APPS NEWS

AUSTRALASIAN PLANT PATHOLOGY SOCIETY

APPS Newsletter Vol 23, No 2 **August 2010**

In this edition:

APPS NEWS is the official newsletter of the Australasian Plant Pathology Society, published electronically 3 times per year. Items for inclusion should be sent to Mrs B. Hall, Plant Research Centre, SARDI, GPO Box 397, Adelaide, SA. 5001. Ph. 08 8303 9562, Fax 08 8303 9393, Email: barbara.hall@sa.gov.au. **Next deadline: 26 November 2010**

Editor-in-Chief APP: Phil O'Brien, School of Biological Sciences & Biotechnology, Murdoch University, South St, MURDOCH, WA 6150. Ph 08 9360 2785, E-mail p.obrien@murdoch.edu.au

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President's Message:

Myrtle rust (*Uredo rangelii*) was detected on 23 April 2010 on a cut flower growing property on the central coast of NSW (Australasian Plant Pathology, 2010, 39, 463–466). The rust has since been confirmed on several myrtaceous plants including *Agonis flexuosa* (willow myrtle), *Syncarpia glomulifera* (turpentine) and *Callistemon* (bottlebrush) species. Myrtle rust can be regarded as a member of the *Puccinia psidii* sensu lato (guava rust) complex. However with three matching gene regions to *Puccinia psidii* found in Brazil and Hawaii, myrtle rust can indeed be said to share very close similarities with guava rust! Thus this incursion of 'myrtle rust' may lead to significant damage to Myrtaceae in Australia, encompassing a wide range of species in the natural environment and commercial species such as forest hardwoods (*Eucalyptus* and *Corymbia*), garden plants and cut flowers. Guava rust also has a reported capacity to evolve and extend its host range. Climate mapping indicates that guava rust could establish in a large proportion of Australia's World Heritage Rainforest.

This incursion did demonstrate the role that APPS can play nationally. Initially the response to myrtle rust was a muted affair and the emergency response to this pathogen was quickly stood down. APPS issued a press release questioning this decision not to eradicate and also lobbied various government ministers and heads of relevant agencies. This led to media interviews and reports in the national media. Eventually the decision not to eradicate was reversed and infected material at the outbreak properties in NSW has been destroyed. I have to especially remark on the hard work and determination of one of our members, Dr Angus Carnegie and his team in NSW in leading the eradication response against myrtle rust. Surveillance is ongoing and we wait to see what will happen in spring when the weather starts to get warmer.

Caroline Mohammed and the Management Committee

New members:

On behalf of the Society, the Management Committee would like to welcome the following new members:

Mr Jayden O'Brien, WA
Ms Laurton McGurk, WA
Miss Endah Yulia, WA
Mr Arbab Ahmad, WA
Ms Johanna Snyman, NSW
Mr Matthew Laurence, NSW
Mr Shane Harvey, NSW
Dr Maria Belen Guijarro, Vic
Miss Rebecca James, NT
Ms Dalphy Harteveld, Qld
Dr Andrew Pitman, NZ South
Mrs Shirley Thompson, NZ South

Jottings from the Editor-in-Chief

The journal continues to show strong growth with an increase in the number manuscripts submitted this year (150 to 13/8) compared to an average of 132 for each of the last four years. At this rate we will finish the year with close to 200 manuscripts for the year. The increased submissions are due in large part to growth in submissions from China (16) and India (27). Whilst the bulk of our manuscripts continue to come from Australian researchers, we have received manuscript from 20 countries around the world.

We have had some changes to the Editorial Board, Jacky Edwards, Lynton Vawdrey, and Martin Barbetti resigned during this year due to pressure of work. They have been on the Editorial Board for some time and we all owe them a huge thanks for the work they have put in on behalf of the journal. We welcomed onto the Board, Amanda Able (SA), Lindy Coates (Qld), Angus Carnegie (NSW) and Grant Smith (NZ). Dov Prusky (Israel) has joined our Editorial Advisory Board. I would like to thank the members (new, continuing, and resigned) of the Editorial Board and the Editorial Advisory Board for their continued support and work on the journal.

