

Quarterly Comments from the APPS President

Time keeps ticking away and life passes so fast - how important it is to make the most of every minute!

For the current APPS Management Committee we are entering the last straight of our term as we approach September 2007, and the Biennial Conference in Adelaide. At that time we will pass the management reigns on to the next MC. With some changes in structure to the APPS Executive, this will not mean the end of some of the current Executive's involvement with APPS management. Provision has been made for carry-over of corporate memory and I hope these changes lead to an even smoother APPS operation, and greater advances in development of the Society into the future.

I was very impressed with the response to my email regarding a joint meeting with the Australian Entomological Society and the CRC for National Plant Biosecurity in Sydney in 2009. The details are yet to be finalised but there appears to be very significant enthusiasm amongst all involved to a joint meeting. Around 10% of our members responded to the email, with only 2-3 of these expressing doubts about the value of such a meeting. We will keep you informed regarding arrangements as they are finalised.

There will also be changes to the way the Biennial Conference business meeting is conducted in Adelaide. We will have a number of reports from sub-committees we would like to present to members, and these will be highlighted during the meeting. We would like to gain as much feedback as we can to ensure there is main-stream support for proposals that are instituted in the next two years management of APPS. Please take the time to attend the APPS business meeting to express your views!

I also draw your attention to the 3rd Asian Plant Pathology Conference in Indonesia in August (20-23rd); details can be accessed on-line at www.3rdacpp.com. From what I understand, the quality of presentations at this meeting is usually very high, with papers presented from all over south-east Asia. APPS was a founding partner in the establishment of the Asian Association of Societies for Plant Pathology (AASPP, which sponsors the meeting) and support from Australasian members will go a long way to furthering the cause of plant pathology in the region.

Lastly, I'd like to encourage all members to attend the Adelaide conference in September 2007. The organising committee have been doing an excellent job and I'm sure the conference will run as smoothly as ever, with the same high standards and outcomes. Adelaide is also a nice place to visit in spring and I'm sure there will be many activities for members to participate in to provide a welcome break to high-pressure work commitments!

Kind regards

Rob Magarey



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New Members

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

NSW: Mr Vinod Kumar
Mr Prashant Golegaonkar
Mr Justin Morris

VIC: Mrs Lila Nambiar

WA: Dr Ali Bhatti
Mr Sean Kelly
Miss Kylie Ireland
Mr William Dunstan
Dr Jayasena
Dr Abu-Baker Siddique

Qld: Mr Peter Wilkinson
Dr Gerry MacManus
Mr Darren Westerhuis
Ms Lisa Keller
Ms Michelle Grose
Mrs Jennifer Morrison
Mr Anthony James
Mr Tim Clewett

TAS: Mr Michael Lang

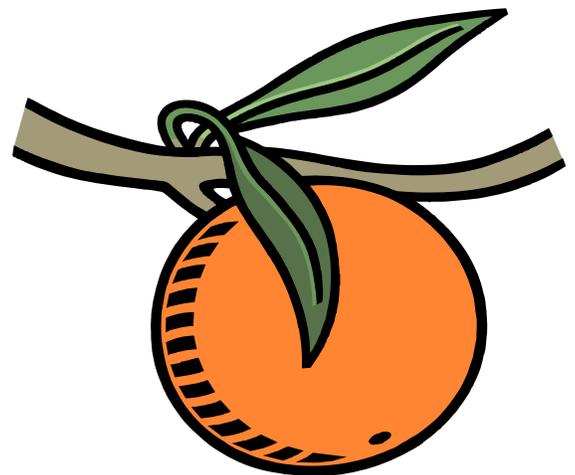
SA: Dr Daniele Giblot-Ducray
Mr Adrian Loschiavo
Ms Matchima Naradisorn

Syria: Dr Mathew Abang

Bookmark the APPS web site:

www.australasianplantpathologysociety.org.au/

Our new journal, 'Australasian Plant Disease Notes' is now available online and can be accessed via a link on the APPS homepage.



