



APPS Newsletter Vol 33, No. 3

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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 March 2021

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President's Message

Thanks to all those who tuned in to the Annual General Meeting (AGM) on Nov 30th 2020. The meeting was productive with lively discussion and many considered thoughts being added to our future agendas and activities. On a personal note, I really enjoyed how many voices joined my President's report through informative interruptions and considered quips. Loved it! Overall, I would suggest that our society is in good shape as it ventures into significant changes in how we conduct our big ticket items, our biennial conference (to be online in Nov 2021) and journals (consideration of free access). Some changes that we made during the AGM will hopefully help guide our ship safely in the future.

Dec 1 marks the 65th anniversary of little Rosa Parks refusing to give up her seat for a white man in Alabama - an action that inspired the Civil Rights Movement in the US. Gains have been made and lost in the interim ...! Let's collectively hope a greater respect for diversity can be brought about in the year ahead. On this note, our data collection upon membership processing will inform the Equity, Diversity and Inclusion Policy established last year. Furthermore, we were encouraged at the AGM to ensure that this flows through to all activities including speakers, awards, committees, etc. Similarly, we plan next year to provide guidelines on sample collection and use that is respectful to indigenous people. If you have thoughts on this or a related topic please contact members of the Management Committee.

To assist the Management Committee in their role in improvement of the image and standing of the APPS Journals, a Journal sub-committee has been formed and is officially included within the Operating Procedures. This sub-committee has a long term view through its composition of three Presidents (Andrew Geering President Elect, Current, and Immediate Past) and an eminent plant pathologist (currently Kim Plummer) whose term will coincide with the biennial 'role'-over. The terms of reference for this sub-committee are still in the process of development and will be shared widely prior to acceptance by the Management Committee.

Changes were made to the Operating Procedures to ensure that we act in accordance with the auditors and efficiently distribute funds to the regional branches. Each Regional Councillor now must provide a full bank statement only once (30th August) rather than four times a year!

The new (though already in action on our website) fee structure has been changed within the Operating Procedures. The aim was to lower impediments to APPS membership, encouraging multi-year memberships and using journal access online. We hope that these meet your personal and institutional needs too and that they promote membership across all career stages. A special mention to Peter Williamson (Business Manager) who made our ambitions 'virtually' live on the website.

Some special thanks are in order and my apologies in advance for those that I have missed. A big shout out for those who represent our society in the printed form. To Sara Blake for her persistent drive for newsletter content. These issues are always a great read and their regularity is like a heartbeat of our plant pathology society. Big shout outs also to the two Editors in Chief of the two journals Australasian Plant

Pathology and Australasian Plant Disease Notes, Phil O'Brien and Dagmar Hanold, respectively. These journals are central to our society and our thanks go to you for their safe keeping. Thanks also to the advisory board, deputy editors and senior editors. Your constant attention to detail and maintenance of scientific standards is truly appreciated.

We thank the Melbourne Conference organisers for such a wonderful occasion last November 2019 when life was 'normal'. Many regional activities have been cancelled and several Special Interest group workshop/conferences have been postponed due to COVID-19. Online meetings are the new flavour – in New Zealand these are termed Zui's, a blend of Zoom and Hui. We look forward to the 2021 APPS conference hosted in Hobart (and joined on-line) and offer support to the organising team who have been thrown a curve ball.

There is much work still to be done so please if anything is on your mind then please be in touch with one or all of the Management Committee. The next meeting is on the 27th January 2021, if you have any thoughts or comments you would like us to table and consider – please email them through.

Have a fabulous break over Christmas, soak in Summer and feel rejuvenated for the year ahead. I look forward to seeing your emails, papers and faces in the new year.

And remember - as Winnie says : 'A day without a friend is like a pot without a single drop of honey inside'

Robin MacDiarmid

New Members

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

Name	Organisation	Country
Nitesh Datt	Biosecurity Authority of Fiji	Fiji
Flavia Bonora	Southern Cross University	Australia

Regional news from NSW



Staff changes

Dr Jay Anderson has moved from Queensland after accepting the position of Senior Research Fellow, Centre for Organics Research, Southern Cross University. She will be based mainly at Wollongbar Research Centre of NSW DPI.