APDN also shows continued strong growth. Total institutional downloads have increased each year in the period 06-09 with a 58% increase in 2009 compared to 2008. The journal is most capably managed by Dagmar Hanold and her editorial team.

As many of you will have heard we are in the process of changing our publisher. As from the 1/1/2011 we will be published by Springer. This process was initiated by the previous management committee and involved considerable consultation within APP. It is considered that the move to Springer will enhance our international profile and help us to grow as a journal.

I'm sure many of you will have noticed the increase in impact factor to 0.949 based on citations of articles published in 2007 and 2008. This is certainly a great testament to the work that Keith Harrower did as Editor in Chief. It is unfortunate that he did not live to see the fruits of his labours.

Although the journal is forging a niche for itself as a plant pathology journal it operates in a competitive environment where there are well established international plant pathology journals. Our challenge is the further strengthen APP's position by increasing its impact factor thus making it more attractive for submission of high quality significant manuscripts. A strategy to achieve this is to commission review articles or to publish focus sections or even whole issues.

Ideas for commissioned articles in APP.
If any of you have any ideas for reviews that you would like to see in APP, or ideas for theme issues please communicate those to me. They do not have to be limited to articles by Australian authors but may be articles by international authors that you would like to see in APP. Similarly if you have ideas for theme issues or focus sections that you would like to see please also communicate those to me.

Phil O'Brien, EIC APP.

News from the Business Manager

I have begun preparation for the transfer of our journal publication to Springer. The move will be complete by January 2011. Members can now pay subscriptions for 2011 and can select the new Springer option of receiving our journal as 'online only' at a discounted rate. The new subscription amounts can be seen in the table below. If you wish to continue receiving hard copy of APP, please make your subscription payment before the end of December.

New members who wish to join the Society between now and the end of the year will become members immediately but will have to wait until January to receive access to journals. In January, new members will be given access to all previous issues and will not need to renew their membership until 2012.

The option of making a direct money transfer between bank accounts is now available as a payment option. This method of payment is preferred as it incurs no fees for Australian bank accounts and is cheaper than credit cards from New Zealand. Instructions for making direct transfers will be made available through the member area of the APPS web site. It is imperative that the reference code is included on your transaction. Direct payments without a reference will be very difficult to track.

If you have any questions concerning the new arrangements, please don't hesitate to ask.
peter.williamson@appsnet.org

Membership Category	**AUD**
Full Membership with APP Online	$120
Full Membership with APP Hard Copy	$172
Student Membership with APP Online	$60
Student Membership with APP Hard Copy	$86
Emeritus Membership with APP Online	$60
Emeritus Membership with APP hard Copy	$86
Emeritus Membership with No APP	$30
AAN subscription	$16.50

Peter Williamson
Business manager, APPS

Regional news from Tasmania

A number of Plant Pathologists in Tasmania have had reason to celebrate over the last few months.

Special congratulations to Dr. Sarah Pethybridge who has been awarded the American Phytopathological Society Syngenta Crop Protection Award for 2010. This prestigious award is given to an APS member for outstanding recent contribution to teaching, research, or extension in Plant Pathology. Sarah joins an illustrious list of previous winners. She will receive her award at the APS Meeting in Charlotte, U.S.A., (August 7-11).

Congratulations to Suzanne Jones, who has completed all requirements for the award of Ph.D with her thesis 'Characterisation of cultural, biological and molecular variability of *Phoma ligulicola* isolates associated with ray blight disease of pyrethrum and chrysanthemum.' Suzanne was supervised by Frank Hay, Sarah Pethybridge and Calum Wilson. She successfully negotiated the challenges of completing much of her Ph.D while working full time, and will continue working as a Research Fellow with TIAR, University of Tasmania.

Congratulations to Katie Dunne (PhD student supervised by Kathy Evans, Karen Barry, Jacqui Edwards and Lance Cadle-Davison) who won best student poster prize at the recent Australian Technical Wine Industry Conference.

