INTERNATIONAL NEWSLETTER ON PLANT PATHOLOGY

ISPP Newsletter 45 (9) September 2015

News and announcements from all on any aspect of Plant Pathology are invited for the Newsletter. Contributions from the ISPP Executive, Council and Subject Matter Committees, Associated Societies and Supporting Organisations are requested.

Editor: Daniel Hüberli (E - mail)

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Notice for the ISPP Council

During September 2015, a motion for amendment of some of the Rules under the Statutes of the ISPP will be sent to ISPP Councillors for voting by the end of October 2015.

The changes concern procedures for the nomination of the next Executive of the International Society for Plant Pathology (which will be elected for the term 2018-2023 during 2016-2017) and Rules concerning the hosting of the International Congress of Plant Pathology (which will be next selected during 2016 in a call for bids by ISPP Associated Societies to host the International Congress of Plant Pathology in 2023 (ICPP2023).

The changes will be

a. to allow appointment of an ISPP Executive Nominations Committee comprising the Immediate Past President (chair) and six other members (as opposed to five under current rules) and
b. to specify that copies of all bids proposed for hosting of the International Congress of Plant Pathology must will be sent to all members of the Council by the ISPP Executive (and not the bidding organization). This is to avoid any perception of bias in the circulation and voting responses to bids submitted.

Councillors and others should note that nominations and voting involves Councillors of Associated Societies only. Under existing ISPP Rules, the processes and enquiries are not open to Convention or Congress venues or Promotion Bureaus. Enquiries about the voting procedure by Associated Society representatives or Councillors can be directed to the ISPP Business Manager.

Honor for Dr Serge Savary, Vice President of the International Society for Plant Pathology

Dr Serge Savary, Vice president of the International Society for Plant Pathology has been recognised by the Government of France for special distinction in services to agriculture through the award of Chevalier Ordre du Mérite Agricole (Knight in the Order of Agricultural Merit).

Dr Savary was born in Ethiopia, educated in France, and completed a PhD in Phytopathology at Wageningen University. He has worked some 30 years, mostly in the tropical world (West Africa, Central America, Asia), and Europe (France, The Netherlands: Fellowship of the Wageningen Agricultural Centre), with a focus on: plant disease epidemiology, simulation modelling, surveys in farmer's fields, IPM, crop loss assessment and modelling, and systems analysis. His career has included service with French research institutes (ORSTOM and

INRA), and IRRI.

His career has had a strong emphasis on professional service and networking, as member of several American Phytopathology Society (APS) committees, and of the BSPP; member of the Epidemiology Committee and the ISPP Taskforce on Global Food Security; founding Chair of the ISPP Subject Matter Committee for Biotic Constraints to Food and Fibre Production; organiser of the 9th International Epidemiology Workshop (Landernau, France); reviewer for several journals of the field. He has also been active in fund raising for international agricultural research (member of a four-scientist proposal development team for the Cereal System Initiative for South Asia to the B&MGF and USAID), and European, national, or local grants.

As Vice President of the ISPP Serge is fostering activities focusing on: food security and safety; other ecosystem services, which have been ignored for too long; and thus greater connections of plant pathology with other disciplines, from social to ecological sciences. While contributing to achieving food security and safety remains a primary goal of plant pathology, Dr Savary believes that such expansions will renew approaches in our field, attract young professionals, and increase our impacts. Such a broader context will increase the scientific scope of plant pathology, and enhance inputs to societies' needs.

(G. Johnson, ISPP President)

Latest plant sciences special issues from Springer

Springer has setup a page which lists recent special issues and calls for papers in Plant Sciences. All special journal issues are free to read through August 31, 2015.

Special issues highlights include:

- Wild Plant Pathosystems (European Journal of Plant Pathology)
- Collection of frontier phytopathological research in Japan to celebrate the 100th anniversary of the Phytopathological Society of Japan (PSJ) (Journal of General Plant Pathology)
- Microbial ecology in soil-plant interactions (Plant and Soil)
- Living with extremes: the dark side of global climate change (Plant Ecology)

View special issues page.

Plant pathologist's experience as a volunteer in Laos PDR

This short video covers the work and experience of volunteer Kylie Ireland in Laos PDR, where she is part of a sustained effort The Crawford Fund (http://www.crawfordfund.org/) has made with training around plant protection, biosecurity and food safety. Volunteer placements have been helping in those efforts, which are being managed and mentored by eminent plant pathologist Lester W. Burgess FAPPS FAPS, who is a member of our NSW Committee and an Honorary Professor at the University of Sydney, where he was formerly Dean of Agriculture. The Crawford Fund partners with the Australian Government's Australian Volunteers for International Development (AVID) program, managed by Scope Global, to place young Australians in developing countries in both scientific and communications positions including Indonesia, Philippines, Sri Lanka, China, Bangladesh, Fiji, Laos, Ghana, Kenya, Ethiopia and Vietnam.

