation mechanisms of tumor virus, etc. He produced more than 110 scientific articles and published four monographs with topics such as virus ultrastructure. He was awarded the achievement prize of the national science meeting, the first science and technology advancement prize of

national education committee, and the science and technology achievement prize of Hubei Province.

Dr. Gao served in several administrative posts including biology department head, virus department head, superintendent of the virus institute, dean, and vice-president of Wuhan University. In 1980, he was elected as subject committeeman of CAS, and successively was part-time head of Wuhan Microbiology Laboratory of CAS, superintendent of Wuhan Microbiology Institute and Wuhan Virus Institute. He also took up the post of assist head of the biology senate group of the State Department degree committee, head of the biology senate group of ministry of education degree committee, director of ministry of education university biology teaching materials, edit committee, assistant director of China microbiology academy, and director of virus specialty committee. Dr. Gao was also editor in chief of *Journal of Virus* and other journals. He also shouldered many important social activities, including vice-chairman of People's Political Consultative Conference of Hubei Province, vice-chairman of Science and Technology Association of Hubei Province, vice-chairman of Association for Friendship with Foreign Countries of Hubei Province. Internationally, he was an honorary member of Sigma Science Academy of USA. In 1981, Lawrence University of USA awarded him an honorary PhD degree. He attended international academic meetings, visited abroad nine times with invitations, and had academic communications with academe of USA, Sweden, Japan, Germany, Hungary, Bulgaria, Romania, Poland, Czechoslovakia, etc., doing much work for promoting the friendship of Chinese and world people and developing international science, technology and cultural communications.

Dr. Gao was a founder of and major contributor to virus research in China. He conducted microbiology and virus teaching and research for 56 years, and had an important influence on the development of microbiology and virus career.

2005 SIP FOUNDER'S LECTURER

Dr Just Vlak was born in Tilburg, the Netherlands, in 1947, but was raised in Utrecht from where his family originated. During his last high school year he became interested in biology, in particular in what was later called molecular genetics.



Dr. Just Vlak

He enrolled in Utrecht University where he graduated in Biology in 1971 specializing in Biophysical Chemistry and Experimental Embryology. He then became interested in viruses and their role in cancer. His PhD research was devoted to the mechanism of human adenovirus DNA replication and he learned to appreciate the importance of cell culture.

Upon graduation and the encouragement of his supervisors, Dr. H.S. Jansz and Dr. Th. J. Rozijn, he applied for a position at the Laboratory of Virology of Wageningen University to set up an animal virus group for research and educational purposes. This was a unique opportunity for him since Wageningen is one of the cradles of virology, with professors Adolf Mayer and Martinus Beijerinck (*contagium vivum fluidum*, 1898) as forerunners, and had a great history in Plant Virology.

Just choose to work on baculoviruses, since it offered the opportunity to link modern molecular genetics to an important application in agriculture; the availability of cell cultures made it even more attractive. In addition, bachelors and master students could learn virology 'by the eye', as baculoviruses can be seen with a simple microscope. The work on baculoviruses was strongly encouraged by professors Jan de Wilde, the Dutch father of biocontrol, and Dr. Thom Tinsley, Institute of Virology, Oxford, who was a good friend of the head of the laboratory at the time, Professor Jan van der Want. Just has been working in Wageningen with baculoviruses since that time, extending his interests beyond

baculovirus genetics into biocontrol, biotechnology and medical and pharmaceutical applications. His sabbatical with Max Summers at Texas A&M University in 1980-1981, with the opportunity to interact with so many excellent scientists, many of whom are still active in the field, was a hallmark in his career. He was promoted to associate professor in 1982 and to distinguished professor in 1997. He teaches courses in Ecology and Biotechnology in Crop Protection, and Fundamental and Applied Virology. In addition to professor in Virology, Just is also the current Director of the Wageningen Graduate Program on 'Production Ecology and Resource Conservation', which advises 260 graduate students how to shape their PhD programs.

