



APPS Newsletter Vol 31, No. 2

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In this edition:

President's Message	2
New Members	3
Dates for your Diary	3
Regional news from NSW	4
Regional news from SA.....	8
Regional news from VIC	10
Vale Dr John Frederick Brown	12

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:

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Next deadline: 26th November 2018

www.appsnet.org

President's Message

I am writing this report while I am on sabbatical at Kansas State University in Manhattan, Kansas (the little apple!) where I will be located for the next 5 and a half months on a Fulbright Fellowship. It is interesting to reflect upon the similarities and differences between plant pathology, and scientific research in general, in the US and at home when you have the chance to be in a place for that long. The first thing that hits home here is the size of the Department of Plant Pathology at K State – including graduate students, technical and admin staff and faculty members there are somewhere between 150 -180 people working here in a very broad range of research and extension programs in plant pathology. It is, as expected, very focussed on those crops that are central to the economy of Kansas i.e. wheat, maize, sorghum, soybean etc. Balanced against that is that there are a very broad range of different approaches to addressing the issues relating to plant disease impacts on those systems which provides opportunities for interesting collaborations to develop when this many researchers are working from the one centre. Of course, the similarities are much more mundane and include the day to day issues of teaching and research and the never ending challenge of securing funding for the next phase of the research program and having to deal with continual budget cuts in a political environment that doesn't necessarily support science. Sadly this latter issue feels all to very familiar to me and there is little compensation from discovering that these scenarios are not unique to Australian research!

It is likely that by the time this newsletter is published the International Congress of Plant Pathology at Boston will be on or will have just finished. This meeting promises great things and I am pleased that we were able to support a number of early career researchers to attend the meeting. Congratulations to Anindita Chakraborty (Murdoch University), Kelly Scarlett (Forest Research UK), Ruvini Lelwala (University of Melbourne) and Reannon Smith (La Trobe University and Agriculture Victoria Research) who were successful in their applications for a bursary to attend the Congress. I hope that attendance at the meeting was of great benefit to their career development and provided an important opportunity to present their science to the broader plant pathology community and hopefully to develop international connections that might prosper in the future.

We on the Executive Committee are still looking for more ways in which we can put value back from being a member of APPS and are very keen for ideas from you about how we might do that. If you have some ideas that you think might work please let your regional councillors know or contact one of the executive committee about them. We will also be putting into place more consistent guidelines about bursaries and other methods of support for conference attendance for early career researchers to allow us to more effectively notify membership well ahead of the meetings and have consistency in the applications and how they are assessed and ranked. More on that in the weeks ahead and we will keep you informed through this newsletter and via the APPS website.

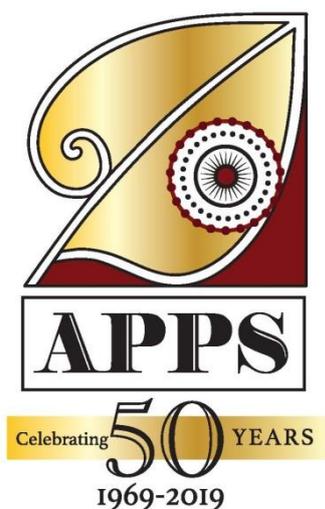
Brett Summerell

New Members

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

Dr Manjula Kularathna	Lincoln University
Dr Stephen Ogden	Market Access Solutionz Ltd
Mr Jonathan Baker	Agriculture Victoria
Mr Roshan Regmi	Curtin University

Dates for your Diary



22nd Australasian Plant Pathology Society Conference
Melbourne Convention and Exhibition Centre
25-28th November 2019

apps2019.org

Regional news from NSW



NSW Plant Pathology and Mycology Herbarium and Orange Regional Museum are showcasing plant health and biosecurity for Science Week.

As a part of a larger grant to digitise the heritage of the NSW Biosecurity Collections and increase public engagement, the NSW Biosecurity Collections will be running an exhibition and activities for under 5s, primary and high school students. The exhibit will be covering plant health and biosecurity, the role of scientific collections and taxonomy in biosecurity efforts and how we use the specimens and their DNA to identify and compare species. The exhibition will open August 11th and continue into September, be sure to drop by if you are in town!