> Dunne, K.J., Evans, K. and Bramley, R. Secondary spread may not be the main driver of within-season increase in the severity of botrytis bunch rot. Australian Technical Wine Industry Conference, Adelaide, July 2010.

Congratulations to Dr. Jason Scott who has been appointed as a Research Fellow with TIAR, University of Tasmania, Burnie on a three year ARC Linkage project investigating Sclerotinia crown rot of pyrethrum in association with Frank Hay (TIAR), Sarah Pethybridge (BRA) and David Gent (USDA-ARS).

Frank Hay hosted a planning meeting of some of the nematology team members of Horticulture Australia Ltd. Project MT09067 'Managing the nematode threat' at the TIAR, UTAS Cradle Coast campus, Burnie, including Graham Stirling, Vivien Vanstone, Sarah Collins, Jennifer Cobon and Greg Walker. This project is investigating management of root knot nematode in vegetable crops, and involves collaboration between TIAR/UTAS, DAFWA, DEEDI, SARDI, Biological Crop Protection, Agronico and Plant and Food, New Zealand.

Frank Hay

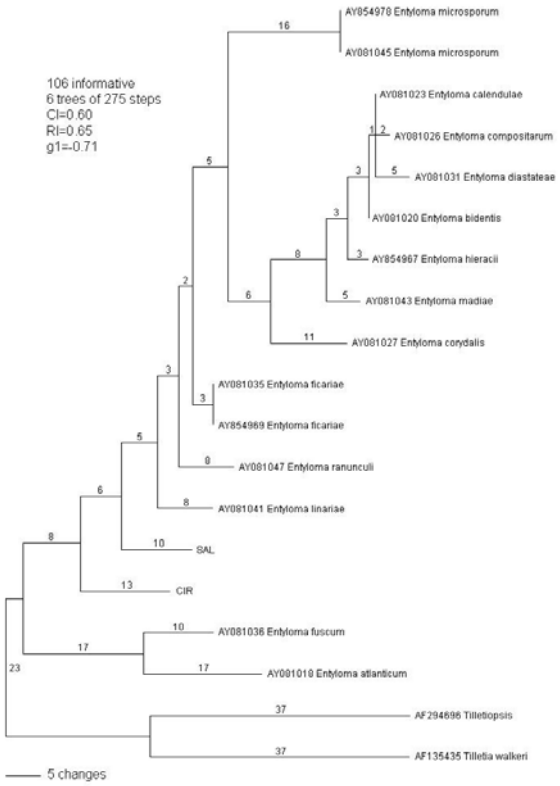
Regional news from WA

APPS Phylogenetics Training Course

State Agricultural Biotechnology Centre, Murdoch University
July 26-27th 2010

The WA APPS regional council in partnership with research scientists, Dr's Treena Burgess, Phil O'Brien and Ms Nicole White from Murdoch University held a phylogenetic training course at Murdoch University on July 26-27th 2010. The course was designed for those new to working with DNA sequences and phylogenetic analysis. Researchers from UWA, CURTIN, Murdoch University, AQIS and DAFWA all joined the fun.

Participants were exposed to a mix of theory and practical sessions giving a background to DNA sequence analysis, phylogenetic analysis and the use of online data bases. We learnt how to tidy up sequences, conduct BLAST searches on Genbank and construct phylogenetic trees using the Geneious bioinformatics software platform. Demonstrations of phylogenetic analysis were also conducted on the aligned datasets including Maximum Parsimony using PAUP software and Bayesian MCMC using MrBayes. Thank goodness for the good food, good company and the good humour of all to help us through this brain strain!



Interest in this course was wide ranging from new PhD students to experienced researchers across our WA plant pathology and entomology spectrum and all places were filled soon after the course outline was circulated. With this in mind, Treena and Phil are planning to run the course at ACPP APPS 2011 Conference: Darwin. 26-29 April 2011. If you are interested please don't miss out on the opportunity to attend by registering your workshop preferences. Workshop descriptions are available on the website. Don't miss the opportunity to have your say, click here or https://www.conlog.com.au/ei/getdemo.ei?id=398&s=_2PW0NA24K as workshops with limited interest will not be on offered.

