New Zealand Plant Protection Society (Inc.)

Newsletter

ISSN 0-86476-091-4

May 2000

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Greetings

Depending on how you count, and who you listen to, this is either the penultimate newsletter of the 2nd millennium or the first newsletter of the 3rd millenium. No matter which, because this year sees some important changes in your Society. The Proceedings will this year become New Zealand Plant Protection, Volume 53. The change aims to improve the scientific standing of the 'Proceedings', positioning it as an up-to-date journal record of New Zealand's progress in plant protection. The other change is the introduction of Sue Zydenbos as editor of NZ Plant Protection. Sue is only the 5th editor in the 53 years of the society, and she follows in the footsteps of the late Les Matthews, and of Jennie Hartley, Alison Popay and Maureen O'Callaghan. A brief biography of Sue appears later in this newsletter.

We reported in the last newsletter on the death of Les Matthews. This time we describe a few of the achievements of the man who was for so long 'Mr Weeds' to New Zealand and, later, to the world.

This year's conference is again to be held in Christchurch. Details are given later in this newsletter. There are advantages in always having our conferences in the main centres, because it's easier (and often cheaper) for people to get there than to smaller places. Other organisations, like the NZ Grasslands Association, often hold their annual meetings in small towns, but in that case many of their members are grassland farmers who help organise the meetings. Do you think that our Society is becoming too urbanised and too cut off from its rural connections? Visiting different areas does allow members to see different agricultural, horticultural or cropping problems, even though the Society hasn't organised field trips as part of its programme for very many years. Holding meetings in different places also allows local consultants or growers to attend our meetings and perhaps pick up useful information. Committee members make the decisions on conference venues. If you think conferences should be held in a wider range of places, button-hole the committee member closest to you and let them know your views on these and any other matters you think important.

So that you know who the committee members are, we've asked each of them to contribute a brief item for this newsletter, saying who they are and what they do.

Ian Popay

President's Message

The Millenium Party passed without a hitch and the La Niña summer has ended. The cool and wet season has caused its share of plant protection problems throughout the country. Some pests and diseases issues are perennial, while others are more sporadic, only causing attracting interest occasionally. One of our challenges is to remain vigilant and develop solutions for the disorders and issues that appear less frequently, or are perhaps out of sight, but not completely out of our minds. With contributions like our recent "Managing Urban Weeds and Pests", the NZPPS can help to draw attention to issues which otherwise have a low profile. This book is now available at a discount to members through Manaaki Whenua Press.

The 53rd Conference is shaping up well, with an excellent list of papers and posters. Christchurch has a history of hosting large meetings, and we are confident of a strong showing again this year. Our plans are also progressing for the organics meeting on Monday August 7. This meeting should offer something of interest for a wide range of people. Please consider attending this session as well as the main meeting.

The NZ Plant Protection Society Conference has been added to the international list published in *Crop Protection*, and we are now affiliated with the International Association of Plant Protection Sciences (IAPPS), which uses *Crop Protection* to carry the newsletter. These developments should help to boost international interest in what we offer.

Our web site is continuing to prove useful to members, carrying details of the updated instructions for authors and other timely information about the Conference (including the name change to "*New Zealand Plant Protection*"). The search engine means that you can quickly find papers carrying keywords of interest, for the last five years. The NZPPS is building an impressive and very functional web site.

CRIs have recently been engaged to a greater or lesser extent with refocussing their public good (FRST) research programmes. For HortResearch and AgResearch especially, this has proven to be a challenge for people in the plant protection disciplines, as these CRIs responded to the strong signals to move activity from the production areas to the higher technology areas (often biotech or genomics). Sustainable production is seen as a second tier priority, compared to the need for new products and processes, along with health and wellness.

At the same time, the HSNO Act is providing plant protection with another set of challenges. Some of the key issues facing plant protection currently are:

- The new rules for pesticide registration are raising the barriers for companies, and many are rethinking their strategies for the New Zealand market, increasingly from a distance, i.e. across the Ditch.
- For people working on the introduction of biological control agents, the upcoming hearings (scheduled May 10) will be an important milestone. The new legislation has much greater requirements for public consultation and hearings, and places the costs for the process on the applicants. Understandably, there are reasons not to be optimistic about the future of classical biological control.
- So can we expect solutions from the development and release of genetically modified organisms ? The Royal Commission will obviously put the answer to that conundrum on hold for some time. The voluntary moratorium on further field trials will have an undeniable impact on science as well as society. New Zealand society has a long way to go to develop a fuller debate on the potential for both organics and biotechnology.
- The rate of appearance of new threats to our biosecurity seems to have gone up dramatically recently. The statistics show how much our trade and tourism has increased, but they don't capture the long term economic cost of incursions such as the Varoa mite, with potential to impact significantly on pollination a wide range of horticulture and seed crops. The application of traditional cost-benefit analysis to biosecurity threats seems likely to be misleading, given the difficulty of

dealing with a time-line of "forever". How does a government decide what to eradicate and what to ignore, given uncertainty over the biological potential of new organisms in our ecological landscape?

