Society for Invertebrate Pathology Newsletter

Volume 49 Issue 2 June 2016

Bienvenue à Tours !
Welcome to Tours!

SIP2016 - The International Congress on Invertebrate Pathology and Microbial Control
and
The 49th Annual Meeting of the Society for Invertebrate Pathology

Tours, Loire Valley, France
July 24 - 28, 2016

MEETING EVENTS

Sunday, July 24

- SIP Council Meeting
- Bacteria Workshop
- Opening Mixer at the Hotel de Ville

Monday, July 25

- Founders' Lecture
- Plenary Symposium
- Symposia and Concurrent Sessions
- Division Business Meetings

Tuesday, July 26

- Symposia and Concurrent Sessions
- Excursion to Amboise
- Garden Party at the *Domaine de Candé*: 5K Race and BBQ

Wednesday, July 27

- Symposia and Concurrent Sessions
- Posters and Cocktail Lunch
- Division Business Meetings and Workshops

Thursday, July 28

- Symposia and Concurrent Sessions
- SIP Annual & Student Business Meetings
- Banquet at the *Grange de Meslay* and Award Ceremony

Friday, July 29 (Satellite Event)

- Summer School on Insect Pathology

http://sip2016tours.org/
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From the President

As I write this final letter as President of your Society for Invertebrate Pathology, I am reminded about how important all the other elected officers, chairs of committees and volunteers really are. Without their commitment and hard work behind the scenes, your society would not be able to advance and to advocate on your behalf. I am also reminded that one of the sad responsibilities of the President is to recognize those members who have recently passed away and their many contributions to their discipline and the SIP. Over the past year, we have lost at least three long serving SIP members, on whose shoulders we all stand. These include Karl Maramorosh (some will remember his presentation on invertebrate cell culture pioneers, Goldschmidt, Gao and Grace, at our 2012 meeting in Buenos Aires), Joe Tanada, who introduced the idea that some insect granuloviruses produce an infection enhancing factor, which he coined as a synergistic factor (now enhancin) and Barbara H. Knowles working on *Bacillus thuringiensis*, as a PhD student with David Ellar, this year's honoree. We reflect on their contributions to their disciplines and the society in our Newsletter and we will recognize them at our conference next month.

I am really looking forward to SIP 2016 in Tours, France, July 24 to 28. Being cc'd on most of the correspondence, I appreciate the extensive background work needed to host this meeting. In addition to dealing with natural disasters like the recent floods in France and Germany, including the Loire Valley where Tours is located (apparently our conference venue was spared and the river is back to normal levels), there is the usual excitement, trying to get the various workshops organized and their chairs dealing with late submission of titles and abstracts and a myriad of special requests for adjustment of fees owing to special circumstances. I really must commend Elisabeth Herniou, Christina Nielsen-LeRoux and Jean-Michel Drezen co-chairs of the meeting and their team for being so efficient, understanding, patient and effective with all the demands being made on them. The scientific and social programs have really taken shape and the one problem they dealt with, a welcome one, was that there were not enough time slots available for all of the oral submissions. Cooperation among the Divisions helped ease some of the pressure. Speaking of Tours, if you have not yet already done so, make sure your travel and accommodation reservations have been completed. When I reserved our train tickets from the Paris CDG airport to Tours/St Pierre des Corps, I noticed that not too many seats were available.

And now, a special request and reminder regarding our often

overlooked (or ignored) responsibility as scientists. Peer review, as all scientists appreciate, is a corner stone of scientific discovery and communication. What better method is there to validate scientific discoveries? We spend much of our scientific careers on generating the scientific literature, but how many of us take on, seriously, our collective responsibility of the peer review aspect of science? Many of our members are either editors, associate editors or editorial board members charged with sending out for review manuscripts submitted for publication in our discipline. I always found it an honour to be asked to review a manuscript, proud that my expertise was being sought and appreciated as of a high level. However, a common refrain I hear is that so many invited reviewers decline to participate in this most fundamental peer review process. Sometimes there are good reasons for that. The particularly conscientious reviewers providing timely and comprehensive (usually with constructive criticisms) reviews are sought after more often and hence do have to decline some invitations. However some of us decline because we are simply too busy. I applaud those that do accept reviewer invitations and treat them seriously irrespective of how busy they are. However, next time you consider clicking the “decline” button in response to a request to review a manuscript (or grant application) remember that colleagues, many who you might not even know, also had to peer review your own manuscripts and requests for funding (and you probably benefited from their comments, even if critical). I encourage you all to give back to science what you gained and to actively participate in the peer review process the next time a request to review comes and you are too busy.

While SIP 2016 is just around the corner, you should all start plans for attending our Golden Jubilee meeting in La Jolla next year. Our Golden Jubilee Committee has already come up with ideas of how to commemorate this special anniversary, but we are looking for more. Any suggestions are welcome, so please send them to myself of Surendra Dara.

As this is my last President’s letter, I would like to acknowledge all the help I had along the way. You have a dedicated and very effective group of volunteers, moving SIP forward. Your society is in good hands, our finances are on solid ground and the future looks bright. But continue to encourage others to join the SIP.

And with that, I welcome Johannes Jehle as your next President, along with the rest of the new Council, and I bid you adieu, as President, but not as a member of the SIP family.

Peter Knell

Tours City Hall (1904)
by Victor Laloux, architect

The Montreal City Hall (Quebec, Canada) was modelled after the Tours city hall.

The ‘Château de Villandry’ and its gardens

‘*The Chateau of Villandry*’, less than 20 km from Tours, ‘*is the last of the great chateaux of the Loire built during the Renaissance in the Loire Valley. The sober elegance of its architecture combined with the charm of its outstanding gardens make this one of the jewels of world heritage*’.
http://www.chateauvillandry.fr/en/

Founders' Lecture Award

Founders' lecture presented by Dr. Neil Crickmore

Dr. Neil Crickmore graduated from Cambridge University in 1984 with a degree in biochemistry and then moved to the University of Warwick for his Ph.D. studies. These were undertaken in the laboratory of George Salmond and involved the genetic characterization of cell division in *E. coli*. Neil was particularly interested in applying the emerging field of molecular genetics to his work and learnt many DNA manipulation techniques while at Warwick. Upon completing his Ph.D. he contacted one of his old tutors at Cambridge (Professor Ellar) for some career advice and it just happened that David was looking for a molecular biologist to work on a joint project with Dupont. Thus Neil was back on his way to Cambridge. Back in 1988 the genetic tools available to work with Bt were extremely limited and so much of this project involved the development of such tools. Neil created a number of cloning vectors and also went on to characterise factors that were crucial for the efficient expression of Bt genes. Many genes were cloned and recombinant Bt strains constructed and tested for their commercial potential. His work also extended into protein engineering – creating toxin variants in the search for those with improved properties. As an experienced molecular biologist in the lab he regularly mentored other members in relevant techniques and collaborated on several projects including the characterisation of the Cry1Ac toxin receptor from *Manduca sexta*.