Last date to have your vote is Friday 20th August.

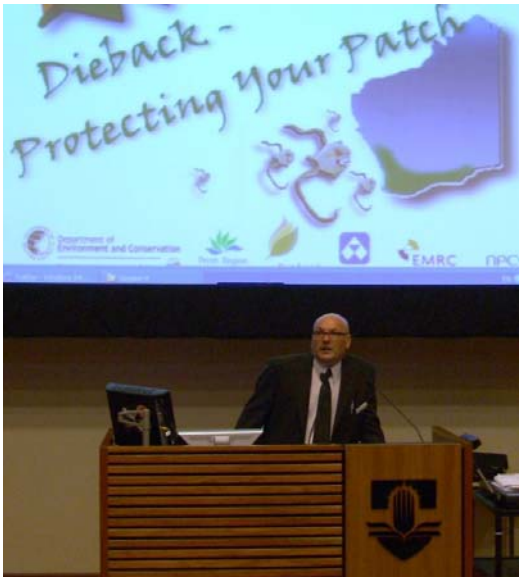
Dieback – "Protecting your Patch"
DIG
Dieback Information Group Meeting

Murdoch University 2010

The 2010 Dieback Information Group meeting was held at Murdoch University in Western Australia on Friday the 16th of July. This year the meeting was bigger than ever with over 230 participants coming to hear about the latest management and research into Phytophthora diseases in Western Australia. The participants represented government agencies and departments, local government authorities, Natural Resource Management groups, industry, consultancies, community groups and universities.

This year's theme was "Dieback – Protecting your Patch". Speakers either showcased some of the recent research coming from the research organisations in Australia or examples of the management strategies of different land management agencies. The Commonwealth Greens Senator Rachel Siewert gave a great presentation on how to get *Phytophthora* management onto the political agenda. She described why the National Threat Abatement plan for *Phytophthora cinnamomi* was disallowed last year by the Senate and gave some handy tips on how to engage politicians with plant disease issues such as *Phytophthora* dieback. In particular she called for a National focus which demonstrates what is at risk and what can be done to address *Phytophthora* impacts across Australia.

Dave Cahill from Deakin University gave a great presentation on the impacts of *Phytophthora* in Victoria and the research being undertaken by his research group in plant-pathogen interactions in their quest to understand resistance mechanisms. There were also some further insights provided by researchers from Murdoch University and University of Western Australia into the mechanisms of phosphite inducing resistance in treated plants. Their work is part of a large ARC linkage grant and the findings to date have started to elucidate the biochemical and molecular pathways that are affected following phosphite treatment. Its hoped this research will assist in the development of improved *Phytophthora* management techniques.



Student and Early Career Plant Health and Protection Symposium 2010

This annual symposium will be held sometime at the end of October. More details to come.

Now in its fourth year, the half –day symposium aims to showcase current research by students and early career researchers on any topic in Plant Health and Protection. Previously this symposium has been well attended by a range of academic institutions industry and community members. The event will end with a sundowner, which gives all participants an opportunity to mingle with their peers.

As in previous years, we will be giving away some excellent prizes to three of the best presentations. If you are interested in presenting, or have a student or early career researcher that you are supervising, please contact Daniel Hüberli on daniel.huberli@agric.wa.gov.au . Places for presentations are limited and already a few slots have been filled.

The WA Councillor Committee

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Regional news from QLD

APPS Plant Pathology Seminar Day

The APPS/Agri-Science Queensland seminar day on the 26th of July was the swan song for 40 years of seminars at the Indooroopilly Research Centre as staff will be moving to a new facility at Dutton Park later this year. This long running seminar series is a tribute to the professionalism of staff and the close relationship between the APPS regional councillors and the seminar committee in ensuring that we had four to five seminars per year.