Just's scientific work primarily focuses on the structure and function of baculovirus genomes. Highlights were the discovery that polyhedrin, the major constituent of baculovirus polyhedra, is a virus-coded protein (1980-1981), the functional analysis of the baculovirus P10 protein (1987-1994), the detection and importance of defective interfering baculoviruses (1991), the sequencing of five baculovirus genomes (*Spodoptera exigua* baculovirus: 1999; *Helicoverpa armigera*: 2001; *H. zea*: 2002; *Chrysodeixis chalcites*: 2005; *Agrotis segetum*: 2005) and the discovery of the major envelope fusion protein (F) of baculovirus group II budded virus (2000). Some major research endeavours involved studies on the bioactivity of *S. exigua* baculovirus and the development of the *Spodoptera exigua* baculovirus into a registered product (1985-1995), the modelling of the behaviour of baculoviruses in protected environments (greenhouse: 2001, chrysanthemum) and open field crops (2005, cotton). Most of these studies were in collaboration with Dr. Wopke van der Werf, ecologist and model expert. In terms of biotechnology, a major impact has been the bioreactor design studies together with professor Hans Tramper, in particular the importance of shear sensitivity of insect cells (1986-1995). Of notable importance were the designs of various baculovirus expression vectors (1990) and bacmids (for HaSNPV and SeMNPV, 2002) and the engineering of HaSNPV for improved insect control. The development of an effective vaccine against East Coast fever using the baculovirus expression system was a major highlight.

Current interests revolve around the structure and function of the baculovirus F protein, the fitness and evolution of baculoviruses and the role of viral DNA photolyases in UV protection of baculoviruses. Over the last eight years, Just extended his studies into aquatic invertebrates and focuses on the white spot syndrome virus of shrimp. Highlights were the sequencing of the

viral genome, one of the largest animal DNA viruses, and the development of a prototype vaccine to enhance shrimp survival.

Just has published more than 230 papers in reviewed journals and another 100 papers in books and conference proceedings. In addition he has co-authored over 320 conference abstracts. He supervised 24 graduate students and is supervising another 6 at the moment. He also advised over 150 MSc students. Many of the MSc and PhD students are from around the world, making English the language of communication in his laboratory and attracting even more students at the moment. Just has served on many editorial boards and was editor for 8 years of the Journal of General Virology. He is currently an associate editor of the Journal of Invertebrate Pathology. Together with Dr. Monique van Oers, he currently forms the Invertebrate Virus Research Group with the Laboratory of Virology.

As a member of the Society for Invertebrate Pathology since 1978, Just has played an active role in the Society's affairs. He attended nearly every annual meeting and served the Society on many occasions. For many years he was member and chair of the Meetings Committee of the Society and responsible for the selection of meeting venues. In 1986 he organized the IV International Colloquium in Veldhoven and welcomed 435 delegates from all over the world. He also co-organized the first annual meeting as a bi-national effort, the Dutch-Israeli meeting in 2001 in Noordwijkerhout, the Netherlands, together with Dr. Meir Broza. In addition to the scientific aspects of the meetings, he placed much importance in having a strong social program during SIP meetings. In 1995 he was founding member of the Virus Division and has been a strong supporter of the divisional structure of the Society. In 2002 he was elected Vice-President and in 2004 President of the Society. He has contributed more than 90 papers to annual meetings over the years and encouraged many of his PhD students to attend the meetings.

Just was attracted by the Society through the collegial friendships and the international attitude, as instituted by the illustrious founding fathers of the Society, including Dr. Ed Steinhaus and Dr. Constantin Vago. Since his first meeting he was immediately attached to members such as Drs. Brian Federici and Bob Granados ('get involved'),

who encouraged him early on to contribute to the science of invertebrate pathology by bringing molecular genetics to the SIP community. This has remained his mission throughout the years. He is pleased to see that molecular genetics is now an indispensable part of scientific programs in the Society meetings.