During his time in the lab and at SIP meetings, Neil developed an interest in the classification of newly discovered Cry toxins and when, in the early 1990s, a proposal was made to redesign the toxin nomenclature, he became part of the team tasked with doing this. Under the guidance of Donald Dean, Neil played a major role in defining and testing various algorithms which led in 1998 to the publication of a revised nomenclature that was immediately accepted by the Bt community and was robust enough to be still in place almost 20 years later. Neil eventually took over the leadership of the nomenclature committee. He also maintains the website, with the technical analysis being undertaken by Dan Zeigler at the Bacillus Genetic Stock Center.

Between the start of the revised nomenclature project and its adoption, Neil left Cambridge in 1995 to set up his own lab at Sussex University. He continued to work on Bt but became increasingly interested in the molecular mechanisms involved in the development of insect resistance to Cry toxins. This led to many publications working with entomologist Ali Sayyed, initially when he was a Ph.D. student in Denis Wright's group at Imperial College in London and then when he came to Sussex as a post-doctoral fellow.

In 2004, a group of European scientists working on Bt put together an application to the European Union for funding to enhance collaborative research between different member countries. The application was successful and Neil was invited to chair the five year project. Many workshops and meetings were organised under the auspices of this COST Action 862 and new collaborations were made: in particular it brought together bench scientists, production scientists, regulators and application specialists more frequently. Neil was particularly keen for many of these participants to interact more with research scientists and so, during his five year tenure as chair, he organised three joint meetings between COST 862 and both the IOBC and SIP. As well as chairing this action, Neil was also heavily involved in the bacteria division of the SIP, holding the secretary/treasurer, vice chair and then chair positions in successive terms, as well as organising various symposia. He has been a keen supporter of

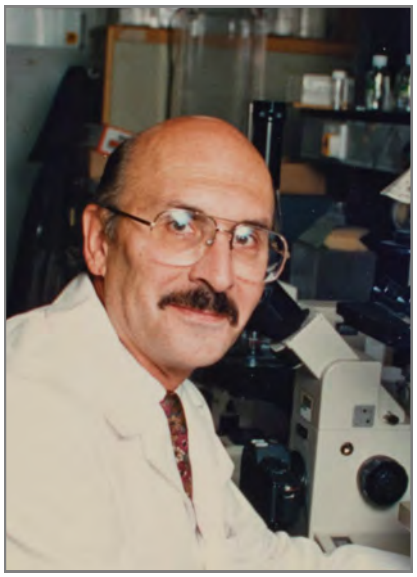
the annual 5K run. For the last few years, he has sat as a member of the Founders' committee. As well as this involvement in the SIP, he is the current associate editor for bacterial papers submitted to the Journal of Invertebrate Pathology and is also on the editorial advisory board for Biocontrol Science and Technology. Following the interactions between COST 862 and IOBC, he was appointed bacteria convenor for the European branch of the latter organisation.

Neil has always embraced collaborative research and, in his early days at Sussex, obtained funding for a collaborative project in Colombia to develop recombinant mosquitocidal bacteria. Publications have also resulted from funded collaborations with groups from Pakistan, India, Brazil and China. He has a long-standing collaboration with Professor Jie Zhang's group from the Institute of Plant Protection in Beijing which has involved many visits and student exchanges over the years. In 2013 he was appointed an adjunct Professor at the Institute.

David Ellar: Taking Bt Beyond the Realms of Insect Pathology

Founders' Lecture in recognition of Dr. David Ellar

Prepared by Neil Crickmore



To those working in the *Bacillus thuringiensis* field, Professor David Ellar should need no introduction. He is a microbiologist who initially graduated from Leeds University in the U.K. in 1963 before moving to the U.S.A. for his Ph.D. at Syracuse. His doctoral studies were undertaken in the laboratory of Donald G. Lundgren where he worked on characterising the morphology of various bacilli. In 1967 he moved to the New York School of Medicine and to a postdoctoral position working with Milton Salton on the structure and function of cellular membranes from *Micrococcus lysodeikticus*. This proved to be a short-lived appointment since in 1968 he was lured back to the U.K. to take up a teaching position in the Department of Biochemistry at the University of Cambridge, a position he then held for the rest of his career, gaining various promotions and degrees along the way. In Cambridge, he continued to work on bacterial morphology and became increasingly interested in spores and the physiological changes that took place during sporulation. His research suffered a major setback in 1974 when a fire destroyed much of his laboratory; this led to the lab being relocated to a temporary building for several years. In 1980 David was given new space on the top floor of the biochemistry building and this space became known as Skylab. The move to Skylab also corresponded with the arrival of John Todd as a Ph.D. student who wanted to test an idea that changes in penicillin-binding proteins may be involved in sporulation. David was happy to let John test this hypothesis which turned out to be correct and led to the first Nature paper to come out of David's lab.

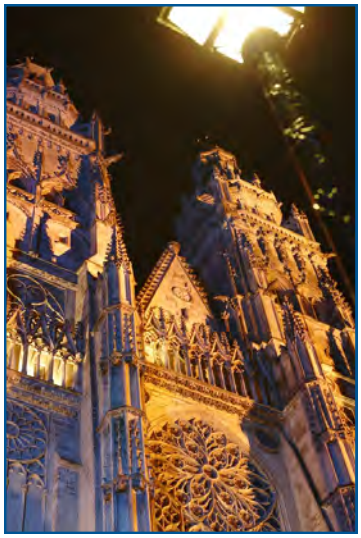
David's interest in sporulation in Bacilli led to an interest in *Bacillus thuringiensis*. Another new student, in Wendy Thomas, came with experience of culturing insect cells in vitro: this led to a convenient way of studying the mechanism of action of the Bt toxins. Wendy was shortly followed by two recently completed Cambridge graduates, Sally Ward and Barbara Knowles, who added molecular and cell biology expertise, respectively, and very soon Bt research in Skylab was thriving. Many breakthroughs were made in the mid-1980s, including the development of the colloid osmotic lysis mechanism, the identification and characterisation of toxin binding molecules and the cloning of several mosquitocidal toxin genes. David was always looking to apply a wide range of methods to the study of Bt and set up many collaborations to facilitate these. One such collaboration was with crystallographer Jade Li who was working at the nearby Medical Research Council Laboratory of Molecular Biology. It has been a constant source of frustration to Bt scientists that the toxins that crystallise naturally in vivo are so difficult to crystallise in vitro. Nonetheless, after many years of hard work, the first crystal structure of a Bt Cry toxin was solved and a second Nature paper published. David went on to publish around 100

papers on Bt or other insecticidal bacteria and, in later years, moved away from studying the toxins in isolation and started looking at other virulence factors.

Overseas visitors and students were always welcome in Skylab with Mahidol University in Thailand providing a number of these. Close links were also built with Huazhong Agricultural University in China. Following a sabbatical visit by Professor Yu Ziniu to Cambridge, Charlie Hodgman, a Skylab post-doctoral fellow, went out to Wuhan to run a practical course on the use of molecular biology to study Bt. It is no coincidence that the labs in Mahidol and Wuhan are now major players in Bt research. David also fostered a number of links with industry including a major project with DuPont in the early days of generating recombinant Bt-based organisms.