REGIONAL NEWS

WESTERN AUSTRALIA

Tuart Woodlands Under Threat

Murdoch University is part of a major Australian Research Council and Industry funded research project to investigate the decline of tuart (*Eucalyptus gomphocephala*) trees. Tuart is one of the most important eucalypts in the south west of Western Australia, dominating the landscape throughout the Swan Coastal Plain and is endemic to the coastal region, being found only in a 400 km strip from Jurien Bay in the north to Busselton in the south.

Research Scientists presented key findings from the first stage of the project at the Woodland Decline Symposium, Mandurah in November 2006. This Symposium was the first of its kind in Australia to look at the decline in health of natural species and ecosystems, with more than 270 delegates attending from university, industry, agencies and the general public. The symposium was opened by the former Minister for the Environment, Mark McGowan, and a range of speakers representing universities, industry and agency presented at the Symposium. Professor Richard Hobbs (Murdoch), Chair of Environmental Science at the University, gave a talk on the impact of agriculture and urbanisation on woodland health and the various aspects which may be playing a role in the woodland decline, such as climate change, weeds, nutrient inputs and other disturbances. Dr Paul Barber (Murdoch), Project Co-ordinator of the Tuart Health Research Group, expanded on the current knowledge of the decline and outlined future research into the cause(s) and management of this serious problem.



Other partners in this three year research project into the cause(s) and management of tuart decline include the Department of Environment and Conservation, Edith Cowan University, Alcoa World Alumina Australia, BEMAX incorporating Cable Sands, State Forests New South Wales, City of Rockingham, City of Mandurah, Shire of Harvey and Specterra Systems.

For further information check out the following website www.tuarthealth.murdoch.edu.au

Paul Barber.

12-13 June - The 1st International Symposium on Nematodes as Environmental Bioindicators to be held at the Heriot-Watt University, Edinburgh

Full details are available from the AAB web-site.

www.aab.org.uk

APPS Honorary Members & Fellows

Over the next few editions of the newsletter, profiles of the Fellows and Honorary Members of APPS will be included in the newsletter. Written by colleagues, these profiles are intended to introduce to you the luminaries of our society. The definitions of both are outlined in the constitution, and can be viewed on the web page. Fellows are people who have "rendered distinguished service to the science of plant pathology", and Honorary Members are those who have "made an outstanding contribution to the Society".

This profile is on Graham Stirling, who is regarded so highly he is both a Fellow and an Honorary member. This profile was written by Marcelle Stirling, with assistance from Trevor Wicks and Ken Pegg.

GRAHAM STIRLING

Graham Stirling was born in 1947 and grew up on his family's wheat and sheep farm on Kangaroo Island. He commenced his agricultural science studies at the University of Adelaide in 1965, intending to specialise in pastures and grazing animals but finished up majoring in Horticulture and Plant Pathology. Dr. John Fisher then introduced him to the fascinating world of nematodes and supervised his Honours and Master's projects on the ecology of stubby root nematodes (*Paratrichodorus*).

Graham moved to Loxton in 1970 as a Nematologist with the South Australian Department of Agriculture and decided to concentrate on root-knot nematode (*Meloidogyne* spp.) because his surveys showed that it was causing major losses throughout the South Australian wine industry. Graham was convinced that nematode-resistant rootstocks would solve the problem and argued that the ban on the importation of grape rootstocks into South Australia (due to the risk of *Phylloxera*) was not justified. The ban was eventually lifted and this enabled Graham to screen a wide range of rootstocks for resistance to the main species of root-knot nematode in South Australia. Since propagation problems were limiting the supply of grafted vines to industry, Graham then turned his hand to grafting research. By 1975, the grafting problems had been solved and bench-grafted grapevines were available to growers. Graham therefore moved on to other



challenges.