Just's laboratory in Wageningen has always been home to a suite of (former) colleagues, which is still the case today. Many of them are now leading invertebrate virology labs in Europe (Dr. Primitivo Caballero, Pamplona; Dr. Johannes Jehle, Neustadt) or are being established (Poznan, Poland; Trabzon, Turkey). A strong collaboration was established in the early 1990's with various laboratories in Canada (Dr. Basil Arif, Sault Ste. Marie; Dr. David Theilman, Summerland; Dr. Peter Krell, Guelph; and Dr. Martin Erlandson, Saskatoon) and China (Dr. Hu Zhihong, Wuhan). The Laboratory of Virology in Wuhan was established by the late Professor Gao Shang-Yin in 1956, and Just has enjoyed a very fruitful collaboration with this institute and professor Gao's scientific 'grand-daughter', Dr. Hu Zhihong, for the last 13 years. He has been honorary professor of the Chinese Academy of Sciences at the Wuhan Institute of Virology since 1997 and visits the institute at least once a year. It is therefore a very great privilege that Just has been invited to give the Founders Lecture 2006 during SIP2006 in Wuhan and to highlight the major contributions of Professor Gao Shangyin to our discipline.

Just is grateful for the many long-time friendships that have developed over the years, which very often included the families of his colleagues. It has been a joy to know so many eminent scientists (to be) from all over the world and with such great social skills. The feeling that we are all fellow travellers in this exciting and unique scientific discipline called 'Invertebrate Pathology and Microbial Control' further encouraged his involvement in the Society's affairs in the past and hopefully for many years to come. For Just, it is indeed a great and unexpected honour to receive one of the highest awards that can be bestowed upon a Society member, and particularly since it is in China where SIP2006 will be held and where the next generation of scientists is eagerly awaiting the Society and to hear about their own scientific hero, Professor Gao Shangyin.

FROM THE PRESIDENT

This is my final presidential address to the membership of the Society. After almost two years at the helm I am

happy to see the Society continue to grow, not yet in great numbers but certainly in quality and enthusiasm. By now the election for the next slate of officers for the Executive Council has been completed and I wish to congratulate not only those that have been elected but also those that volunteered to stand for office. With the new officers taking office during SIP2006 in Wuhan, the Society is ready for the next two years.

The next SIP meeting is also approaching and the number of attendants on April 15th (about 300) exceeds expectations. I visited China at about the same time and I was able to experience the great enthusiasm of the organizers of SIP2006 and sincerely hope that more delegates will sign up. It seems that the organization is on track and they will do their utmost to help everyone to travel to China and to make the meeting a great success. Many young Chinese scientists will use this unique opportunity to meet with the rest of the Society and I hope we will meet their expectations and can accommodate them in the future within our Society. By making a short cut via the SIP system and thanks to our skillful Executive Secretary, Peg Rotstein, credit card payments facilitated the registration. It is not too late yet to sign up, though! SIP2006 is going to be an excellent and exciting meeting.

Recently I was also in formerly Eastern Europe and I met with Balkan pathologists. We forget that one of our founding fathers, Elie Metchnikov, was from that region (Ukraine) using the insect pathogenic fungus *Metarhizium anisopliae* in experimental tests to control the wheat grain beetle, *Anisoplia austriaca*. The institutes in Eastern Europe had a great reputation in microbial control, but went through difficult times. With new contacts and initiatives fostered by the European Union, new energy has been generated to recoup that position and the Society should reach out to these scientists as well. I came to know that some of our members (microsporidiologists) have sponsored a SIP membership of a less privileged colleague from the Balkan and I wonder whether we could adopt such a personal gesture for others in other parts of the world.

The Council is now preparing for the business meeting in Wuhan. I hope that many of the attendants will be at the SIP business meeting and witness the handing over of the gavel to Wendy Gelernter, your new president. And, like everyone

else, I am preparing for presentations and encourage students to give their best. I am looking forward to meeting you all in good spirits in Wuhan.

让我们八月相约在武汉！

Just Vlak
President

ANNOUNCEMENTS

Glossary for Invertebrate Pathology

By July 2006, a third edition of An Abridged Glossary of Terms Used in Invertebrate Pathology will be available, for SIP members only, on the SIP web site. Edward Steinhaus and Mauro Martignoni published the first two editions of this glossary in 1967 and 1970. An ad-hoc committee (David Onstad, Jim Fuxa, Rich Humber, Jesko Oestergaard, David Shapiro-Ilan, Vladimir Gouli, Robert Anderson, Ted Andreadis, and Lerry Lacey) supported by the Publications Committee has been working on expanding and improving the glossary since September 2005. The committee added approximately 400 terms, doubling the size of the glossary. The goal was to emphasize terms that contemporary scientists would need to know to understand not only modern publications but also literature published before 1970. The glossary will be particularly useful for those teaching invertebrate pathology.