So given this background, where will the future of plant protection lie? Remember that something like 40% of the world's food production is lost to pests, diseases and weeds. While I can't provide equivalent figures to NZ, I can tell you that an economist from Victoria University has recently summarised the estimated cost to New Zealand of pests, diseases and weeds, as 1% of GDP ($850M pa). This historical analysis ignored the intangible costs of control or failing to control the targets. Vertebrate pests especially are having a major - but non-monetary - impact on biodiversity.

These immense challenges will require people working in plant protection to be more innovative than ever. Government signals seem to recognise the importance of science and technology, and we can expect to see some increased funding opportunities for companies through Technology New Zealand. Our challenge must be to reach our potential to benefit New Zealand society at large in this difficult environment.

Max Suckling,
President NZPPS

Obituaries:

Nineteen ninety nine saw the Society loose several long time members.

An obituary for Frank Thompson was placed in the December 99 newsletter and those for Les Matthews and Phil Broadhurst follow. Obituaries for these three members will be placed in NZ Plant Protection Vol 53.

Les 'Weedy' Matthews

The New Zealand Plant Protection Society owes a great deal to the late Les Matthews. Les was well-known throughout New Zealand as 'Mr Weeds', and his reputation as an authority on weeds and their control later spread throughout the world. He was born in Kaitaia, where he received his earlier education. He joined the New Zealand Forest Service when he was 16 and was involved in survey work before completing his BSc in 1948. He then joined the Department of Agriculture in Wellington as an agronomist, and specialised in the new technology of herbicides and weed control, soon becoming an expert in the field.

Les worked for several years in the Department's head office in Wellington before moving to Ruakura, from where he built up, directed and led a national weed science group that was involved in exploring diverse weed control methods. He also started building his international reputation by attending, and speaking at weed conferences round the world. Les invariably questioned other peoples' ideas and was never afraid to put up his own theories and argue in support of them. He always used to say that the Weed Research Organisation near Oxford in England regarded him as a bit of a 'colonial upstart'.

Colonial upstart or not, he was on the executive of the Asian-Pacific Weed Science Society (APWSS) for several years and became its President in 1972-73, during which time the Society held its biennial conference in Rotorua. Later, he was one of the six members of the steering committee which helped establish the International Weed Science Society (IWSS), and he then became its first president in 1977-1979.

In 1977, Les became the first holder of the newly established post of Chief Weed Science Officer of the Food and Agricultural Organisation (FAO) of the United Nations. This position took him to Rome and from there he supervised the research and operations of all FAO's weed scientists around the world. His efforts and achievements in weed science led to his selection as an honorary member of the Weed Science Society of America (WSSA) in 1981.

His posting to Rome led to Les and his wife Jean falling in love with Italy and they spent

most of their time there until Les's death in May 1999. Neither did Les ever lose his love of building and he spent many of his later years renovating his Italian castle in Terenziano.

In New Zealand, Les played a major role in building up the NZ Weed and Pest Control Society, later to become the NZ Plant Protection Society, serving on its committee for 25 years and, for many of those years being secretary, and editor of the published conference proceedings. He became a life member of the Society in 1968. He was also an active member of the New Zealand Institute of Agricultural Science, and was elected a Fellow in 1982.

Weedy Matthews wrote a number of articles in scientific and farming journals, and contributed chapters to several books. His own *magnum opus* was the book *Weed Control by Chemical Methods*, published in 1975. Although the book was written before glyphosate and metric measures had reached New Zealand, it remains, 25 years later, as the only New Zealand text book on the subject.

Les had a long and distinguished career in weed science, in which he won accolades both nationally and on the world stage. His contribution to weed science, to New Zealand, and to the world, will not be easily forgotten.

Anis Rahman
Trevor Pattison
Ian Popay

Phil Broadhurst

Phil Broadhurst died on 28 December 1999, aged 36.

Phil began work as a school leaver in 1981 with the Plant Diseases Division, DSIR, at the Mount Albert Research Centre. His employment papers state that he was 'the most suitable person selected from a large range of applicants'. He entered the Technical Trainee Scheme which was operating at the time to encourage young people to develop careers as science technicians. He immediately began studies towards a NZ Certificate of Science, and in 1984 he was transferred to permanent staff as a technician after successfully completing this qualification. In 1986 he received a Prince and Princess of Wales Science Award to carry out studies on the taxonomy and identification of *Fusarium* with Dr Lester Burgess at the University of Sydney. In 1988 he completed a further period of overseas study at the Commonwealth Mycological Institute in London, again on the taxonomy and identification of fungi. In 1990 he received the rare qualification of NZ Diploma in Science, and in 1992 was promoted to the position of Scientist, Plant Pathology, in DSIR Plant Protection.