The award of a CSIRO Post-Graduate Studentship in 1975 provided Graham with an opportunity to move to the University of California, Riverside, where he intended to study mechanisms of resistance to root-knot nematode in grapevines. However, he was soon introduced to the biological control work being done in Dr. Ron Mankau's laboratory and decided to specialise in that area. At

a time when most biological control workers were studying nematode-trapping fungi, he found a new parasite of root-knot nematode eggs (*Dactylella oviparasitica*) and showed that it was keeping the nematode under control in some Californian peach orchards. He was awarded his Ph.D for that work in 1978. Interestingly, the fungus was not seen again until 2003, when it was found to be a major factor suppressing populations of cyst nematode (*Heterodera schachtii*) in California.

Graham returned to Loxton in 1978 and began to work on a fascinating bacterium (*Pastueria penetrans*) that was an obligate parasite of root-knot nematode. He developed an *in vivo* culture technique that soon became the standard method of mass producing the bacterium for research purposes, and in a landmark paper published in *Phytopathology* in 1984, showed that inundative application of *Pastueria* provided excellent control of root-knot nematode. Later he then went on to study the host specificity of *P. penetrans* and was one of the first scientists to make a serious attempt to culture the bacterium *in vitro*.

In 1983 at the age of 35, Graham moved to a Nematology position in Brisbane with the Queensland Department of Primary Industries. His first task was to tackle a new disease that was devastating the Burdekin rice industry. He found the causal agent was a new species of needle nematode (*Paralongidorus australis*) that occurred naturally in wet environments in north Queensland. Rice paddies were an ideal habitat for the nematode and over a period of 5-10 years, populations increased to levels that completely destroyed the rice root system. By 1988 he had developed a range of control measures for the nematode, but unfortunately they were never used because the rice industry collapsed for economic reasons and rice-growing land was planted to sugarcane.

During his time in QDPI, Graham made a major effort to change the nematode management practices used in Queensland's horticultural industries. He saw nematicides as a tool of last resort and tried hard to convince growers that the principles of integrated pest management could be applied to nematodes. He encouraged the use of forage sorghum as a rotation crop in the vegetable industry, demonstrated the value of organic amendments in the ginger industry and showed that nematode populations on many pineapple farms were not high enough to warrant nematicide treatment.

Although Graham's primary responsibility in QDPI was to find immediate solutions to the nematode problems being faced by growers, he retained an interest in biological control because he was convinced that our understanding would eventually improve to the point where biological control agents would be provide useful nematode control. In 1991, his book entitled 'Biological Control of Plant Parasitic Nematodes' was published in the UK and became accepted internationally as the standard reference text in that area. During the next five years he developed several commercially-acceptable formulations of nematode-trapping and egg parasitic fungi and demonstrated their potential in the field.

Graham eventually found that it became more and more difficult to work within the constraints of a government agency, and so in 1997 he joined his wife Marcelle (also a plant pathologist) in their own company (Biological Crop Protection Pty. Ltd.). This allowed him to focus on what he thought was a plant pathologist's primary role: undertaking research, providing diagnostic services and helping growers improve their disease management. The first major issue that he addressed was the withdrawal of two widely-used soil fumigants: ethylene dibromide in the pineapple industry and methyl bromide in the vegetable industry. Rather than simply replacing one chemical with another, Graham used the opportunity to introduce more sustainable management practices for soil-borne diseases into both industries. He therefore concentrated on deriving economic thresholds for root-knot nematode, establishing monitoring procedures for key pathogens and providing predictive services for consultants and growers. Diagnostic tests for *Meloidogyne* and *Fusarium oxysporum* f. sp. *lycopersici* were developed in collaboration with colleagues in CSIRO and SARDI and were the first validated DNA tests for soil-borne pathogens to be available in horticulture.

From 1995 to 2006, Graham also made a major contribution to the Sugar Yield Decline Joint Venture, a multi-disciplinary research project that was established by Sugar Research and Development Corporation to determine the causes of yield decline in the Queensland sugar industry and develop solutions to the problem. Graham considered this one of his most satisfying assignments because the scientists involved worked together as a team and the outcome of their work was a new farming system that changed the way sugarcane was grown. This farming system (which involved crop rotation,

controlled traffic, reduced tillage and residue retention) was more profitable and sustainable than the previous sugar farming system and overcame most of the physical, chemical and biological constraints that were causing yield decline. His main contribution was to demonstrate that plant-parasitic nematodes were one of factors causing yield decline, that nematode control was one of the reasons that soybeans and other legumes were useful rotation crops, that inputs of organic matter were important in enhancing the suppressiveness of soil to nematode pests, and that free-living nematodes were useful indicators of the biological status of sugarcane soils.