Jenny Cobon kicked off with a report on her OCCPO funded scholarship to Scotland where she worked on Potato Cyst Nematode, an emergency plant pest in Australia. Identification using morphological characteristics can readily distinguish between the two cyst nematodes on potato, but molecular diagnostic may be necessary to identify PCN when dealing with large sample numbers of large quantities of soil.
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Wayne O'Neill discussed results from his previous ACIAR project on the diversity of the Panama disease pathogen (*Fusarium oxysporum* f.sp. *cubense*, *Foc*) in Indonesia where he characterised the strains of *Foc* by Vegetative Compatibility Group analysis. The results from this work have expanded our knowledge of the distribution of the pathogen in Indonesia and demonstrated the current predominance of the "tropical" race 4 strain, which is very aggressive on Cavendish varieties, across the Indonesian archipelago. He is now working as part of a group on a newly funded project to manage *Foc* in Indonesia and Australia.

Anthony Young has recently been to New Zealand and the US to research the citrus disease Huanglongbing or HLB. He described the future scope of his ACIAR project and his interests in the bacterium. Currently Australia does not have HLB or the psyllid vector of the disease.

Virologists, John Thomas and Denis Persley, spoke of their recent travel. John has spent some time in Indonesia on an ACIAR scoping study, where he observed the farming practices and the horde of viruses that infect their Solanaceous crops. Denis, John and Cherie Gambley went to the International Plant Virus Epidemiology Symposium at Cornell University in New York State. They rubbed shoulders with the world's top virologists and learnt about the current global virus problems, such as Plum pox virus in USA and Canada. Apparently the next virus to look out for in Australia is Pepino Mosaic Virus.

Yu Pei Tan, also the recipient of an OCCPO scholarship, has recently been in the Netherlands. There she worked at CBS, developing a molecular-based protocol for the detection of Dutch Elm Disease (*Ophiostoma ulmi* and *Ophiostoma novo-ulmi*) in the event that an incursion should ever occur in Australia.

Roger Shivas bought us up to speed on recent arrivals of plant pathogenic fungi in Australia. The diversity of fungi being found in Australia appears endless.

Murray Sharman's PhD project on Tobacco streak virus in Central Queensland will benefit sunflower and mungbean growers. Murray has shown that TSV occurs in many weed species, including *Parthenium*, and can be transmitted by thrips and pollen. Growers can either use tolerant varieties of sunflower or control the *Parthenium* to significantly reduce virus transmission.

Anthony Young came back for an encore performance to talk about the recent Queensland incursion of *Xanthomonas fragariae*, the pathogen responsible for Angular Leaf Spot of strawberry. The pathogen is extremely slow growing and notoriously difficult to culture, but with the help of esteemed bacteriologist Tom Marney, they were able to culture and sequence the bacterium to show that it was *X. fragariae*.

Jenny Cobon and Alistair McTaggart.

Book Review

'Diseases of vegetable crops in Australia'

Edited by Denis Persley, Tony Cooke and Susan House
CSIRO Publishing, 2010
292 pages
ISBN 9780643096387

Correct diagnosis and an understanding of the source and spread of vegetable diseases is critical to selecting effective, sustainable and economical management strategies. Plant pathologists across Australia have contributed to this book which is the third revision of a vegetable disease handbook first produced by Queensland Primary Industries and Fisheries in 1978. This revision is much expanded and unlike previous editions the photographs are included alongside relevant text which significantly improves the ease of reading.

Chapter 1 provides an introduction to the causal agents of diseases in vegetable crops, including fungi, bacteria and phytoplasmas, viruses and viroids and nematodes. The basic principles of integrated disease management and using fungicides are also outlined. Chapter 2 summarises the common disease groups that infect a range of crops including bacterial rots, damping off diseases, powdery mildews and root-knot nematodes.