Steinhaus and Martignoni stated, "This glossary, to remain useful, must be revised at regular intervals. Users are urged to address their criticism and suggestions to the compilers and to propose additional entries to be included in future editions." Therefore, users are encouraged to send their new definitions or suggestions for changes to the SIP Publications Committee for review.

David Onstad
Coordinator of the Glossary Committee &
Chair of the Publications Committee

Disease news "in a minor chord"

It is great news to hear that in some way, insect pathology will contribute to saving human lives. The human papillomavirus (HPV) vaccine was initially developed by

Rose, Reichman, and Bonnez at the University of Rochester using the baculovirus expression system in insect cells to produce virus-like particles. The HPV L1 capsid protein has proven to be immunogenic when expressed for human papillomavirus types 6, 11, 16, and 18. On June 8, 2006, the FDA approved the Merck tetravalent vaccine, Gardasil, based upon production in yeast for prevention of cervical and vulvar cancer caused by HPV 16 and 18 in females previously not exposed to the viruses. In addition, genital warts caused by HPV 6, 11, 16 and 18 were reduced 99.1%. In test trials, GlaxoSmithKline is also developing an HPV vaccine that was initially processed with the baculovirus expression system.

Worldwide, a half a million cases of cervical cancer caused by HPV occur per year and about 240,000 die per year from it. The incidence of genital warts in sexually active females ranges from 25% to 40%. In some populations, it can be as high as 70%. About 1 million cases of genital warts occur each year in the United States and about 32 million cases occur worldwide. The cost of the disease treatments and Pap smear test are tremendous. In the United States alone, the cost of HPV related diseases is about \$5 billion. The tetravalent vaccine consisting of inactive virus proteins requires three doses over a 6-month period and may cost \$300 to \$500 for the series.

The baculovirus expression system was originally patented by Max Summers (a former SIP member) and Gale Smith at Texas A&M University. The baculovirus expression system has been modified over the years by a number of researchers. It has been used by hundreds of companies to produce useful proteins which are biologically active, immunogenic and correctly processed in the eukaryotic insect cells. Initial studies in bacteria showed the HPV proteins did not fold properly. Improved cells lines for baculovirus expression have also been developed by insect pathologists. A number of members of SIP have contributed to advancing this research and in producing books and manuals on the baculovirus expression system.

Jim Maruniak

MEMBER NEWS

**Barbara Knowles**

I moved to Austria in 2005 to learn German, restore an old house (plenty more skills to learn) and work as a science writer and editor. My career began with a PhD on the mode of action of *Bacillus thuringiensis* toxins in David Ellar's lab at the University of Cambridge. I went to my first SIP conference in UC Davis in 1984. After 13 years researching *Bt* specificity and mode of action in Cambridge, I moved to the UK Natural Environment Research Council in 1995 as editor and writer of publications about environmental sciences aimed at non-specialist readers, including schools. In 2001, I was seconded to the Office of Science and Technology, a government department responsible for UK science funding and for scientific advice to the prime minister and government. Here I developed policies on engaging the general public with science and technology, on ethics in science and on other broad issues in the relationship between science and society. In need of career breaks, Gareth and I moved to Austria in 2005, to the town where my mother was born. We spent a marvelous year tackling plastering, woodwork, and an international crew of builders, plumbers and electricians, before Gareth died suddenly in April. I am continuing to restore our house while working from home as a freelance science writer and editor, writing about scientific and technical topics in all disciplines, for non-specialist readers. It has never been more important for scientists to explain to a wide audience what they do and why it matters. If you need help turning science jargon into plain English, drafting a press release, improving your web pages or reporting the significance of your work to policy makers or business, just ask!

Dr. Barbara Knowles
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Moving??

Please prepare a paragraph including information about past and present postings, new address, telephone, fax and email address and send to your Newsletter Editor for inclusion in the Move Section in the next issue of the Newsletter.