The work on yield decline of sugarcane gave Graham a better understanding of the soil biological environment and how it was influenced by the farming system. He continued working with sugarcane but also commenced similar projects on cereals and vegetables. This work showed that rotation crops, tillage practices and organic inputs influenced the suppressive potential of soil and therefore played a major role in sustaining the biological control agents that normally keep plant-parasitic nematodes under control. This work is continuing and in the next few years he hopes to see the day when all crops (but particularly vegetable crops) are grown using farming

systems that sustain the beneficial soil biota and therefore enhance the natural biological control mechanisms that should operate in all soils.

During a career that has so far spanned 37 years, Graham Stirling's energy, enthusiasm and organisational skills have enabled him to make a contribution to a wide range of agricultural and horticultural industries. A commitment to achieving practical outcomes has also ensured that the results of Graham's research were adopted by growers. Graham felt that scientists had a responsibility to communicate their results to others and this is evidenced by the more than 100 research papers and many more extension publications that he produced during his career. However, Graham's contribution to his profession should not just be measured by his research and extension contributions. For example, he was APPS Regional Councillor in Queensland for several years, he has served as a Senior Editor of Australasian Plant Pathology, he was a driving force behind the establishment of the Australasian Association of Nematologists, he was a member of the committee that organised the first Australasian Soil-Borne Diseases Symposium and he also supervised ten students during their post-graduate studies at the University of Queensland and James Cook University.



Internet Information

Recently found on the web was an interesting newspaper article about Olaf Ribeiro, know to all who are involved with *Phytophthora*. He is rescuing heritage trees by adjusting the micro-flora in the soil around tree roots. His passion for this stems from his conviction they can live forever: "If you don't believe me, look at the ancient pines in Australia that have been alive since the dinosaurs."

http://seattletimes.nwsourc.com/html/pacificnw01142007/2003522426_pacificplife14.html

Daniel Huberli



Jottings from the APP Editor-in-chief

Hello Everyone,

I do not like doing it but I really have to say that ‘I have some good news and some not-so-good news.’

I like to keep you up to date with what is happening with the Editorial Board – in fact there are two EB’s. The first and the largest is responsible for *Australasian Plant Pathology* (APP) – our main journal. The second EB manages the web-based journal *Australasian Plant Disease Notes* (APDN). Earlier this year Professor John Irwin retired from the EB of APP and I shall again take this opportunity to thank him for his professionalism in handling the manuscripts that were allocated to him. John had an enormous workload as he was simultaneously CEO of the CRC for Tropical Plant Protection plus he carried out his purely University of Queensland duties. I am indebted to John for his assistance. The retirement of a mycological plant pathologist caused me to search around and Dr Elizabeth Aitken from UQ has accepted a position as a Senior Editor and already has several manuscripts under review.

James Cunnington does a very excellent job with the many small papers that are submitted to APDN. At James’ suggestion I sought someone who would look after the virology papers and was fortunate to gain the assistance of Dr. Robin MacDiarmid from HortResearch, Auckland (NZ) as the APDN virology editor. Robin has already completed several papers and they, among about 20 others are now on the APDN website. APDN will not be issued with an Impact Factor until it has been operational for two years. I am heartened by the fact that it is attracting many more short papers (First Records, Disease Notes and others) than did APP. I feel that many of these papers from our international trading partners are of value to Australian Biosecurity, AQIS and in other ways. They also inform us of key workers on crops in those other countries thus enabling networking. Please take time to look at the APDN website – it is extremely professional and I am grateful to CSIRO Publications for their contribution.

Both journals are going well with the standard of published papers being of a high standard. Often this takes time with Senior Editors liaising with authors

from non-native English speaking countries. I am often amazed at how long some people take to review a paper and some Senior Editors have stated their frustration with this to me. I should be very grateful if, when asked to provide a review of a paper, that you handle it expediently as you would want your own papers to be handled.