Early in his career, David had some journalistic experience with a local newspaper and had a talent for writing. This was evident in his publications and was a skill that he endeavoured to pass on to those in the lab. In Barbara Knowles he found a kindred spirit – she eventually went on to write speeches and reports for the U.K. Government's Office of science and technology. Aside from his love of writing he had interests in the arts, most notably in music and painting. Two other great loves were his pipe and wine. It was no great chore to hold the position of Fellows' wine steward for his Cambridge College - Gonville and Caius.

Throughout his career he picked up a number of awards including a DuPont Global Technology Award (1997), a fellowship of the Royal Entomological Society (1989), a fellowship of the American Academy of Microbiology (2001) and the Society for General Microbiology Fred Griffith Prize (2005). In 1995, David delivered the SIP Founders' Lecturer Award honouring Howard Dulmage. SIP was very important to David – he attended most meetings and encouraged lab members to also do so. He occupied a number of different positions within the Society including Chair of the Bacteria Division and Trustee. He also sat on a number of committees and for many years was an associate editor for the Journal of Invertebrate Pathology.



Saint Gatien's cathedral in Tours (built between 1170 and 1547)

Saint Cosme Priory, last home of the French poet Pierre de Ronsard (1524-1585)

Château de Candé

Traditional boat (*'gabare'*) along a quay of the Loire river

49th Annual Meeting of SIP in Tours, France
July 24-28, 2016

Weather

End of July is the height of summer in the Loire Valley. You may expect temperatures with an average high above 25ºC and a fair amount of sunshine. A light jacket might come in handy in the evening, as the average low is around 14ºC.

Let's try chocolate bugs or cricket crackers!

SIP outreach evening – Wednesday, July 27

From late afternoon, you will have the opportunity to mingle among the general public at the riverside bar of '*La Guinguette*'. Two companies selling edible insects will be present, as well as a number of local entomological and naturalists' associations.

Who will you take the pose with? Will it be Drake the Dragon or the Duke and Duchess of Windsor?

Garden Party at the Domaine de Candé – Tuesday, July 26

The BBQ and the 5K race will take place at the Domaine de Candé. Beware, many surprises await visitors!

Now is the time to book!

SNCF fast-speed trains (TGV) require that you make a reservation. Book early, as you will be travelling during the busy vacation period. Allow at least two hours between your flight arrival and your train departure, and three hours at the airport before your flight departure.

Tours is a very popular destination in the summer, so book your hotel early! Rooms blocked for the SIP meeting will be released on June 30.

49th Annual Meeting of SIP in Tours, France
SCIENTIFIC PROGRAM

Sunday, July 24

BACTERIA DIVISION WORKSHOP: The future of the Bt nomenclature – C. Berry

Monday, July 25

FOUNDERS' LECTURE *(introduced by J. Becnel)*

Lecturer: Neil Crickmore, University of Sussex, Brighton, U.K.
Honoree: David Ellar, Emeritus Professor, University of Cambridge, Cambridge, U.K.

PLENARY SYMPOSIUM

Insect for food and feed – C. Nielsen-Leroux

- Opportunities and constraints of farming Insects for food and feed: a global review - Paul Vantomme, UN Food and Agriculture Organization, Italy
- Industrialization of insect farming: new challenges to prevent pathogenic hazards - Thomas Lefebvre, YNSECT, France
- Managing insect viruses in insect factories for food and feed: successful management of an insect virus, *Glossina pallidipes* salivary gland hypertrophy virus, from an insect factory - Adly Abdalla, International Atomic Energy Agency, Austria
- Pathogenic aspects in insects produced for feed and food - Jørgen Eilenberg, University of Copenhagen, Denmark

SYMPOSIUM OF THE DISEASES OF BENEFICIAL INVERTEBRATES DIVISION

Mollusc diseases – K. Bateman & D. Bass

- New perspective on the microcell parasites - Isabelle Arzul, IFREMER, France
- A new phylogeny and eDNA insight into paramyxids: an increasingly important but enigmatic clade of protistan parasites of marine invertebrates - David Bass, CEFAS, Natural History Museum, U.K.
- Viral diseases affecting marine bivalves - Tristan Renault, IFREMER, France
- Breeding for disease resistance – Development of a *Crassostrea gigas* SNP array. - Tim Bean – CEFAS, U.K.

SYMPOSIUM OF THE E.U. COST ACTION FA1405

Ménage à trois – *Three way interactions between plants, arthropods and microbes that benefit the plants – R . Meadow & M. Pozo*

- A fungal endophyte helps plants to tolerate root herbivory through changes in gibberellin and jasmonate signaling - Marco Cosme, Utrecht University, Netherlands
- Uncovering the effects of cover crops and soil characteristics on *Metarhizium*-plant-insect interactions in an organic cropping system - Mary Barbercheck, Pennsylvania State University, U.S.A.
- Induced plant defense accomplished by a grass endophyte - Benjamin Fuchs, University of Würzburg, Germany
- Systemic grass endophytes and their importance for herbivores in Europe - Jochen Krauss, University of Würzburg, Germany
- Plant metabolic responses to endophytic colonization by *Trichoderma* and *Epichloe* and their effect on insects - Michael Rostás, Lincoln University, New Zealand
- Endophytic entomopathogenic *Metarhizium brunneum* against insect pests: novel integrated fermentation and formulation strategies - Anant Patel, Bielefeld University of Applied Sciences, Germany
- Determination of destruxin A in potato plants after foliar spray of *Metarhizium brunneum* - Enrique Quesada Moraga, University of Córdoba, Spain

SYMPOSIUM OF THE FUNGI DIVISION

How fungi mediate protection against herbivores and plant pathogens – N. Vitt Meyling & M. Raad

- Plant protection potential of entomopathogenic fungi as endophytes: what is the evidence and what is the mechanism? - Nicolai Meyling, University of Copenhagen, Denmark
- Microbial-induced resistance against herbivores: mechanisms and ecological consequences - Ana Pineda, NIOO-KNAW, Netherlands
- Priming of plant defenses against herbivores by arbuscular mycorrhizal fungi - Maria J. Pozo, CSIC, Spain
- Induced systemic resistance by *Trichoderma* spp. - Christine Vos, KU Leuven, Belgium
- Elucidating the mechanisms of *Beauveria bassiana* induced plant resistance - Maya Raad, Bio-Protection Research Centre, New Zealand

STUDENT AND POSTDOCDOCTORAL FELLOW WORKSHOP

Funding opportunities in the E.U. and U.S.A.

BUSINESS MEETINGS: FUNGI, MICROSPORIDIA AND BACTERIA DIVISIONS

Tuesday, July 26

SPECIAL SYMPOSIUM

Human impact on pathogens-honeybee interactions – A. Dubuffet & P. Gayral

- EPILOBEE: results from a pan-European epidemiological study on honeybee colony losses 2012-2014, conducted by the European Union Reference Laboratory - Magali CHABERT, European Union Reference Laboratory for Honey Bee Health, France
- Honey bee stressor interactions: never the same and so much to learn - Geoffrey Williams, University of Bern, Switzerland
- Interactions between the gut parasite *Nosema ceranae* and pesticides in the honeybee - Frederic Delbac, Université Blaise Pascal, France
- On the interconnected emerging parasite pressures facing bees - Dino McMahon, Freie University Berlin, Germany
- Man-made epidemics: *Varroa* and DWV in honeybees and the risk they pose to wild pollinators - Lena Wilfert, University of Exeter, U.K.