Please also inform the SIP Office of your new address. The address of the Office is also found on page 2.

POSITIONS AVAILABLE

A PhD student research assistant position is available to study host range mechanisms of baculoviruses in insects. The student will be on a research assistantship for the first year and on teaching assistantship for the rest of the PhD program. The applicants must have a MS degree before applying and must have excellent English communication skills and good personalities. The applicants must have a strong background in biochemistry, immunology, virology and genetics. Entomology experience is a plus.

Contact information for applicants:

Dr. Xiao-Wen Cheng
 Department of Microbiology
 32 Pearson Hall
 Miami University
 Oxford Ohio 45056 USA
 Tel. 513-529-5429
 Fax. 513-529-2431
 Email: chengx@muohio.edu

Postdoctoral position: The Department of Entomology at the University of Arizona is seeking qualified candidates to fill a post-doctoral position in the research program directed by Dr. Patricia Stock. This post-doctoral position is for a one-year period, with the possibility of extending the appointment to 2 additional years, pending funding availability. The successful candidate will design and conduct experiments directed at determining the development and evolution of the bacterial receptacle of steinernematid nematodes and the role of this structure in the nematode-bacterium symbiotic phase and insect-pathogenesis. Other responsibilities include grant proposal and manuscript writing and collaboration in the supervision of graduate and undergraduate students.

Minimum Qualifications: Ph.D. degree in biology, with expertise in nematology and/or developmental biology.

Additional Minimum Qualifications: Experience with light, transmission and confocal microscopy techniques, molecular biology, phylogenetics, and statistical analysis including use of standard computer tools.

Application: Send a statement of research experience, career goals, curriculum vitae, publications, and names, addresses and telephone numbers for three letters of reference.

Contact information and applications to:

Dr. S. Patricia Stock

Department of Entomology

University of Arizona

410 Forbes Building

P.O. Box 210036

Tucson, AZ 85721-0036

Office: (520) 626-3854

Lab: (520) 621-1317

Fax: (520) 621-1150

Email: spstock@ag.arizona.edu

<http://ag.arizona.edu/PLP/faculty/stock.html>

Postdoctoral position at the University of Southern Mississippi. Incumbents will perform research on some aspects of the pathology, life history, or epidemiology of *Hematodinium* spp. a dinoflagellate parasite of blue crabs. The approach will include development of a laboratory challenge model, modeling the parasite population dynamics (within host or among hosts), and estimating model parameters. Candidates must have a PhD in a biological science or a related discipline.

Contact information for applicants: Jeff Lotz, Dept. Coastal Sciences, The University of Southern Mississippi, Gulf Coast Research Laboratory, P.O. Box 7000, Ocean Springs, MS 39566-7000.

Tel: 228 872-4247, E-mail: Jeff.Lotz@usm.edu.

Webpage: <http://http://www.usm.edu/gcrl>

POSITIONS WANTED

Karunamoorthi- I am a medical entomologist and I am now searching for a graduate assistant fellowship. I was a postgraduate in medical entomology from the Vector Control Research Centre (ICMR), Pondicherry University, Ondicherry, India. I then worked as a lecturer in entomology in Mahalashmi College of Arts & Science, Tamil Nadu, India. Currently I am working as lecturer in medical entomology in Ethiopia. I am very much interested in pursuing my Ph.D. Programme in the area of vector biology/biological control of vector insects,

especially by using plant derived natural insecticides and biocides or biotic chemicals (IGR) in different areas of the world in order to achieve my educational objectives and professional goals.

Contact information:

K. Karunamoorthi

M.Sc., M.Phil., D.P.H.M.,

Medical Entomologist

Jimma University

P.O. Box No. 378

Jimma, Ethiopia

Dr. Prabhuraj A. I am working as assistant professor in the Department of Agricultural Entomology in College of Agriculture, Raichur, Karnataka, India. I am mainly focusing my research work on utilization of entomopathogenic nematodes for managing crop pests. I did my doctorate (1997) on "Faunistic studies of entomopathogenic nematode families Steinernematidae and Heterorhabditidae and their potential as biocontrol agents against white grubs and caterpillar pests". In my Ph.D. work, I isolated three new strains of *Heterorhabditis* and conducted detailed studies of biology, pathogenicity, shelf life, and mass production on different laboratory hosts and artificial media, bioassay against *Holotrichia serrata* and *Spodoptera litura*, and a field study on eggplant root weevil. Recognizing my above work, Indian Council for Agricultural Research (ICAR) conferred the prestigious "Jawaharlal Nehru Award" in 2001. I was also awarded Junior Research Fellowship and Senior Research Fellowship for my postgraduate and doctoral studies. During my present tenure, I completed one national project (funded by ICAR) on "Integration of entomopathogenic nematodes with other biopesticides for the management of *Helicoverpa armigera* in chickpea ecosystem" from 2002 to 2004, which was funded in the amount of \$45,000. The salient features of the project are 1. There is a scope for integration of EPN with three botanicals, 2. This combination has resulted in increased efficacy of nematode thus leading to considerable reduction in nematode concentration, thus providing an effective, ecofriendly and economical plant protection strategy. Currently I am looking forward to work on 1. Standardization of in vitro mass production techniques of insecticidal nematodes without affecting their virulence and shelf life; and 2. Development of novel nematode formulations and testing their efficacy against different insect pests. I

participated in the XXIV International Congress of Entomology (ICE2004) held in Brisbane, Australia, 2004 and presented a paper on EPN.

Contact information:

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or aprabhuraj@gmail.com

Shreenivasa Reddy- I would like to apply for a PhD Programme in agricultural entomology (insect pathology/biologicalcontrol). I completed a masters degree programme in agricultural entomology in April 2005 from Navsari Agricultural University, Navsari, Gujarat, India where I secured a 6.66/10grade. My Msc. thesis was laboratory and field Investigations of population dynamics, varietal screening and bio-efficacy of newer insecticides against pest complex of Indian bean, and biology of *Clavigralla gibbosa* Spinola on Indian bean and pigeonpea.

Contact information:

reddy130@gmail.com

V. Sreenivasa Reddy

Cumbumpadu, Peddaraveedu (Mandal)

Dupadu, Prakasam 523330

Andhra Pradesh

India

Weibing Shi- A post-doc position and research on the ecology and biology of insects or mites and host pathogens, particularly in pathogen-host interactions; the oviposition and reproductive strategies by pathogen infected females; the ecology of infected mites or insect populations and development of mycoinsecticides against various insects, especially for mites.

Qualifications: PhD. candidate with following skills:

Well-versed in chemicals, pests of agriculture, plant protection and microbiology; able to work independently in selection, design, data analysis, and writing papers in English; able to do analyze using mathematic models; good at learning and applying new information and technologies; intermediate in English reading and fluent in speaking; familiar with Windows, Office, Photoshop, DPS data analysis system, and Prism picture software.

Contact information: I

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FUTURE MEETINGS AND WORKSHOPS

Meeting of the sub-group “Soil Insect Pests” of the IOBC/WPRS Working Group “Entomopathogens and Entomoparasitic Nematodes“

Date: October 16-18, 2006

Location: Research Centre for Agriculture and Forestry, Laimburg, 39040 Auer/Ora Italy

Contact: Wolfgang Schweigkofler, Department of Plant Protection, Research Centre for Agriculture and Forestry Laimburg, I-39040 Auer/Ora (BZ) ITALY

Ph.: ++39 0471 969630

Fax: ++39 0471 969579

E-mail: wolfgang.schweigkofler@provinz.bz.it

Link: <http://www.laimburg.it/en/6840.htm>

Details: We would like to invite you to the fifth meeting of the “Soil Insect Pests” subgroup (formerly *Melolontha* subgroup) of the IOBC/WPRS working group “Entomopathogens and Entomoparasitic Nematodes“

Entomological Society of America December 10-13, 2006

Indianapolis, Indiana, USA

www.entsoc.org/annual_meeting/current_meeting/



Save the date!