https://www.youtube.com/watch?v=8o0a7FmxwQU

Botany 2015 Science and Plants for People, July 25-29, 2015

This year, the Canadian Phytopathological Society (CPS) met jointly with Plant Canada. Plant Canada is an umbrella organization for six Canadian plant societies including, CPS, Canadian Botanical Association (CBA), Canadian Society of Agronomy (CSA), Canadian Society for Horticultural Science (CSHS), Canadian Society of Plant Biologists (CSPB) and Canadian Weed Science Society (CWSS). Plant Canada holds national scientific meetings once every four years, with one of the six member societies hosting the conference. This year, Plant Canada (with CBA as a host for 2015) co-organised its 1st international meeting entitled "Botany 2015 Science and Plants for People" with the Botanical Society of America from July 25-29 in Edmonton, Alberta, Canada.

A total of 14 plant scientific societies or organizations from Canada and the USA participated in the international meeting: American Fern Society, American Bryological and Lichenological Society, American Society Plant Taxonomists, Botanical Society of America, International Association for Plant Taxonomy, Mycological Society of America, Society for Herbarium Curators, CBA, CPS, CSA, CSHS, CSPB and CWSS.

The Presidents or the representatives of the participating Canadian and American plant societies at Botany 2015, Science and plants for people meeting in Edmonton, Alberta, Canada. Back row from left: Drs. Jon Shaw (President, American Bryological and Lichenological Society), Pat Herendeen (President, American Society Plant Taxonomists), Tom Ranker (President, Botanical Society of America). Middle row from left: Drs. Vincenzo DeLuca (President, Canadian Society of Plant Biologists), D. Jean Dodge (President, Mycological Society of America), Shahrokh Khanizadeh (Past President, Plant Canada), John Markham (President, Canadian Botanical Association). Front row from left: Drs. Samir Debnath (President, Canadian Society for Horticultural Science), Deena Errampalli (President, Plant Canada and President, Canadian Phytopathological Society), Mary Stensvold, (Secretary, the American Fern Society) and Karol Marhold (Secretary, International Association for Plant Taxonomy). Photo courtesy: Bill Dahl, BSA.

Over 1620 delegates from five continents attended the Botany 2015, Science and Plants for people meeting from July 25-29, 2015 in Edmonton, Alberta, Canada and explored a wide-range of recent advances in plant sciences. The scientific program had a total of 1396 abstracts. There were 13 special addresses, 689 papers, 480 posters, 22 symposia with 191 symposia speakers, 3 colloquia, 6 discussion sessions, many contributed paper sessions and 17 workshops. At this meeting 23 field trips were organised. The Plenary lecture of the conference titled, "Botany is cool: so why doesn't the public know that?" was presented by Ken Thomson from University of Sheffield, United Kingdom.

A highlight of the symposia at the Botany 2015 meeting was that co-sponsorship of a symposium by at least two different plant societies allowed for interaction and collaboration between different plant scientific societies. The titles of the 22 symposia shows the diversity of the subject matter that was presented and discussed at this meeting Basic and applied approaches to improve disease resistance in plants; Underutilized Crops for Secure and Green Futures; Celebrating More Than Three Decades of Research in Nymphaeales: A Colloquium Honoring Ed Schneider; Ecological impacts and restoration of industrial sites: roles of bryophytes and graminoid vascular plants; What can Next Generation Fungal Genome Sequencing do for you?; Integrated perspectives on the ecology, genetics and coevolution of intimate mutualisms; Advances in Modelling Plant Development; The rise and fall of photosynthate: Evolution of plant/fungus interactions from paleobotanical and phylogenomic perspectives; Desiccation tolerance in bryophytes: perspectives from early career scientists; Lab Bench to Boardroom: Developing Plant Science Ideas; Forest Tree Responses to a Changing Climate; The negotiated surveillance of parts and wholes: a symbioses-centered perspective on plant biology research; Ecological diversification and niche evolution in the temperate zone largest genus: Carex; Mesozoic and Cenozoic plant evolution and biotic change: A symposium in honor of Ruth Stockey; The evolutionary importance of polyploidy; Plant Resilience to Climate Challenges; Phylogenetic approaches to understanding biodiversity and endemism.

The Botany 2015, Science and Plants for people meeting In Edmonton, Canada was a great success, it provided the stage for an international perspective and North American specific focus and allowed for networking and discussion opportunities for the delegates and members belonging to 14 plant societies.