CROSS-DIVISION SYMPOSIUM OF THE NEMATODE AND MICROBIAL CONTROL DIVISIONS

Recruitment of beneficial microbes and nematodes – I. Hiltpold & M. Brownbridge

- Entomopathogenic fungi: friend or enemy of the plant? - Rob van Tol, Wageningen University, Netherlands
- Potential of root-associated pseudomonads with insecticidal activity for biological control of soil-dwelling insect pests of crops - Christoph Keel, University of Lausanne, Switzerland
- Threesome in the rhizosphere: bacteria, entomopathogenic nematode and plant interactions - Ivan Hiltpold, Western Sydney University, Australia
- Entomopathogenic nematodes boost plant immunity - Parwinder Grewal, University of Texas, U.S.A.

SYMPOSIUM OF THE MICROBIAL CONTROL DIVISION

Next generation biopesticides – C. Hauxwell

- Using bumblebees for targeted application of biopesticides - Sarah Van Beneden, Biobest, Belgium
- Working with insect pathogen ecology for better biocontrol delivery - Michael Brownbridge, Vineland Research and Innovation Centre, Canada - Travis Glare, Bio-Protection Research Centre, Lincoln University, New Zealand
- Characteristics of novel bacterial insecticides/miticides/nematicides from *Chromobacterium subtsugae* and *Burkholderia rinojensis* - Timothy Johnson, Marrone Bio Innovations, U.S.A.
- Regulatory implications of new technologies - Roma Gwynn, Rationale, U.K.

Wednesday, July 27

CROSS-DIVISION SYMPOSIUM OF THE DISEASES OF BENEFICIAL INVERTEBRATES AND FUNGI DIVISIONS

Bioinformatic tools and methods in parasitology – B. Lovett, D. Bass & H. Hesketh

- High throughput sequencing and bioinformatic tools for invertebrate pathology - an overview- Ronny van Aerle, University of Exeter, U.K.
- Next generation sequencing - a powerful approach to assess potential effects of BCAs on microbial communities in soil - Juerg Enkerli, Agroscope, Switzerland
- Using dual-RNAseq to study host-pathogen interactions: data generation and analysis - Henrik H. De Fine Licht, University of Copenhagen, Denmark
- Big data and little *Metarhizium*: evolution and interactions of an endophytic insect pathogenic fungus- Brian Lovett, University of Maryland, U.S.A.

SYMPOSIUM OF THE BACTERIA DIVISION

Unity and diversity of entomopathogenic bacteria: from genomics to virulence mechanisms – S. Gaudriault & D. Clarke

- Insect pathogenicity determinants of plant-associated Pseudomonads - Christoph Keel, University of Lausanne, Switzerland
- *Photorhabdus* virulence cassettes: a nano-syringe based toxin secretion and delivery system - Nick Waterfield, Warwick University, U.K.
- Comparative genomics in the entomopathogenic genus *Xenorhabdus*: insight into the XaxAB binary cytolysin-encoding locus - Sophie Gaudriault, INRA, France
- Virulence determinants of the beepathogenic species *Paenibacillus* larvae - Elke Genersch, Institute for Bee Research, Germany
- *Photorhabdus* toxins affecting the cytoskeleton – Klaus Aktories, Freiburg Institute for Advanced Studies, Germany

SYMPOSIUM OF THE NEMATODE DIVISION

Harnessing metabolites from entomopathogenic nematode symbiotic bacteria for broad use – I. Hiltpold

- The regulation of secondary metabolism and natural product production in *Photorhabdus* - David Clarke, University College Cork, Ireland
- Identification and application of eicosanoid biosynthesis inhibitors synthesized by *Xenorhabdus* and *Photorhabdus* - Yonggyun Kim, Andong National University, South Korea
- Using *Photorhabdus* and *Xenorhabdus* metabolites for control of pecan and peach diseases - Selcuk Hazir, Adnan Menderes University - David Shapiro-Ilan, USDA-ARS, U.S.A.
- Natural products from entomopathogenic bacteria - from bugs to the clinic? - Helge Bode, Goethe-University Frankfurt am Main, Germany

NEMATODE DIVISION WORKSHOP

Shooting a worm - insights on nematode photography – J. Eisenback

DISEASES OF BENEFICIAL INVERTEBRATES DIVISION WORKSHOP

Coral diseases – M. Sweet

VIRUS DIVISION WORKSHOP

Taxonomy of polydnaviridae – M. Strand

BUSINESS MEETINGS: MICROBIAL CONTROL, NEMATODE, DISEASES OF BENEFICIAL INVERTEBRATES AND VIRUS DIVISIONS

Thursday, July 28

SYMPOSIUM OF THE VIRUS DIVISION

Viruses and in horizontal gene transfers – E. Herniou & J.M. Drezen

- Mechanisms of horizontal gene transfer in metazoans. - Chiara Boschetti, University of Cambridge, U.K.
- Evidence of recent interspecies horizontal gene transfer regarding nucleopolyhedrovirus infection of *Spodoptera frugiperda* - Mariano Belaich, Universidad Nacional de Quilmes, Argentina
- Continuous influx of genetic material from host to virus populations - Gilbert Clément, UMR CNRS 7267, Université de Poitiers, France
- *Microplitis demolitor* bracovirus DNAs integrate into the genome of host cells - Michael Strand, University of Georgia, U.S.A.
- Acquisition and domestication of bracoviral genes in *Spodoptera* spp contributes to their defense against pathogens - Salvador Herrero, Universitat de València, Spain

SYMPOSIUM OF THE MICROSPORIDIA DIVISION

Host pathogen interactions – S. Bjornson

- Inhibition of apoptosis is a universal mechanism for intracellular survival of microsporidia? - Yuliya Sokolova, Russian Academy of Sciences, Russia and Louisana State University, U.S.A.
- Mosquito-microsporidia model systems for understanding morphological and phylogenetic relationships - James Becnel, USDA/ARS, U.S.A.
- Pathogenicity, prevalence and intensity of a microsporidian infection by *Nosema fumiferanae postvittana* subsp. n. in the light brown apple moth, *Epiphyas postvittana*, in California - Julie Hopper, University of California, U.S.A.
- Comparative genomics of microsporidia that infect marine organisms - Bryony Williams, University of Exeter, U.K.

SIP ANNUAL BUSINESS MEETING

STUDENT BUSINESS MEETING

Friday , July 29

SUMMER SCHOOL ON INVERTEBRATE PATHOLOGY

Prevention and control of diseases and contaminants in insectaries – L. Castrillo, A. Jensen, C. Nielsen-LeRoux & E. Herniou *(Registration is closed, but you may place your name on a waiting list).*

Formats for contributed papers

Posters

Poster size should not exceed 82 cm in width by 142 cm in height. Adhesive tape will be provided.