The Plant Health Diagnostic Lab welcomed their new Plant Pathologist Sophia Callaghan to EMAI in October, following two weeks in hotel quarantine. Sophia joins us from Melbourne University where she has just completed her PhD, studying the soil-borne pathogens associated with yield decline of processing tomatoes. Prior to that Sophia worked in southern Lao as an Australian Volunteer (Crawford-AusAID funded), spending a year at a crop disease diagnostic laboratory and surveying vegetable and tree crops for pests and diseases. With her background and passion for Plant Pathology, Sophia will be a great asset to the team and EMAI.

Publications - from Dr Francine Perrine-Walker

Two new publications on *Phytophthora palmivora* and its interaction with cocoa are out. This research was conducted on isolates from PNG.

This review article was part of the Special Issue Plant Fungal Pathogenesis.

<https://www.mdpi.com/2309-608X/6/3/167>

The second article in the Australasian Plant Pathology Journal on the use of an *in vitro* test to study infection in cocoa isolates of *P. palmivora* from PNG.

Perrine-Walker, F. Use of cellophane to study the infection structures of PNG cocoa isolates of *Phytophthora palmivora* in vitro. Australasian Plant Pathol. 49, 701–705 (2020). <https://doi.org/10.1007/s13313-020-00750-4>

Plant Health Diagnostic Lab Highlight

Waratah dieback: PHDS is investigating a dieback problem at a native cut flower farm. So far *Phytophthora* (root and crown rot pathogen) has been identified in diseased crown tissues, but there is possibly more than one organism and more than one disease involved – other potential fungal candidates are growing slowly from the diseased crown tissues and there appears to be a branch dieback disease possibly caused by a pathogen entering pruning wounds. The property has an extensive collection of rare Waratah varieties propagated from local populations as well as a

number of other Proteaceae species (from Australia and South Africa) and all are potentially at risk from these diseases. Based on the preliminary results a management plan has been developed with the grower to minimise losses while awaiting completion of the diagnostic work.

Jordan Bailey

Postgraduate Research Scholarship in Myrtle Rust

Applications are now open for Postgraduate Research Scholarship in Myrtle Rust at the University of Sydney. Please see the [Scholarships Office website](#) for eligibility criteria and conditions.

Applications close 15 January 2021.

Peri Tobias

Regional news from NZ north



Scientific webinars bring together plant pathologists from both the South Island and the North Island of New Zealand

The monthly APPS scientific webinars keep being well attended, we regularly have between 35 to 50 computers being connected via Zoom, with some computers being set up in meeting rooms where more than one scientist follows the seminar. Attendees are from both North Island and South Island. While we have not been able to alternate speakers from South Island with speakers from North Island, we had presentations made by speakers from both islands. A wide range of projects were presented.

In August the speakers were Nari Williams who talked about '*The centre of origin of Phytophthora pluvialis*' and Melissa Guo who talked about her work on *Effectors of the kauri dieback pathogen*.

In September Erin Stroud presented: *Unravelling the network: Using RNA-seq to investigate the 'Hort16A' response to different biotic stressors*, and Kirstin Wurms presented *Molecular and hormone responses of susceptible ('Hayward') and resistant ('Hort16A') kiwifruit cultivars to latania scale infestation, as affected by elicitors*.

We could not hold a seminar in October but we had one in November with Chandan Pal from PHEL giving a talk entitled "*Hidden world of the brown marmorated stink bug (BMSB) gut - a metagenomic perspective*" and Monika Walter from Plant & Food Research Motueka presenting '*Reversing the epidemic: Successful European canker management under temperate, high rainfall conditions*'.

The November seminar was the last one for this calendar year. We intend on starting again in February or March 2021.

Joel Vanneste

Regional news from NT



Joint NT APPS/AES seminar day

On the 24th of September, the NT branches of the APPS and Australian Entomology Society (AES) jointly hosted a seminar day held in a meeting room at the Darwin Convention Centre. There were 30 attendees with interests spanning the fields of plant pathology, plant biosecurity, weed management, entomology and medical entomology. Seventeen talks were given over the course of the day, with the theme being 'This is what I work on and this is why it's important'. Many more people attended virtually via Microsoft Teams.

NT APPS members gave excellent talks: Sharl Mintoff discussed the ongoing Panama disease research happening in the NT, Jose Liberato talked about mango malformation disease, which is also caused by different species of *Fusarium*, and Maxine Piggott discussed the potential for use of new genomic sequencing technologies for use in diagnostics. Retired plant pathologist Barry Conde has jumped the fence and discussed his new passion for *Tetragonula* stingless bees. He brought in a demonstration hive and some honey for us to try.