The Scientific Program Book for the joint meeting "Botany 2015 Science and Plants for People" is available at: http://www.plantcanada.ca/proceeding/2015/index.html

(Deena Errampalli, Immediate past President, Canadian Phytopathological Society and President, Plant Canada)

American Phytopathological Society Annual Meeting, 1-5 August 2015

More than 1,600 people met in Pasadena, California, USA, to discuss the latest discoveries in plant pathology

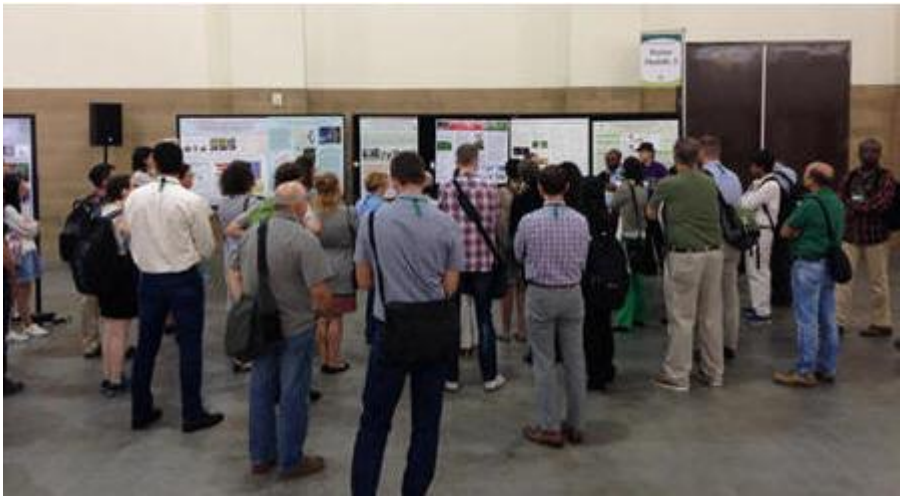
and related fields.

With 24 special sessions, 33 technical sessions, two PhytoViews, and 15 Idea Cafés, the Scientific Sessions provided in-depth information on important and trending industry topics. There were 761 posters showcasing the latest research in the field, with 8 well-attended poster huddles bringing together similar topics and creating an atmosphere for exciting discussion.

The California backdrop also offered many opportunities for attendees to learn outside of the conference room through engaging hands-on field trips.

A selection of special sessions from the meeting were live-streamed and these are accessible as videos on the APS website.

Scientific session



Poster huddle

(APS, 18 August 2015)

Programme for 18th International Plant Protection Congress, 24-27 August 2015

The scientific programme is now available online and downloadable as a PDF from the conference website.

Programme for Australasian Plant Pathology society conference, 14-16 September 2015

The scientific programme is now available online and downloadable as a PDF from the conference website.

Invasive alien species: Czech contribution to challenges in European research and policies

On June 3, 2015, the Czech Liaison Office for R&D (CZELO), together with the Permanent Representation of

the Czech Republic to the EU in Brussels, organised a half-day conference in Brussels on invasive alien species (IAS) and diseases. The aim was to discuss related challenges in Europe and the impact of IAS and diseases on the development of EU policies in the field of agriculture and environment. The conference presented policy views on IAS and diseases and agricultural research, as well as the views of stakeholders (researchers from the Czech Republic and other European countries). The PLANTFOODSEC lead partner participated at the event and presented the project's main objectives, results and impacts.

The presentations are available on the website of the Czech Liaison Office for Research, Development and Innovation.

Read more.

(The Biosecurity Telegram, Issue 8, July 2015)

Soil health paradigms and implications for disease management

A review by R. P. Larkin "Soil health paradigms and implications for disease management" was published in August 2015 by *Annual Review of Phytopathology* (vol. 53, pp. 199-221). The abstract is as follows:-

Soil health has been defined as the capacity of soil to function as a vital living system to sustain biological productivity, maintain environmental quality, and promote plant, animal, and human health. Building and maintaining soil health are essential to agricultural sustainability and ecosystem function. Management practices that promote soil health, including the use of crop rotations, cover crops and green manures, organic amendments, and conservation tillage, also have generally positive effects on the management of soilborne diseases through a number of potential mechanisms, including increasing soil microbial biomass, activity, and diversity, resulting in greater biological suppression of pathogens and diseases. However, there also may be particular disease issues associated with some soil health management practices. In this review, research and progress made over the past twenty years regarding soil health, sustainability, and soil health management practices, with an emphasis on their implications for and effects on plant disease and disease management strategies, are summarized.

See: http://dx.doi.org/10.1146/annurev-phyto-080614-120357

9th Australasian Soilborne Diseases Symposium, 14-18 November 2016

The 9thASDS will be held in the spa resort township of Hanmer Springs, North Canterbury, New Zealand, in the early summer of 2016, under the auspices of the Australasian Plant Pathology Society (APPS).

The Symposium will include inputs from plant pathologists and other researchers, who study soilborne plant pathogens and the diseases they cause, soil health, microbiology and related ecology, in forestry, pasture, arable, fruit and vegetable crops, and natural environments.