Biosecurity Collections redbubble store

The NSW Biosecurity Collections were founded in 1890 and have been managing scientific specimens for reference and research ever since.

Over the last 100+ years the collections have become home to more than just the preserved plant pests and diseases but also a number of artworks, illustrations and photographs.

As we get many requests for prints of these beautiful works, we've joined redbubble.

Now you can have your favourite plant pest or disease hung in your home, while supporting the Collections and Australian biosecurity efforts!

Enjoy!

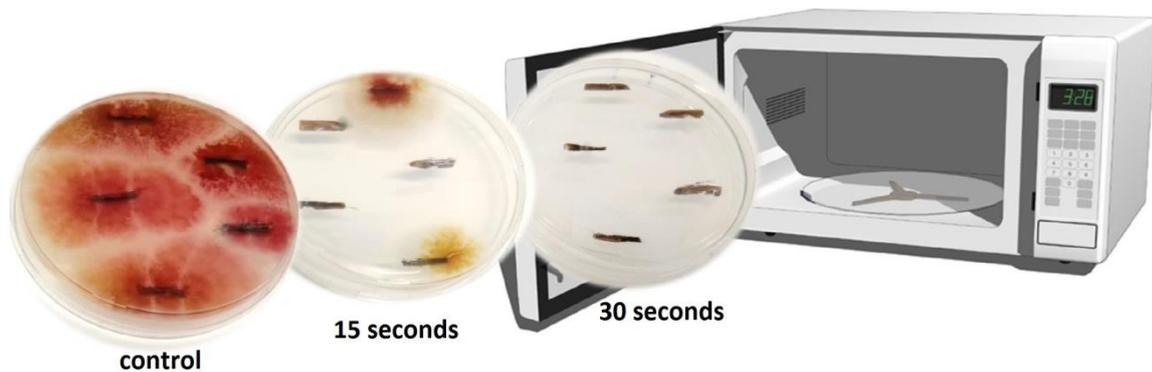
www.redbubble.com/people/biosecuritycoll

Are microwaves the new magic bullet?

Toni Petronaitis, research officer in cereal pathology with NSW DPI, has been mixing up microwaves with mycology to test if stubble-borne pathogens can be killed using microwave radiation. Toni will be presenting her novel research at ICPP in Boston next month. Her work focuses on the use of microwave radiation to kill the crown rot fungus, *Fusarium pseudograminearum*, in wheat stubble.

In collaboration with Clayton Forknall (QDAF) and Steven Simpfendorfer (NSW DPI), Toni investigated the survival of *F. pseudograminearum* in durum wheat stubble after microwave radiation. The pathogen was eliminated from stubble after 30 seconds of microwave radiation when stubble was embedded in moist soil. This suggests microwave radiation could offer a rapid and effective method for heat kill of stubble-borne pathogens such as *F. pseudograminearum* on a paddock scale in the future.

This work has been published online with Australasian Plant Pathology (<https://rdcu.be/2SqC>) if you'd like to read more.



F. pseudograminearum colonies recovered from durum wheat stubble following microwave radiation for 0, 15 and 30 seconds with added soil.



Cereal crop exhibiting honey brown discolouration of stem bases which is characteristic of crown rot infection (right) versus healthy crop (left). Crown rot is caused primarily by the fungus *F. pseudograminearum* in the Australian wheat belt.

A sweet visit to Hasanuddin University, Indonesia

Professor David Guest visited Hasanuddin University (Unhas) in Makassar Indonesia recently to work with his student Muhammad Junaid on VSD disease in cocoa, caused by *Ceratobasidium theobromae*, where it has devastated plantations in the Sulawesi regions.

Students heard from Prof. Guest on Cocoa sustainability, profitability and the impact of farmer and community health. Junaid remarks that the interdisciplinary attendance, from Agriculture, Public Health, Economics and Business, and Medical Faculty revealed new insights into the cocoa communities in Sulawesi.