Posters will be available for viewing at the same location as the coffee breaks and during the entire conference.

Oral communications

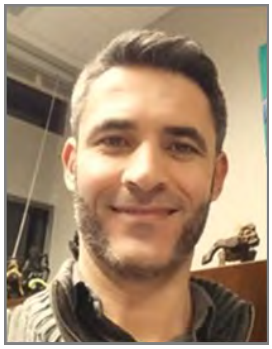
Oral presentations will be scheduled every 15 minutes (12 minutes for the presentation itself, followed by a question period of 3 minutes).

Symposium speakers should check with session organisers for their talk duration.

Check the conference website for updates on the scientific and social programs: http://sip2016tours.org/index.php

Meet the newly elected Members of the next SIP Council (2016-2018)…

Zhihong (Rose) Hu
Next Vice-President



Juan Luis Jurat-Fuentes
Next Secretary

Stefan Jaronski
Next (actually continuing) Treasurer

Helen Hesketh
Next Trustee

Sean Moore
Next Trustee

… and the newly elected Honorary Members of the Society

Max Bergoin

James Harper

Remembrances

Barbara Knowles

Dr. Barbara Knowles died on April 13, 2016 at the age of 55. Barbara studied at Cambridge University under Dr. David Ellar, where she did ground breaking research on the mode of action of *Bacillus thuringiensis*. This research resulted in nearly 30 publications. She then moved to public science policy at the U.K. Natural Environment Research Council and the Office of Science and Technology. She later became senior science advisor to the Royal Society of Biology.

Barbara became fascinated with the beautiful hayfields of the Eastern Carpathians of Transylvania, where she worked to promote sustainable rural development and traditional agriculture. She was influential in promoting hay making festivals, wild flower conservation and local cheese production. This project stimulated the interest of Prince Charles, who visited the region to learn about hay making in 2011. In 2014 Barbara was awarded the honor of Member of the Order of the British Empire.

In 2008 Barbara was diagnosed with motor neuron disease which led to a progressive loss of mobility and speech. Nonetheless she continued to be active in her work in sustainable development with the assistance of her colleagues at the Pogany-Havas Association in Transylvania. Barbara will be missed by her many friends and colleagues all over the world.

Obituary prepared by Elizabeth Davidson, Arizona State University, Avril 2016.

Karl Maramorosch

Professor *emeritus* and renowned scholar Karl Maramorosch was born January 16, 1915 and died of natural causes on May 9, 2016 at the age of 101 while visiting friends in Poland. He was born in Vienna where his family had fled at the outbreak of World War I to evade the advancing Tsarist Army. After the war, the family returned to their farm in eastern Poland where Karl attended primary and secondary schools, graduating from the Moniuszko Conservatory of Music in 1934. He considered becoming a concert pianist, but followed his father's footsteps in agriculture and entered Warsaw University, graduating *magna cum laude* in agricultural engineering in 1938. The same year he married his college sweetheart, Irene Ludwinowska, who was his steadfast companion for the next 70 years. His childhood dream of becoming a virologist was interrupted the following year when the Nazis and subsequently the Soviets invaded Poland. Karl and his young bride escaped across a heavily guarded bridge into Romania, disguised as a Polish army major and his wife. Here they were interred in refugee camps for the remainder of the war and where Karl became a skilled shoemaker. His parents, brother and 127 close relatives perished in the Holocaust.

Eager to escape for a third time, now from Soviet-occupied Romania, Karl obtained a sham transit visa from friends in the Swedish Embassy in Bucharest that took the couple through Czechoslovakia

and France to Sweden. Here the American Consul classified Karl as a 'skilled agriculturist" entitled to a First Preference immigration visa. They arrived in New York City on February 24, 1947. Karl entered Columbia University and received his Ph.D. in a mere two years while working as a technician at the Brooklyn Botanic Garden. Upon graduation he was hired by Rockefeller University and was finally free to independently pursue his long deferred scientific interests. Over the next 12 years, Karl was influenced by some of the most famous scientists of the time, particularly at Cold Spring Harbor where he worked most summers. He spent long hours with Luria, Delbruck, Mayr, McClintock, Hershey and scores of other luminaries. At Rockefeller, he modified the method of Weigl, who had been his brother's professor in Poland, to microinject plant pathogenic viruses and phytoplasmas into leafhopper vectors. This permitted him to obtain the first evidence that some plant pathogens multiply not only in plants but also in invertebrate vectors. He performed experiments definitively demonstrating that the agent causing aster yellows multiplies in its vector.

Karl moved from Rockefeller University to the Boyce-Thompson Institute in 1961 where he made his most important contributions. As Program Director of Virology, he and his coworkers were at the forefront of new and fascinating studies using the electron microscope to detect and characterize viruses and phytoplasmas in cells of diseased plants and insect vectors. In 1974, Karl joined the Waksman Institute at Rutgers University where he later earned the coveted title Robert L. Starkey Professor of Microbiology. In 1984, he made his final career move when he joined the Entomology Department at Rutgers. Invariably the first to arrive to work, Karl continued to write, edit, lecture, travel, organize international conferences and mentor over the next three decades, until an injury finally forced him to retire to his daughter Lydia's home in California. Advancing age did not dim his passion for travel as he demonstrated by visiting Mt. Kilimanjaro on his 98th birthday. When asked the secret for this exceptional vigor, he always responded "*never stop working*."

Karl pioneered insect tissue culture, making major advances to our understanding of the replication of plant-pathogens in insect vectors and the interactions between insects, viruses and plants. His research laid a foundation for diverse and increasingly important use of invertebrate-based *in vitro* expression systems used today in agriculture, medicine, drug discovery and mammalian cell gene delivery. His early enthusiasm for what was once a small and unrecognized field developed into an important branch of science now demonstrating its enormous potential including the first cancer vaccine.

Karl was a prolific writer and editor in serving the disciplines of virology, plant pathology and entomology with uninterrupted distinction across eight decades. He edited more than 90 volumes and authored or coauthored hundreds of journal articles covering his research interests in comparative virology, invertebrate cell culture, parasitology, plant and insect disease, spirochetes, viroids, phytoplasmas, spiroplasmas and biotechnology.

Karl's fluency in seven languages fueled his extensive international activities. When the Justus Liebig University in Germany invited him, Karl lectured in German. In Romania, as a guest of their Academy of Sciences, he made use of the Romanian he had acquired during World War II. In St. Petersburg, Moscow, Armenia and Uzbekistan, he lectured in Russian and in Poland in Polish. He used his 37 visits to India to secure sufficient grasp of Hindi to impress his audiences.