V European Congress of Protistology and XI

European Congress on Ciliate Biology

July 23-27, 2007

St. Petersburg, Russia

Web-site: <http://ecp2007.ifmo.ru/>

Email: secretary@ecp2007.ifmo.ru (please, refer to "ECP-V")

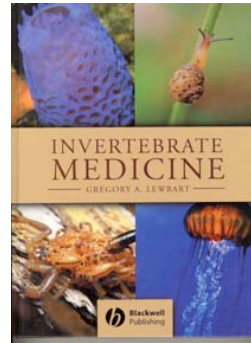
Mail: ECP-V Organizing Committee Institute of Cytology RAS 4 Tikhoretsky Avenue St. Petersburg 194064 RUSSIA

Language of the Congress: English

Congress venue: The historical and scientific center of St. Petersburg

Second announcement: November 2006. Registration deadline: March 30, 2007. Deadline for abstracts: March 30, 2007

PUBLICATIONS



Invertebrate Medicine

Lewbart, G.A., 2005

Blackwell Publishing

Hardcover, 356 pp.

Approx. US \$100

ISBN: 0813818443

Invertebrate Medicine is the single most comprehensive resource available today on invertebrate animal medicine. Public and private aquarists, aquaculturists, and veterinarians in zoo animal, exotic animal and laboratory animal medicine will all find this book an irreplaceable source of information on many of the animals they care for or treat. Coverage includes sponges, jellyfish, anemones, corals, mollusks, starfish, sea urchins, crabs, crayfish, lobsters, shrimp, hermit crabs, spiders, scorpions, and dozens more. Although coverage is broad, emphasis is on invertebrates harvested for food or kept in captivity as pets, for display, or as research animals. The book's organization is easy to follow, with chapters dividing up invertebrates taxonomically. Each chapter includes the natural history of the group, anatomy and physiology, environmental disorders, preventative medicine, infectious diseases, common miscellaneous disorders, analgesia, anesthesia and surgery, treatment protocols and formularies. Amply illustrated in color and black and white, Invertebrate Medicine is sure to become the classic reference on invertebrate animal medicine.

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Future SIP Meetings

SIP 2006!!

Wuhan, China

August 27-September 1



Quebec City, Quebec, Canada

August 12-16, 2007

Proposals for hosting future meetings are welcomed. Please contact Mark Goettel, Chair of the Meetings Committee.
Email: Goettel@AGR.GC.CA

the classic reference on invertebrate animal medicine.
(*Publisher's description*)

Invasives Permeate Life Villains aplenty populate the list of 100 of the world's worst invasive alien species compiled by the Invasive Species Specialist Group. While there is little quibbling over inclusion of *Ulex europaeus* (gorse), *Boiga irregularis* (brown tree snake), or *Lymantria dispar* (gypsy moth), strong attachment and economics may call into question listing of *Felix catus* (domestic cat) and *Capra hircus* (goat). The 146-member group, representing over 40 nations, used two criteria to place species on the "100 Worst" list: "serious impact on biological diversity and/or human activities; and their illustration of important issues of biological invasion." Only one species from each genus was allowed. Absence from the list, say the authors, "does not imply that a species poses a lesser threat." Life today clearly occurs amongst invasive aliens, both the nasty and the benevolent. <http://www.issg.org/booklet.pdf>.

Reprinted from IPMnet News #145, March 2006

The winter 2006 edition of **IPM in the Marketplace**, a periodic newsletter covering aspects of IPM in food production, marketing, and related topics, has just been released by the IPM Institute of North America. The lead article describes the advances being made in growing fruit grown under an IPM regime, and the product then being marketed at a premium price.