Muhammad Junaid explaining VSD pathogen isolation on water agar medium.



Prof David Guest investigating the pathogen of VSD disease, *Ceratobasidium theobromae* (Ct) on Sulawesi cocoa to ensure correct fungal morphology.



Prof Guest lectures multidisciplinary students and faculty on Cocoa sustainability, profitability and the impact of farmer and community health

Jordan Bailey

Regional news from SA



Congratulations to multiple award winners at SARDI

Sue Pederick, Women in Horticulture Award

Congratulations to Sue Pederick, Senior Technical Officer at SARDI for nearly 20 years. Sue has received the Women in Horticulture Award at the AUSVEG SA Awards, for recognition of her dedication to plant disease diagnostics work and commitment to working with industry. The award was held at the Arkaba Hotel on 11 April 2018 and celebrate the significant contributions of South Australia's vegetable and broader horticulture industry.



Specialising in diagnosing plant diseases for South Australia's horticulture industry, Sue works proactively with commercial resellers and growers, and supports industry advisors. Sue's work to determine new pest pressures and monitor issues in the state has been critical in safeguarding the horticulture industry. "I am humbled, honoured and excited to have won such a prestigious award. I have had strong female mentors and role models throughout my career to look up to, showing great strength of character and expertise," Sue said.

SARDI Executive Director Dr Peter Appleford said Ms Pederick was a worthy recipient of the award. "Plant pathology is a key skill which underpins the success of the horticulture industry, which in 2016–17 generated \$3 billion in gross food revenue," "Without this critical work, the industry would not be able to effectively identify threats to horticulture production Dr Appleford said.

The Women in Horticulture Award, sponsored by PIRSA, recognises an exceptional female grower or supply chain member who has demonstrated outstanding ability and success in her chosen field. For more information on the Women Influencing Agribusiness and Regions strategy, visit www.pir.sa.gov.au/women

Note: an independent panel judged this award category. Drafted from PIRSA website author not cited.

Jade Rose, SARDI Science Bursary and Commonwealth Scholarships SA

Congratulations to Jade Rose who has been awarded SARDI's 2018 science bursary for women. Jade is an Agricultural Science Honours student working in SARDI's Plant Health and Biosecurity team with Jenny Davidson investigating *Ascochyta* blight on cv PBA Hurricane XT lentils.

Awarded on an annual basis, the SARDI science bursary was established in 1994 to celebrate the South Australian Women's Suffrage Centenary.

Jade said that winning this bursary was a real honour. "Working at SARDI has always been my dream role, so to be working here and gaining the experience that not only helps with my studies, but provides me with the practical experience for my future career pathway is incredibly beneficial and rewarding," Jade said.



L-R: SARDI's Dr Peter Appleford, SARDI science bursary award recipient Jade Rose and SARDI's Dr Kathy Ophel Keller at the Waite Campus. Photo: PIRSA

"This bursary will allow me to focus on my honours studies to achieve the best marks possible, without having to work full-time and potentially compromise my results."

"The skills I'm learning here at SARDI will be greatly beneficial in the future, as they can be applied to any plant pathology role and will allow me to build connections and open up opportunities to work in different areas within the industry," she said.

With Jade's future career plans leading towards completion of her honours, to then work towards starting a PhD and working in a research role within the Agricultural Sciences industry, this bursary is a great step forward to achieve that goal.

Jade was also successful in winning a scholarship to support her Honours year through the Commonwealth Scholarships Program for SA.

Congratulations again to both Sue and Jade

Pauline Glocke

Regional news from VIC



Pathogen Bioinformatics meeting - 28 November 2018

A one-day bioinformatics meeting co-organised by Dr James Hane (Pathogen Bioinformatics SIG) and APPS Victoria will be held at AgriBio, Bundoora on 28 November 2018.

Dr Hane is the Bioinformatics Program Leader with the Centre for Crop and Disease Management at Curtin University (WA) whose research encompasses genome analysis of agriculturally-important fungal pathogens and host species. His research has characterized genomes of pathogens and plants of agricultural and economic importance.