Several other plant pathology talks were given throughout the day, including from Sandy Perkins who related pathology survey stories from NAQS (Northern Australian Quarantine Service).

Darsh Rathnayake's work spans both plant pathology and entomology, and he gave an update on experimental work happening in the NT to investigate transmission of cucumber green mottle mosaic virus (CGMMV) by honey bees.

Highlights from entomology talks throughout the day included Alexander Roberts who discussed the mosquito surveillance and control work conducted around the Darwin area by the Medical Entomology unit of NT Health, and Professor Alan Andersen from CDU, who gave a very interesting talk on the megadiversity of ants in the arid zone of Australia. To finish off the day, Brian Thistleton reflected upon a long and adventure-packed career, from the UK to the NT via the South Pacific.



Some NT APPS members: Merran Neilsen, Sharl Mintoff, Maxine Piggott and Barry Conde



Barry Conde showing attendees his demonstration hive of *Tetragonula* stingless bees



Sharl Mintoff talks about Panama disease research happening in the NT

Merrran Neilsan

Regional news from SA



Congratulations to Nicole Dron for best postgraduate plant pathology presentation

The Annual Postgraduate Symposium of the University of Adelaide's School of Agriculture, Food and Wine was held at the Waite Campus on 28 and 30 September 2020. The symposium provides a forum for mid-candidature students to present their research in a friendly and supportive environment. The standard of presentations was excellent overall and it was great to see the breadth of research being undertaken. A number of APPS SA members attended.

There were 4 presentations by students in plant pathology and related areas:

Qi Wu	Molecular Epidemiology and Physiology of Shiraz Disease with an Emphasis on Grapevine Virus A
Nicole Dron	Improving Phytophthora Root Rot Resistance Through Waterlogging Tolerance in Chickpea
Nadeeshani Perera	Interaction of Cereal Cyst Nematodes with Barley: Genetics and Biology
Monica Adu-Gyamfi	Cereal Cyst Nematode Resistance in Barley

Nicole Dron, a University of Adelaide student based in Tamworth at NSW DPI presented via Zoom and won the APPS SA prize for the best presentation in Plant Pathology. Nicole received membership with the APPS for a year and \$200 in cash. The prize was judged by a number of APPS SA members and then presented by Pauline Glocke on behalf of the APPS SA.



Pauline Glocke (left) presenting the award to Nicole Dron (right)

(Photo credit: Keryn Lapidge)

Regional news from TAS



PhD completions

David Page (supervised by APPS member Morag Glen) graduated in August. His thesis was titled “Basidiospores: their influence on our thinking regarding management of Ganoderma root-rot disease in tropical hardwood plantation crops”.

Awards

BAGSci Honours student Anna Mackintosh (supervised by APPS members Kathy Evans and Karen Barry) received the Ag Institute Australia (Tas) Award for her honours presentation on powdery mildew in strawberries.

Recent seminars

16th October: Soil Health seminars - four postgraduate PhD candidates working on a diverse range of projects related to the connection between soil biology and soil health took part in a highly informative seminar session

1. Phillip Kay – Microbial Changes Associated with Improved or Reduced Soil Health
2. Theresa Chapman - Diversity and Function of Cover Crops in Vegetable Production
3. Philippa French - Cover crops under vineyard rows: effects on vine nutrition, water availability and soil function
4. Brianna Walker - Organic Amendments and the Soil Microbiome in Vegetable Cropping

6th November: PhD candidate Alison Ctercteko - Understanding the factors influencing the survival of *Trichoderma harzianum* and its interaction with *Botrytis cinerea* to improve control in horticultural crops

20th November: PhD candidate Chiranthika Singhalagoda - Screening native pepper for resistance to dieback & tolerance to drought

2021 APPS biennial conference

The Tasmanian committee have been progressing plans for the 2021 conference and have made the decision it will be a fully online conference. There are some great opportunities with an online format to replicate what we usually do face-to-face. Look out for a “save the date” soon and then full details later.