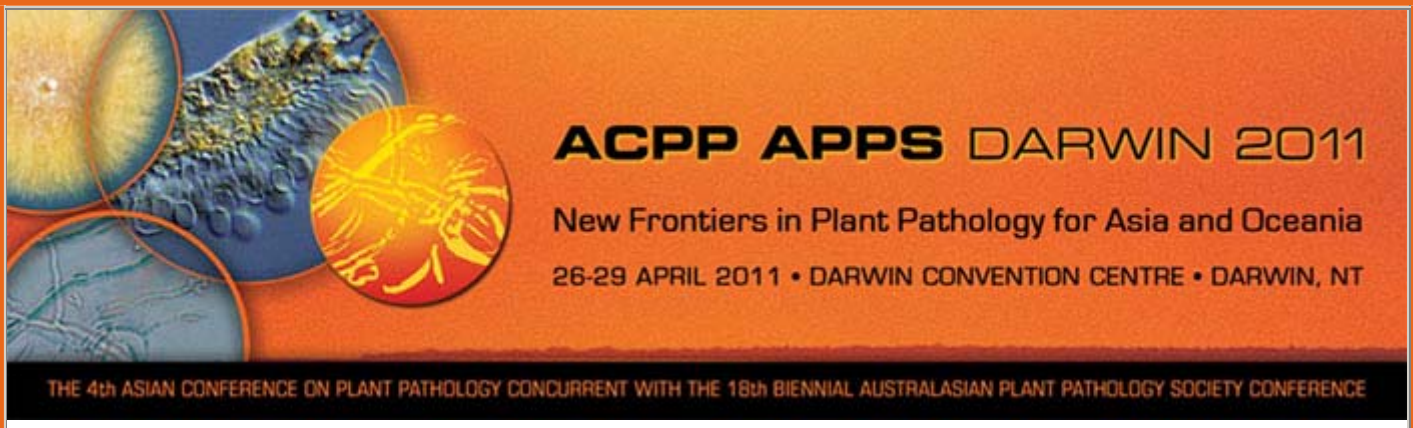
The subsequent 21 chapters cover the primary vegetable crops produced in Australia from Asian vegetables through to tomatoes. Each of these chapters begins with a description of the production and use of the crop and then outlines the main diseases in the crop. Information for each disease includes the pathogen, symptoms, source, importance and management. All chapters include an impressive array of high quality photographs of disease symptoms taken both in the field and the lab.

Within certain chapters there are special highlighted sections describing diseases that are not currently present in Australia that present a biosecurity threat. Descriptions of these threats are also detailed, including photographs and what action to take if the disease is suspected. The book concludes with a glossary of terms and an extensive index.

The management sections for each disease provide more information than a lot of the standard compendiums produced overseas and have an applied focus and an emphasis on integrating strategies to ensure disease management is effective and sustainable. Growers may be disappointed with lack of specific chemical recommendations but the editors explain that this information has not been included because registered and permitted chemicals change so regularly and vary between states.

Overall, the book is informative and well presented and will prove a valuable reference for anyone with involved in vegetable production.

Dr Kaye Ferguson
Senior Research Officer
SARDI



Registration for the 4th Asian Conference on Plant Pathology concurrent with the 18th Biennial Australasian Plant Pathology Society Conference is now open. For more information visit the conference website.

www.appc2011.org

Draft session topics

Alternatives to chemical control
Bioinformatics and genomics of plant pathogens
Biosecurity
Cereal pathology (winter cereals, rice)
Disease management
Disease surveys
Epidemiology
Forest pathology
Global food security
Modelling and crop loss assessment
Natural ecosystems
New fungicides
New technologies
Plant-pathogen interactions
Population genetics
Prokaryotic pathogens
Soilborne diseases
Training, extension & technology transfer
Tropical horticulture
Virology
Other

Workshops

Various workshops are available covering different topics so we need to determine which one(s) you are interested in attending. For workshop descriptions, go to the website and place your votes (maximum of three). Don't miss the opportunity to have your say.

NB. Workshops with limited interest will not be on offer. **Last date to have your vote is Friday 20th August.**

Plenary speakers information will be available in the near future.

CRC PLANTbiosecurity

Key Dates

Now open - Call for abstracts
Now open - Online Registration
25 September 2010 - Call for abstracts close
21 January 2011 - Early bird registration closes