The meeting will have a bioinformatics focus, encompassing techniques, current research, issues and opportunities relevant to the plant pathology field. The meeting will provide a platform for discussion and will be a great opportunity for networking, collaboration and the sharing of knowledge. It will also provide a supportive arena for students and early-career scientists to enhance their professional networks.

AgriBio is one of Australia's leading biosciences facilities, hosting cutting-edge research to support and protect Victoria's agricultural sector. The bioinformatics meeting will be open to all interested parties, and will be free of charge for APPS Members. Please save the date and keep an eye out for more details once registration opens.

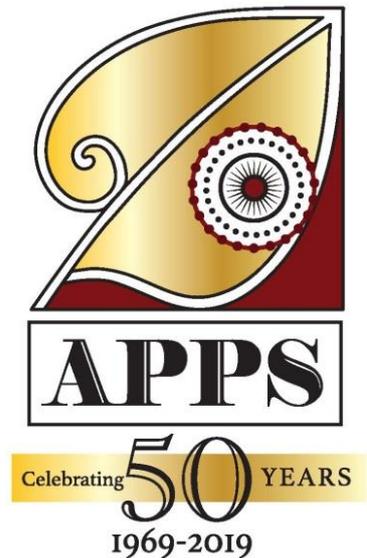
Get Ready for the 22nd Biennial Meeting of the APPS!

Save the date!

The 22nd Biennial meeting will be held November 25-28th, 2019 at the Melbourne Convention and Exhibition Centre and will be the climax of our 50th Birthday celebrations. This year's conference theme is "Strong Foundations, Future Innovations" as we will celebrate our history and showcase the current cutting edge research which is leading us into the future. Bookmark our website apps2019.org and feel free to download and distribute the promotional material available under the home tab.

We are currently developing an exciting scientific program and are still open to feedback as to what topics you would like to see included. Thanks to those of you who have already sent feedback about the proposed topics! Please contact Candace ce@unimelb.edu.au if you would like to offer your help or assistance in making this a great meeting!

Candace Elliott

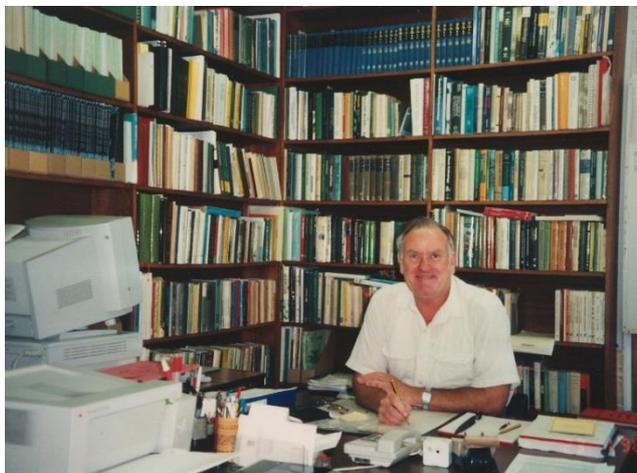


Vale Dr John Frederick Brown

4 March 1939- 4 April 2018

Foundation Member and Fellow of the Australasian Plant Pathology Society.

It was with great sadness that I learnt of the passing of John Frederick Brown on 4 April 2018, after a short battle with cancer.



John was educated at Hurlstone Agricultural High School and the University of Sydney, graduating BScAgr (Hons) in 1961 and PhD in 1965. In 1964 he was appointed Lecturer in Botany at the University of New England (UNE) at Armidale. Initially he taught mycology and soil microbiology but soon introduced plant pathology into the curriculum. This was the beginning of more than 35 years of teaching and research into many aspects of plant pathology. His courses, teaching ability and rapport with students quickly attracted quality honours and postgraduate students and a significant research group was formed at UNE. He interacted with many agricultural and horticultural industry groups to identify disease problems that he and his students could research and hopefully solve. He had a great ability to attract research funds to support postgraduate research. John was promoted to Associate Professor in 1973, a position he held until he retired in 1996. He continued as a Research Fellow at UNE supervising PhD students until 2000 when he moved from Armidale. John supervised and co-supervised 14 PhD and 12 MSc students as well as numerous honours students.