*Compiled by Karen Barry and Robert Tegg.
For further information Robert.Tegg@utas.edu.au*

Regional news from VIC



Our first online AGM and end of year celebration

Due to the continuing restrictions on movement in Victoria, we decided to have our first on-line annual general meeting in October this year. We had 17 people log into our meeting which we held on the Microsoft Teams platform. As we have members from all different plant pathology disciplines and backgrounds, I chose Teams to accommodate the Federal Government employees who are unable to use Zoom to do security issues. At the meeting we spoke about what we might do in 2021 and how we looked forward to doing something out in the field soon. There seemed to be an appetite for some plant pathology presentations, so we were encouraged to try to organise another meeting before Christmas.

On the afternoon of December 18th, we will get together again online to hear talks from students who are finishing up at the end of the year. There will be some finishing PhD students, as well as some Honours students who will report the results of their studies. We also plan to have some Christmas themed games and perhaps some socially responsible end of year drinks.

New member for Victorian Branch committee

We are delighted to have Ruvini Lelwala join our organising committee at the end of 2020. Ruvini has been an active member of the Vic branch for several years and is a past recipient of an APPS travel scholarship to attend the 2017 APPS Biennial meeting in Brisbane (where she also was awarded best student poster!)

Recognition of Branch member

Vic Branch APPS member Brendan Rodoni was awarded the Inaugural Kim Ritmann prize for Science and Innovation in recognition for his 35-year career as a leading scientist and educator in Australia and overseas. He has made a large contribution to plant virology and bacteriology research over his long career.

Candace Elliot

2020 Australian Museum Eureka Prize winner

Congratulations to Professor Robert F Park, University of Sydney, winner of 2020 Australian Museum Eureka Prize for Leadership in Innovation and Science

Prof Robert Park has won the Eureka Prize for Leadership and Innovation in Science, announced on 24th Nov. 2020. The Australian Museum Eureka Prizes are Australia's most prestigious and comprehensive science awards, recognising excellence in research and innovation, leadership, science engagement and school science. Robert, located at the Sydney Institute of Agriculture, Plant Breeding Institute, School of Life and Environmental Sciences, Faculty of Science, University of Sydney, has been recognised for his leadership of the Australian Cereal Rust Control Program. His work covers 35 years of dedication, perseverance and excellent research contributing to cereal breeding for rust resistance, targeting control for *Puccinia* species to provide direct benefits to global cereal production and food security.



The Eureka Prize shines a light on the excellent teamwork of one of APPS's most senior plant pathologists and highlights the critical work that our members engage in. Robert is an active member of APPS, having been a key member of the 2017-2019 APPS executive.

CONGRATULATIONS ROBERT AND YOUR EXCELLENT TEAM!

<https://australian.museum/get-involved/eureka-prizes/>

By Kim Plummer on behalf of APPS

2020 Undergraduate Honours Scholarship Report

Fiona Hill – University of Queensland

Over the past year I have been privileged to have carried out and completed a research project under the guidance of Professor Elizabeth Aitkin and Dr Jay Anderson at the University of Queensland. The project not only contributes vital information to the Australian banana industry's understanding of a prominent banana disease, but also provides previously unexplored research to plant pathology academia.

My project aimed to investigate sugarcane as an alternative host of *Fusarium oxysporum* f.sp. *ubense* (*Foc*), the causal agent of Fusarium wilt in bananas. Practically, my project involved searching for traces of fungus colonisation of inoculated sugarcane. Another exciting aspect of this research was the opportunity to utilise a genetically modified fungus that produced a green fluorescent protein that can be detected using a laser confocal microscope. The presence of GFP-*Foc* was frequently found in the roots of sugarcane. My project also allowed me to make a valuable contribution to the wider BA14014 Fusarium wilt program (Fusarium wilt Tropical Race 4 research program) currently supported through Hort Innovation. The honours journey was a unique learning opportunity, where I was able to utilise and develop my scientific and lab skills as well as to explore the unique challenges that come with a self-paced project and the challenge of balancing study, work, family and friends.

I am deeply grateful to have been awarded the APPS's Advancing Plant Pathology Fund – Australia Undergraduate Honours Scholarship which provided a significant financial relief while I focused on my research. I am also very thankful to my supervisors for their guidance and the Aitken lab for their support throughout the past year.