Recognized throughout his life with awards and accolades, Karl's proudest moment came in 1980 when he was awarded the $100,000 Wolf Prize, considered agriculture's equivalent of the Nobel Prize, "for his pioneering and wide-ranging studies on interactions between insects and disease agents in plants." Countless further awards followed including the Jurzykowski Award in Biology, the American Institute for Biological Sciences Award of Distinction and the Distinguished Service Award, the Japan Society for Promotion of Science Distinguished Professorship, two Fulbrights, Waksman Award and Medal, the American Association for the Advancement of Science Campbell Prize, the Distinguished Lifetime Achievement Award of the In Vitro Biology Society, the Warsaw University Award of Distinction and the Society of Invertebrate Pathology Founder's Lecture Honoree. He was elected to the German National Academy of Sciences, and was a Fellow of the American Association for the Advancement of Science, of the American Phytopathological Society, of the New York Academy of Sciences, of the

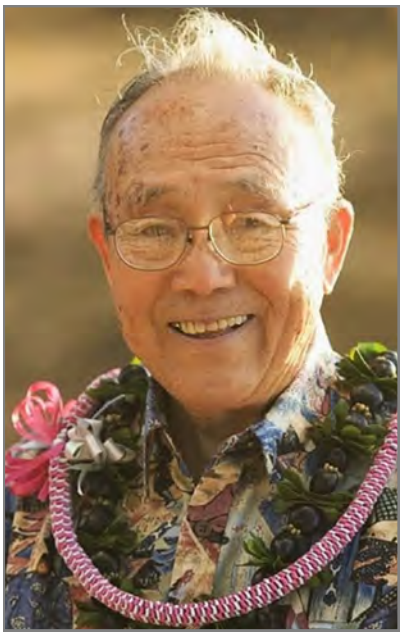
Indian Virological Society, of the Indian National Science Academy and others. He was an Honorary Member, Fellow and most significantly designated a "Legend" of the Entomological Society of America which also nominated him for the National Medal of Science. His alma mater awarded Karl an Honorary Doctorate which he received at a ceremony in Warsaw in October 2014.

Karl Maramorosch, eminent virologist, entomologist and plant pathologist, was a truly remarkable and multifaceted individual. Not only was he a celebrated scientist, but a gifted pianist, an amazing sleight of hand magician, a polyglot, a world traveler, an avid photo and videographer, and the owner of a phenomenal memory. Karl was an extraordinary person who lived an extraordinary life. He will be missed by all those whose lives he touched over his long life.

Safe travel, Karl.

Obituary prepared by Randy Gaugler, Rutgers University, May 2016.

Yoshinori "Joe" Tanada



Yoshinori ("Joe") Tanada, Professor Emeritus of Entomology and eminent insect pathologist at the University of California, Berkeley, was born on June 8, 1917 and passed away on May 24, 2016 in Oakland, California. He was born in Puuloa on the island of Oahu, Hawaii and always showed an interest in the biological sciences. After graduating from high school, he enrolled in the Department of Zoology at the University of Hawaii and majored in entomology earning a Bachelor of Science degree with Honors in 1940. Between 1941 and 1943, he worked in the Department of Chemistry as a stockroom clerk and then entered graduate school at the University of Hawaii as an Assistant in Zoology in 1943.

In 1945, with a Master of Science degree in hand, he was offered a position as a Junior Entomologist in the Agricultural Experiment Station at the University of Hawaii. Showing a strong interest in academic pursuits through his research and publications between 1945 and 1950, he was encouraged by several faculty members, especially Professor F. G. Holdaway, to pursue a study leave for a Ph.D. degree. In 1950, he entered the Ph.D. graduate program in entomology at the University of California, Berkeley where he focused in insect pathology under the mentorship of Professor Edward Steinhaus. His Ph.D. thesis was entitled "Infectious Diseases of *Pieris rapae*" and he conducted research on viruses, bacteria and fungi, including the microsporidia infecting the imported cabbage butterfly. Dr. Steinhaus suggested that he study the various pathogens of the imported cabbage butterfly so that he would be a well-trained insect pathologist in Hawaii. One of the most significant findings of Joe's research was that the nucleopolyhedrovirus (NPV) of *P. rapae* was not host specific. Prior to his study, the NPV of *P. rapae* was believed to be host specific.

His Ph.D. research completed, Joe returned to the University of Hawaii in 1952 as an Assistant Entomologist and completed all the requirements for a Ph.D. in Hawaii, which was awarded by UC Berkeley in 1953. He was appointed to the professorial series in 1954 and promoted to Associate Professor and Associate Entomologist in 1956. His research interests were on insect pests of orchids, the interactions of a microsporidian pathogen on a developing gregarious parasitoid in an infected imported cabbageworm and pathogens of insect pests in Hawaii with emphasis on viruses of the armyworm.

Shortly after Joe's promotion to the associate level, Professor Steinhaus recruited him as an Assistant Insect Pathologist in the Agricultural Experiment Station at UC Berkeley. He accepted this position and was tenured in 1959 to Associate Insect Pathologist and then promoted to Insect Pathologist in 1964. The following year, Joe received an appointment as Professor of Entomology and maintained

his Insect Pathologist title in the Agricultural Experiment Station. After a 28 year career at UC Berkeley, he retired in 1987 after working for 34 years as an insect pathologist in Hawaii and Berkeley. Although officially retired, Joe continued to review manuscripts for journals, edited manuscripts for colleagues whose first language was not English, completed writing up the last of his data from his own research and culminated his career by publishing the "Insect Pathology" textbook in 1993 (Academic Press, Inc.). Over his career, he published over 200 scientific articles including 97 that were in refereed journals, plus numerous book chapters and reviews, and co-edited two books, one with Hisao Aruga entitled "The Cytoplasmic-Polyhedrosis Virus of the Silkworm" (University of Tokyo Press, 1971) and the other with James R. Fuxa entitled "Epizootiology of Insect Diseases" (J. Wiley & Sons, 1987).

Dr. Tanada had a distinguished career in insect pathology and conducted research on all pathogen groups with particular emphasis on insect virology. His pioneering research in insect pathology demonstrated how pathogens interact with each other, which added significantly to our basic understanding of the infectious process, especially with insect viruses. In 1959, he published a seminal paper entitled "Synergism between two viruses of the armyworm, *Pseudaletia unipuncta* (Haworth) (Lepidoptera, Noctuidae)" (J. Insect Pathol. 1:215-231) where he demonstrated that a granulovirus synergized the NPV of the armyworm. This paper would be the basis for much of his research career at UC Berkeley until his retirement. His last paper on this subject was published two years after he retired (Uchima, K., Egerter, D. E. and Tanada, Y. 1989. Synergistic factor of a granulosis virus of the armyworm, *Pseudaletia unipuncta*: its uptake and enhancement of virus infection *in vitro*. J. Invertebr. Pathol. 54:156-164). Other researchers, especially Dr. Robert Granados at Boyce Thompson Institute, took the banner and conducted further research on the synergistic factor. The foundation laid by Dr. Tanada led Dr. Granados to further delineate the pathways by which the NPV and granulovirus gain entry to their hosts via the midgut epithelium. Moreover, Dr. Granados showed that granuloviruses had a class of metalloproteases, the enhancins (i.e., the synergistic factor), that assisted and enhanced viral entry through the mid-intestinal epithelium. The granulovirus enhancins have been reported from other laboratories and have been engineered in rice to create insecticidal rice plants in Japan.