Symposium themes (and Keynote Speakers) will include:

- **Biocontrol** (Prof Gabriele Berg, Austria)
- **Soil Health** (Prof Jos Raaijmakers, the Netherlands)
- **Biosecurity** (Dr Treena Burgess and Dr Nick Waipara)
- **Disease Management** (Dr Steve Johnson, USA)
- **New Technologies/Diagnostics** (Dr Andy Pitman)

The Symposium will also consider research on all aspects of soilborne plant diseases, through offered papers, delivered as poster or oral presentations.

The village of Hanmer Springs is a "magical" place, surrounded by mountains and forests, with crisp alpine air. Beside the lure of plant pathology and soil (!!), attractions include boutique shopping, excellent cafes and restaurants, an 18 hole golf course, farm parks and adventure activities (e.g. fishing, hunting, jet boating, bungy jumping). A key attraction is the award-winning Hanmer Springs Thermal Pools and Spa.

Key dates

4 April 2016	Registrations open
9 Sept 2016	Early registration discount ends
	Last day for abstract submission
3 Oct 2016	Notification of paper acceptance
28 Oct 2016	Registrations close

Note: reduced registration expenses for Students

9th ASDS website address: www.lincoln.ac.nz/ASDS

The bacterium of many colors - APS Press book

As George Santayana once said, "Those who do not remember the past are condemned to repeat it."

Through 'The bacterium of many colors,' a new title from APS Press, plant pathologist and history enthusiast Robert M. Harveson helps researchers and professionals alike learn from the past through a fascinating collection of stories chronicling some of the most significant events, people, and lessons that shaped plant pathology into the discipline it is today.

This new book highlights outbreaks from the obscure to the infamous, covering a range of pathogen types, including fungi, bacteria, viruses, nematodes, phytoplasmas and prokaryotes.

Early chapters provide foundational knowledge about the major pathogen groups and how the diseases they cause were discovered and studied. Remaining chapters feature a variety of engaging stories that can be read independently in any order. Many of these chapters address specific diseases and are arranged in three broad parts: consequences of human error; novel control strategies; and important findings related to key pathological and scientific concepts.

Topical focus and biographical profile sidebars add more 'colour' to the stories and help the reader explore subjects in greater depth. They also help provide readers with a greater understanding of and insights into the key topics and the individuals who shaped the plant pathology discipline. The book is well illustrated with nearly 300 images.

The 'Bacterium of many colors' will also be available at discounted prices for the Kindle, as well as Apple iOS and Android devices with Kindle app, for students in non-major science courses and for personal use. Visit www.shopapspress.org to learn more about this and other important titles from APS PRESS.

(APS Press, June 2015)

Probiotics for plants: Endophytic bacteria promote growth

Scientists have known for decades that plants like legumes have beneficial bacteria which "fix" nitrogen in nodules attached to their roots. Researchers have recently found some nitrogen-fixing bacteria actually live inside plant tissue including leaves, stems, and roots. Sharon Doty, an associate professor at the University of Washington, was one of the first to discover these bacteria, and their successful transfer between plants.

Doty and her team isolated endophytes from poplar and willow trees. These trees thrived despite a rocky, forbidding surround. Doty then transferred the endophytes to rice plants which resulted in larger and taller plants with fuller root systems-despite limited nitrogen conditions in the greenhouse.

This endophyte-plant relationship is partly a matter of speed in adaptation. "Plants have a limited ability to genetically adapt to rapid environmental changes (heat, drought, toxins, or limited nutrients) and so they may use microbes that do have this capacity to rapidly evolve due to their vastly shorter life cycles," she explained. "By having the right microbes for the conditions, the plants are healthier. That is how it is similar to humans taking probiotics to improve their health."

And the environmental payoff? Farmers could use less chemical fertilizers to give plants the nitrogen they need. Because runoff from these fertilizers can be harmful to surrounding ecosystems, being able to use less is great news and can even decrease greenhouse gas emissions, added Doty. "This research offers the potential alternative for chemical fertilizers in crop production, thus aiding sustainable agriculture with minimum impacts on the environment."

This benefit is not limited to rice. "Research on endophytic nitrogen-fixation has enormous potential benefits since endophytes have a very broad host range," she said. "Unlike root nodules that are limited to a few plants, endophytic nitrogen-fixation could be used for any plant species." The endophytes of poplar and willow can also provide growth benefits for such diverse species as corn, rice, ryegrasses, tomato, pepper, squash, Douglas fir, and western red cedar.

The next steps in this work have practical applications. Doty's lab is collaborating with an agricultural company to take advantage of these bacteria on a large scale. This could include seed coating or spraying.

Doty's research is published in Crop Science

(PhysOrg, 8 July 2015)

Acknowledgements
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