In the past 18 months I have handled 2 special APP issues covering papers submitted by members of the CRC for Tropical Plant Protection. Another special issue was that containing the keynote papers from the Australasian Soilborne Diseases Symposium held late last year in New Zealand. These three special issues caused much hair pulling on my part trying to coordinate simultaneous presentation of papers in their allocated special issue of APP. The next hurdle is the issue due in December of this year which will feature the keynote papers from the biennial conference of APPS to be held in Adelaide. I have also ‘commissioned’ or been offered ‘review type’ papers and two more such papers by Andrew Carnegie are to appear soon.

In the December 2006 Newsletter I stated **“If you, singly or as a member of a team wish to have a review article considered then please do not hesitate to bring it to my attention”**. I need more of these papers as it is well documented that they really do enhance the impact factor. They are also handled by me in a **speedy** fashion – look at the time differential between the receipt date and the acceptance date in the papers recently published by Martin Barbetti *et al* (APP **35**, 691-706) and the *Puccinia psidii* review by Glen *et al* (APP **36**, 1-16) and the forthcoming reviews by Angus Carnegie. I pull out ‘all stops’ to get them reviewed with the absolute minimum of delay.

I am now confronted by the fact that, in some future issues, I may not be able to meet the page quota due to:

- Insufficient number of accepted papers
- Slow reviewing
- Lack of ‘Invited Reviews’.

I also note with a sense of despair that some APPS members have recently published in European and other plant pathology journals, work that was done

in our geographical domain. This work could have been submitted to APP. Perhaps the reason is government or institutionally derived with a perceived 'need' to publish in journals with an impact factor greater than APP's. This is a catch-22 situation. If we do not publish in APP then the impact factor is unlikely to rise faster than it is since APP will not be cited for a paper published elsewhere. I believe that there is a professional loyalty issue here. It is probably linked to the fact that membership increases in the year of the conference in order that some 'new' members gain a discount for conference registration. Perhaps I am becoming too cynical.

If you have any queries about publishing then please contact me – email is best. I shall also be at Adelaide and I expect to be 'cornered' for a chat.

I was also asked recently by Christine

Horlock – on behalf of the WA plant pathologists – to approach CSIRO Publications regarding student prizes. I spoke to Dr Chris Anderson and it was agreed that CSIRO Pubs present 2 x \$100 book vouchers. I acknowledge the kindness of our publishers. CSIRO Pubs will have a presence at the Adelaide conference and we should support them in return.

As always I would finally like to thank the members of the Editorial Boards who serve us well with their time and efforts. Without their efforts neither APP nor APDN would be possible due to the massive workload involved.

Thank you and cheers

Keith Harrower

This was your space - where were you??

**Make the most of your newsletter.
Send in some articles or
information to be included.**

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: hall.barbara@saugov.sa.gov.au. **Next deadline: 30 July 2007.**

Editor-in-Chief APP: Dr Keith Harrower, School of Biological & Environmental Sciences, Central Queensland University, Rockhampton, Qld 4701. Ph 07 4930 6354, Fax 07 4930 9209, E-mail k.harrower@cqu.edu.au

Web Site: <http://www.australasianplantpathologysociety.org.au/>



ADELAIDE 2007

16th Biennial APPS Conference Back to Basics: Managing Plant Disease

Adelaide Convention Centre South Australia

24-27 September 2007

This Conference will bring together professionals involved in the advancement and dissemination of knowledge of plant pathology in the diverse environment.

A four-day scientific program is planned along with a trade exhibition, workshops, field trips and the opportunity for all delegates to enjoy pre and post Conference tours to some of South Australia's agricultural and scenic regions.

Abstract submissions are now being accepted. The closing date for submissions is Friday 18 May 2007. Refer to the Conference web site below for submission and formatting instructions.

Online registration is now open

<http://www.plevin.com.au/apps2007/>

or follow the link from your APPS website