Joe was a strong advocate for invertebrate pathology. He taught an insect pathology course at the University of Hawaii and then at UC Berkeley that provided the basic foundation for graduate students to understand the biology of insect pathogens, the infectious process, epizootiology and microbial control. He wrote a very useful laboratory manual for students to have hands-on experience with insect pathogens. He served as major professor for two M.S. and seven Ph.D. students and was generous with his time to encourage them in their thesis research. His generosity extended into his retirement years. He gladly gave permission to Fernando E. Vega and me to serve as co-editors for the second edition of "Insect Pathology" which was published by Academic Press in 2012. Moreover, he was pleased when we informed him that all the contributing authors of the book would forego the royalties for their contributions and agreed to donate them to the Chris J. Lomer Memorial Fund to defray travel expenses for scientists from developing countries to attend the annual meeting of SIP.

He was instrumental in the development of insect pathology in Japan. He was awarded a one year Fulbright Fellowship (1962-1963) to conduct research at the University of Tokyo, that established a long lasting relationship with many established and up and coming Japanese scientists, and many of them conducted research in his Berkeley laboratory on insect viruses. In 1980, Joe received an award from the Japan Society for the Promotion of Science and spent three months at the University of Tokyo to conduct research in insect pathology. Besides Japan, he served as a consultant for a number of national and international agencies including the US Army (1950), South Pacific Commission (1959), FAO, United Nations to Thailand (1971), Government of the Azores (1972), Western Samoa and Tonga (1972) and FAO.

One of the founding members of SIP in 1967, Dr. Tanada was a very active member throughout his career. He served as Treasurer (1972-1974), Trustee (1976-1980) and on numerous committees. He contributed significantly to the establishment of the *Journal of Insect Pathology* serving as Acting Edi-

tor in 1960 as well as being on the editorial board from 1961-1964. After the journal was renamed the *Journal of Invertebrate Pathology*, he served on the editorial board from 1970-1972 and 1977-1982.

Joe received a number of SIP awards during his scientific career: Founder's Lecture Speaker honoring Professor Steinhaus (1984); Honorary Member (1988); and Founder's Lecture Honoree (1999). He was elected Fellow of the American Association for the Advancement of Science in 1964 and after he retired, he received the Japanese Government Research Award for Foreign Specialists in 1989 and was recipient of the Lifetime Achievement Award from the Hawaiian Entomological Society in 1997.

On the personal front, he married Edna Noriko Saito in 1949 and had two daughters, Karen and Ruth. In his spare time, he loved fishing for salmon and striped bass in San Francisco Bay on party boats and from shore for shad on the Sacramento River and on various inland lakes and streams for trout. He enjoyed gardening and was especially proud of his orchid collection, which he shared with friends and colleagues. In 1999, his two daughters invited a number of relatives, friends and colleagues to Joe's and Edna's 50th wedding anniversary in Las Vegas. The three-day affair was filled with lots of sight-seeing, entertainment and food which everyone enjoyed. Joe is survived by his wife, two daughters and a granddaughter.

His friends and colleagues always called him Joe and he signed off on less formal letters to people who knew him as Joe rather than Y. Tanada. How did he acquire the nickname Joe? When he was a graduate student at the University of Hawaii in 1943 during WWII, a close faculty friend gave him his nickname after GI Joe. He adopted the nickname and always had it in parenthesis when he signed off on any correspondence.

Yoshinori "Joe" Tanada was a noted insect pathologist who made many significant contributions to the discipline. His pioneering research on a granulovirus being synergistic to the NPV of the armyworm laid the foundation on understanding the infectious process of insect viruses. He was dedicated to, and served as an ambassador for the discipline. He was a gentle giant and will be missed by his family, friends and colleagues.

Obituary prepared by Harry Kaya, University of California, Davis, June 2016.

News and Announcements

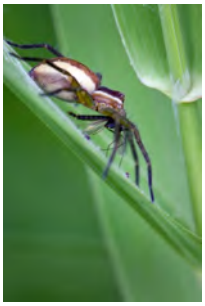
Microbial Control News

Do not miss in the next SIP Newsletter (November 2016 issue), a "Microbial Control News" full page report by our SIP colleague Stefan Jaronski, identifying significant commercial events!

Meetings

XXV International Congress of Entomology (ICE)
September 25-30, 2016, Orlando, Florida, U.S.A.

Visit: http://ice2016orlando.org



3rd Symposium on Ecological Networks and 3rd Symposium on Molecular Analysis of Trophic Interactions

September 11-15, 2017, Uppsala, Sweden

Bringing together researchers and students in trophic interactions and network ecology

Visit: https://www.slu.se/en/Collaborative-Centres-and-Projects/centre-for-biological-control-cbc/ecology-conference/

Bacillus ACT 2017

Late Summer/Fall 2017

The next *Bacillus anthracis, B. cereus & B. thuringiensis* (Bacillus ACT) meeting will be scheduled for late summer to fall of 2017. We are underway with the selection of the venue and dates. Once this process is final, we will send a "Save the Date" message with more details.

This biannual conference brings together scientists performing basic and translational research related to *Bacillus anthracis, B. cereus and B. thuringiensis* and related bacteria. Areas to be addressed at the conference include: genomics, epidemiology, ecology, cell structure and function, gene regulation, bacterial development, toxins, bacteria - host interactions, and the development of diagnostics, vaccines, and therapeutics for anthrax.

We welcome you as an integral part of this stimulating conference and we are looking forward to seeing you in 2017.

Questions? Please contact:
Stacy Castro, castro19@llnl.gov or Adam Driks, adriks@luc.edu

Position available *(deadline for applying: June 30, 2016)*

UF IFAS
UNIVERSITY of FLORIDA

Entomology & Nematology Department
Steinmetz Hall
1881 Natural Area Drive
(352) 273-3901
(352) 392-0190 (Fax)
http://entnem.ifas.ufl.edu/

POSITION ANNOUNCEMENT # 00013269
Requisition # 497420

Title: **Assistant Professor in Insect Pathology/Symbiosis**

Location: **Entomology & Nematology Department**
University of Florida
Institute of Food and Agricultural Sciences (IFAS)
Gainesville, Florida

Salary: **Commensurate with Qualifications and Experience**

Review Date: **For full consideration, candidates should apply and submit additional materials by June 30, 2016. The position will remain open until a viable applicant pool is determined.**

Duties and Responsibilities

This is a 12-month tenure-accruing position that will be 80% research (Florida Agricultural Experiment Station) and 20% teaching (College of Agricultural and Life Sciences), available in the Entomology & Nematology Department, Institute of Food and Agricultural Sciences, at the University of Florida. This assignment may change in accordance with the needs of the unit. Tenure will accrue in the Entomology & Nematology Department.

This faculty member's proposed research should target the mechanisms underlying host-microbe interactions of both pest and beneficial insects. Research may involve identification of either defense/resistance mechanisms that affect pathogen virulence or specific virulence factors that can be exploited for insect control. Microbial interactions that impact host nutrition, development, and/or responses to environmental stresses (*e.g.*, temperature, chemical exposure) also are of interest. The faculty member's research, incorporating collaborative efforts, should develop his or her discoveries into novel management approaches. The faculty member will actively seek federal and private contract and grant funding to support and to develop an internationally recognized, competitive insect pathology/microbiology research program.