His research interests were broad and encompassed most major areas of plant pathology (aetiology, pathogenesis, epidemiology, disease assessment and management strategies). His research activities can be broadly divided into five categories; diseases of temperate field crops (particularly small grain cereals and sunflower), diseases of tropical cash and subsistence crops in Pacific Island nations, microbiology of leaf surfaces, mycorrhizal symbioses and biological control of weeds using plant pathogens.

John's interest in tropical agriculture commenced in 1969 when he was asked by the then Department of Foreign Affairs, to visit the Solomon Islands as an advisory plant pathologist. He spent 10 months in the Solomon Islands between 1970 and 1974. During the period 1977 to 1981, he was involved in running a 'short course in plant protection' and initiating and monitoring follow-up research in selected Universities in Indonesia.

The Australian Academy of Science sponsored five Plant Pathologists to visit 12 Chinese research institutions during a 26-day visit in June-July 1982. The group consisted of John, Chris Hayward, Bob McIntosh, Graham Stirling and James Wong with John as the group leader. The visit followed reports of two earlier visits to China

in 1980, one led by Sir Otto Frankel and the other by Dr John Possingham, that recommended a visit by a team of plant pathologists might provide useful insights for Australian agriculture. The reasons for the recommendations related to the earlier teams' observations that crop disease levels were lower than expected and whether these might be attributed to the traditional farming techniques used in China. The group published its report 'Some impressions of plant pathology in China, 1982' in 1983 in the *Journal of the Australian Institute of Agricultural Science* 49, 71-80.

In 1986 and 1987, John was seconded from UNE for 17 months to the Bogor Agricultural Institute (IPB) in Indonesia to head a project designed to improve the University's (IPB) ability to train their own undergraduate and postgraduate students in agriculture and science. His most recent involvement in tropical plant pathology (1987-94) was in the South Pacific states of Tonga, Fiji, Samoa and Vanuatu where a dieback disease of kava was investigated and its cause established.

John developed special expertise in the area of epidemiology and crop loss assessment and was recognised both nationally and internationally for his contributions to this field. John has authored or co-authored about 190 publications including 10 books or book chapters, 177 scientific publications and several reports to international agencies. A highlight of his career was the publication of the 556-page textbook *Plant Pathogens and Plant Diseases* in 1997. The book contained contributions from John and 16 other Australian Plant Pathologists with specialist knowledge in various fields. It was edited by John and Helen Ogle, John's first PhD student. This textbook was specifically written to emphasise examples of diseases in the Australasian region and was launched at the 1997 APPS conference in Perth.

In addition to his research contributions to Australasian Plant Pathology, John contributed to our Society in many ways, particularly during the first 20 years of its existence. He acted as Chairman and Convenor of the Epidemiology and Crop Loss Assessment section for several biennial conferences as well as for the Fourth International Plant Pathology Congress held in Melbourne in 1983. John served as President of the Society from 1995 to 1997 and was designated a Fellow of the Australasian Plant Pathology Society in 1999. Several of his students have served on the executive committee of the APPS as well.

His past students work, or have worked, in Universities, Government Departments (both State and Federal), in private enterprise as well as holding overseas posts. In his retirement John and his wife Leonie moved to the family property on the shores of Lake Conjola on the south coast of NSW, where he continued to maintain an interest in mycology and plant pathology and enjoyed catching up with past students and colleagues.

Those of us fortunate enough to know John will sadly miss his endearing sense of humour, warmth and honesty. John shared his life with his lovely wife Leonie, their children, Michael, Tony and Karen, grandchildren and great grandchildren. Our condolences go out to Leonie and all of John's family.

*Dr Joe Kochman, one of John's students, Foundation Member and Fellow APPS
May 2018*