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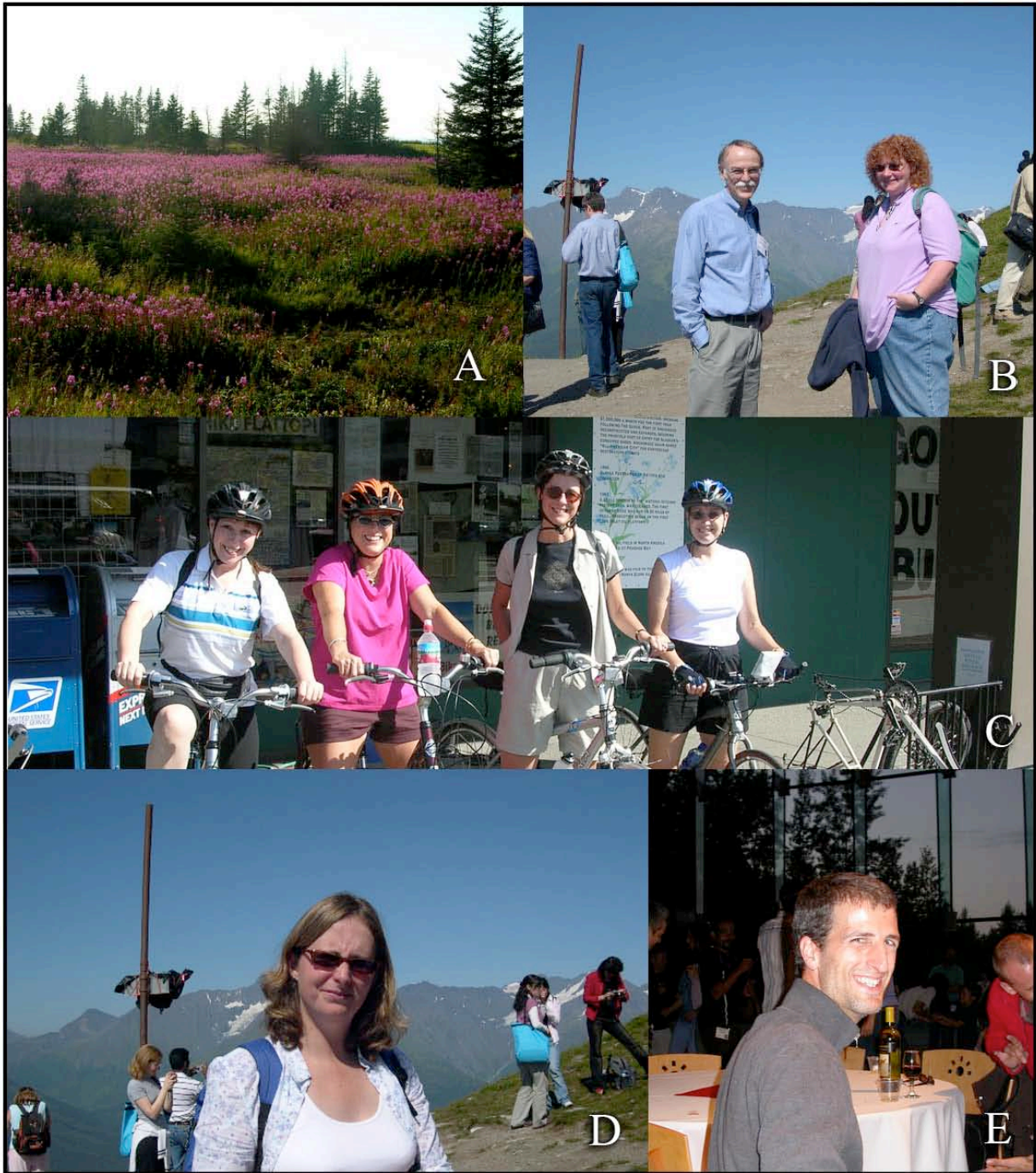
Reprinted from IPMnet News #145, March 2006



Loy Volkman, Martin Erlandson, Jim Slavicek, Rollie Clem, Gary Blissard, David Theilmann, and Bob Granados end their golf outing as the Anchorage city lights begin to twinkle.



A) Harry and an alarmed JoAnn Kaya, B) Jimmy Becnel, Ginny and Gerry Carner, Linda Becnel; C) Jim Whitfield, Don Steinkraus, and Mike Dimock; D) an evidently cold Mary Barbercheck, E) Bob Granados



A) Fireweed; B) Wraight and Pell atop the world, C) Hell's Angels SIP-style, D) Helen Roy, puzzled by the paparazzi, and E) an almost painfully dazzling smile from young (in SIP years) Todd Ugine.



A) Maddie goes mad on the dance floor and B) Bruce Tabashnik explores a new career, C) Hilary Lauzon and Jondavid DeJong; D) Tomas Dubois, your sommelier for this evening. E) Committing a “Krellony”, F) Cindy Lacey and Karen Goettel.