The faculty member will participate actively in undergraduate and graduate education by supervising undergraduate, thesis, and dissertation research, publishing the results with his/her graduate students, as well as by serving on additional graduate committees. Other expectations include engaging in scholarly activities such as participating in curriculum revision and enhancement, seeking funding for the teaching program, publishing teaching-related scholarship, producing learning tools, and engaging in professional development activities related to teaching and advising. The faculty member should support and participate in the CALS Honors Program, distance education, and international education.

Because of the IFAS land-grant mission, all faculty are expected to be supportive of and engaged in all three mission areas—Research, Teaching and Extension—regardless of the assignment split specified in the position description.

Qualifications

A doctorate (foreign equivalent acceptable) in Entomology, Microbiology, Comparative Pathology and Immunology, or a closely related discipline is required. Post-doctoral research and training in molecular and cell biology, genomics, and bioinformatics is desirable. Candidates should have demonstrated skills in verbal and written communication, interpersonal relationships, and success in the procurement of extramural funding. Candidates must be supportive of the mission of the land-grant system. Candidates also must be committed to IFAS core values of excellence, diversity, global involvement, and accountability.

Background Information

The Entomology and Nematology Department (http://entnemdept.ufl.edu/) has diverse teaching, research, and extension programs with 29 faculty members located on the main campus in Gainesville plus 38 faculty located at 11 Research and Education Centers (RECs) throughout the state.

The University of Florida (http://www.ufl.edu) is a Land-Grant, Sea-Grant, and Space-Grant institution, encompassing virtually all academic and professional disciplines, with an enrollment of more than 50,000 students. UF is a member of The Association of American Universities. The Institute of Food and Agricultural Sciences (http://ifas.ufl.edu) includes the College of Agricultural and Life Sciences (http://cals.ufl.edu), the Florida Agricultural Experiment Station (http://research.ifas.ufl.edu), the Florida Cooperative Extension Service (http://extension.ifas.ufl.edu), the College of Veterinary Medicine (http://www.vetmed.ufl.edu), and the Florida Sea Grant program (http://www.flseagrant.org/), and it encompasses 16 on-campus academic departments and schools, 12 Research and Educational Centers (RECs) located throughout the state, 6 Research sites/demonstration units administered by RECs or academic departments, and Florida Cooperative Extension Service offices in all 67 counties in the state, which the counties operate and maintain. Further, the School of Natural Resources and Environment is an interdisciplinary unit housed in IFAS and managed by several colleges on campus. IFAS employs over 2500 people, including approximately 900 faculty and 1200 support personnel located in Gainesville and throughout the state. IFAS, one of the nation's largest agricultural and natural resources research and education organizations, is administered by a Senior Vice President and four deans: the Dean of the College of Agricultural and Life Sciences, the Dean for Extension and Director of the Florida Cooperative Extension Service, the Dean for Research and Director of the Florida Agricultural Experiment Station, and the Dean for the College of Veterinary Medicine. UF/IFAS also engages in cooperative work with Florida A&M University in Tallahassee.

Employment Conditions

This position is available September 1, 2016, and it will be filled when a suitable applicant is available. Compensation is commensurate with the education, experience, and qualifications of the selected applicant.

Nominations

Nominations are welcome. They need to include the complete name and address of the nominee. This information should be sent to the address below.

Application Information

- Individuals wishing to apply should go online to http://explore.jobs.ufl.edu/cw/en-us/job/497420 and submit:
  - Application
  - Cover letter that states applicant's interest in the position and qualifications relative to the credentials listed above
  - Statement of research interests and teaching philosophy
  - Curriculum vitae
  - Contact information (including email addresses) for three individuals willing to write letters of recommendation

Please refer to Requisition # 497420
Dr. Phillip Kaufman
Chair, Search and Screen Committee
University of Florida
Entomology & Nematology Department
Steinmetz Hall
1881 Natural Area Drive
Gainesville FL 32611-0620

Telephone: 352-273-3904
Facsimile: 352-392-0190
Electronic Mail: pkaufman@ufl.edu

The final candidate will be required to provide an official transcript to the hiring department upon hire. A transcript will not be considered "official" if a designation of "Issued to Student" is visible. Degrees earned from an education institution outside of the United States are required to be evaluated by a professional credentialing service provider approved by National Association of Credential Evaluation Services (NACES), which can be found at http://www.naces.org/ .

The University of Florida is an Equal Opportunity Institution dedicated to building a broadly diverse and inclusive faculty and staff. The selection process will be conducted in accord with the provisions of Florida's 'Government in the Sunshine' and Public Records Laws. Persons with disabilities have the right to request and receive reasonable accommodation.

The Foundation for The Gator Nation

Reminder: check out the SIP Facebook Page!

The SIP Facebook page, liked by 726 people at the time of writing, provides a venue for news, information, photographs and videos relating to invertebrate pathology and to the Society's events. You can reach the page from the SIP home page (www.sipweb.org) by clicking on the **Facebook icon** (at lower right).

The Facebook page, which is overseen by the SIP Publications Committee, is managed by representatives from each SIP division: Bacteria, Juan Luis Jurat-Fuentes and Eva Fortea (student); DBI, Grant Stentiford and Kelly Bateman; Fungi, Helen Hesketh; MCD, Ken Narva; Nematode, Rousel Orozco (student); Virus, Bryony Bonning (lead administrator) and Eric Haas-Stapleton; Multi-Division, Lerry Lacey.

We invite you to LIKE the SIP Facebook page and to post invertebrate pathology-related news and photographs, including from past meetings.

Still looking for SIP Ambassadors!

We are still looking for SIP ambassadors to represent us globally and to connect with SIP members and future SIP members throughout the world.

The SIP has instituted an **Ambassador Program** to improve our outreach and familiarize colleagues throughout the world about SIP and to encourage them to participate in SIP meetings and become members.

The ambassadors will serve a three-year term, renewable for a second three-year term. To that end, we are asking for nominations (self nominations will also be considered) for **SIP Ambassadors** to represent SIP in different large and small geographic regions of the world (cantons to continents).

The **nominees** should be long serving SIP members, be familiar with SIP and be willing to further the outreach of SIP. Once nominations have been received the SIP Council will select the final slate of ambassadors.

Please submit your nominations (self-nominations accepted) and short bios to either President Peter Krell (pkrell@uoguelph.ca) or Surendra Dara (Chair of the Membership Committee, skdara@ucanr.edu). Looking forward to hearing from you to make SIP truly an international society.

The cerulean chafer beetle

(*Hoplia coerulea*)

La hoplie bleue

The emblematic scarabaeid beetle of the Loire Valley.

Photo : © - Christophe RAIMBAULT - Cg37

The **Château de Candé,** a castle located in the commune of Monts, Indre-et-Loire, 10 km (6 mi) to the south of Tours, on the border of the Indre River in France.

SIP
SOCIETY FOR INVERTEBRATE PATHOLOGY
Tours 2016