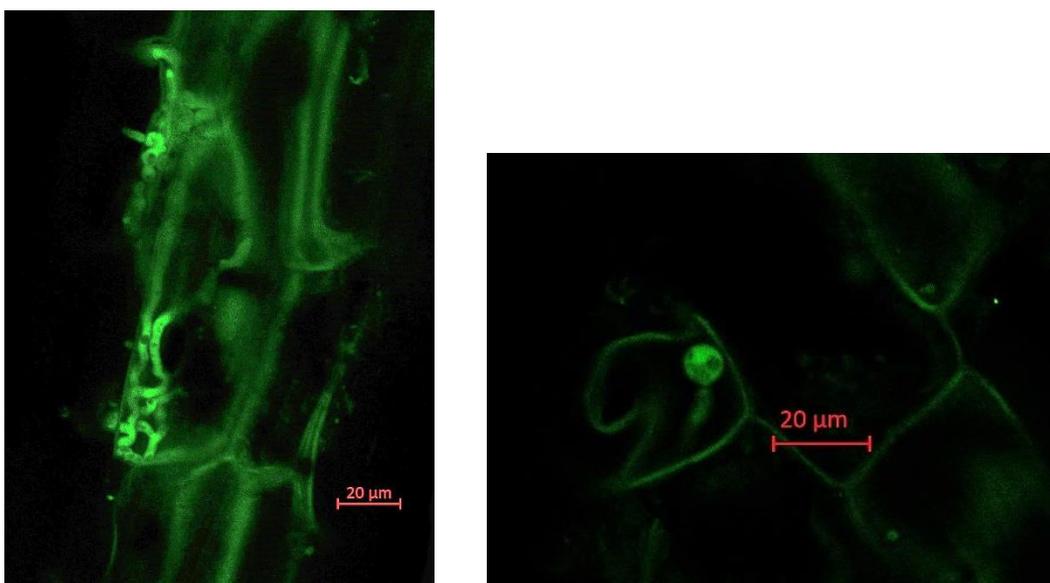
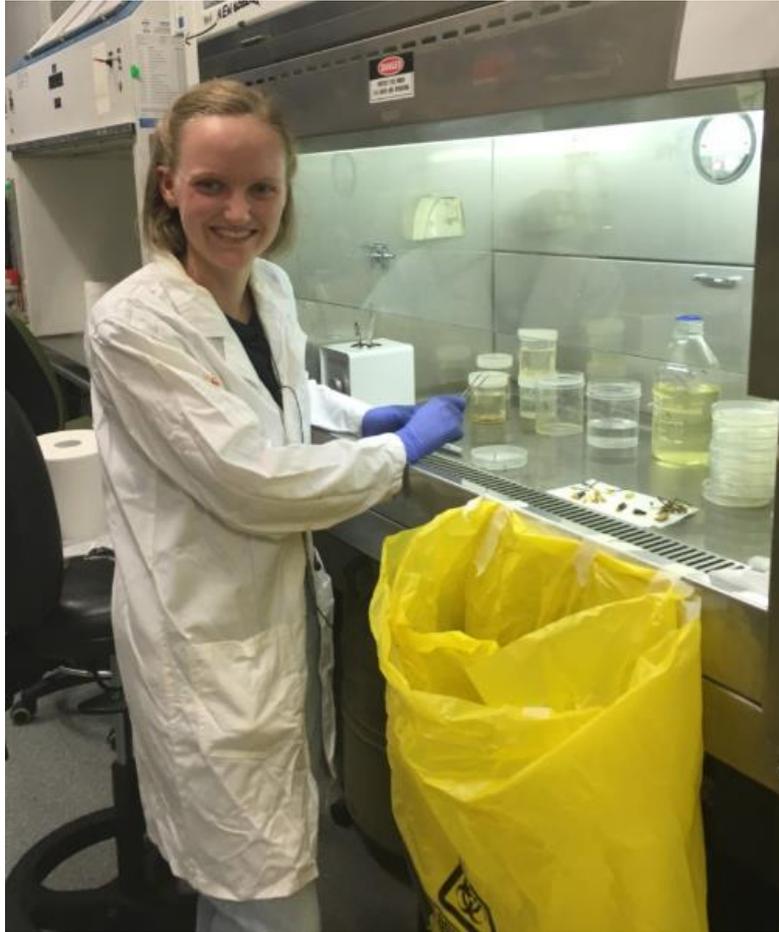


Figure 1: GFP-*Foc* hyphae and chlamydospore in a root section of sugarcane.



Fiona Hill