In the early stages of Phil's career he assisted in research on soilborne plant diseases, setting the scene for much of his future work. He later became a recognised specialist in the taxonomy and identification of *Fusarium* and related fungi, describing new species and undertaking basic studies on the biology of these important plant pathogens. He also completed a number of research projects on root diseases of Boronia, onion, and sweet potato (kumara). The breadth of his expertise was not confined to the soil, however, as ringspots on lettuce and cabbage, *Stemphylium* on asparagus, fungi on gorse and broom, and 'black ink' disease of wasabi were all subjects of studies, papers and reports Phil completed. He also carried out studies on the control of plant diseases, including the identification of fungicide resistance in important vegetable pathogens.

Testimony to Phil's co-operative and collaborative nature, and the high regard in which he was held by colleagues, is the large number of scientific papers and reports he co-authored during his research career. Phil has always been a friendly, highly co-operative and conscientious work colleague. His experience and expertise have been very valuable in all of the research projects he has embarked upon. He rapidly developed an excellent science reputation well beyond expectations of his original employment, which was recognised in his post-graduate awards and career advancement.

His enthusiasm for plant pathology research was justifiably rewarded by a very high level of achievement.

Phil Broadhurst will be remembered by work colleagues as one who completed research tasks with intelligence, skill and conscientiousness, but also as a very bright and pleasant person with a dry good (and bad??!!) sense of humour and a love of heavy metal music and good boutique beer.

While his death has been greeted with great sadness, his determination in a fight against advancing terminal cancer has been respected by all of his close associates. Phil's excellent research contributions, his widely recognised science reputation, and his friendliness will be remembered by all who knew and worked with him.

Richard Falloon
Bob Fullerton

Potted biographies of the Society's executive committee members

Max Suckling, President, based at HortResearch, Lincoln

Max is the Portfolio Manager for Sustainable Production and Market Access with HortResearch, based at Lincoln. His interests include the evolution and management of resistance to conventional and transgenic insecticides, apple IPM, and insect chemical ecology, focussing mainly on the identification and use of sex pheromones to reduce the need for insecticides in pest management. As President of the NZ Plant Protection Society, he is a strong advocate for increasing the funding for the research and development of sustainable production systems, including more environmentally-benign systems for pest, disease and weed management.

Sue Zydenbos, Editor, based in Christchurch

Sue comes from a farming background, and considers it inevitable that she would go to Lincoln College. After graduating with an Honours degree in Plant Science, she worked as a pasture scientist with MAF at Winchmore Irrigation Research Station for 4 years. This work covered everything from studying the effects of endophyte in ryegrass, measuring growth rates of different pasture species and looking at grazing management strategies for lean lamb production to examining the interactions of goat and sheep grazing on pasture quality!
With the decline in funding for pasture research in the late 1980s, she took the opportunity to retrain in animal biochemistry and went back to Lincoln University to do her PhD. This was followed by a two year post-doc at the Karolinska Institute in Sweden to learn molecular biology techniques. The work involved looking at the action of the growth hormone receptor, which was then applied to lines of sheep back in New Zealand with AgResearch at Invermay Agricultural Centre. After three years, Sue and husband Rick returned to Christchurch to set up a landscaping business. Sue continued to write up her research from Invermay, while helping with the physical construction and planting design aspects of landscaping.

In early 1999 she worked as a scientific editor for Crop & Food Research while the permanent editor was on parental leave. With the impending arrival of their first child, she decided to look for contract work in the area of scientific writing and editing that she could do from home. Sue considers her new role as editor of New Zealand Plant Protection as a great challenge and it realises one of her longtime goals of being involved in the publication of a conference proceedings.

Anis Rahman, Treasurer, based at Ruakura

Anis is leader of the AgResearch plant protection group at Ruakura. He received his MSc from the University of Alberta in 1968 and his PhD from the University of Saskatchewan in 1971. His research encompasses the field of weed management, specialising in environmental aspects of plant protection. Anis has very many publications, including books, science journal papers and papers presented at international and national conferences. He has been a winner of the

Khwarizmi International Research Award, and holds a number of prestigious posts, including membership of the Board of Directors of the International Weed Science Society, treasurer of the Asian-Pacific Weed Science Society, and past president and treasurer of the NZ Plant Protection Society.

Kerry Harrington, based at Massey University

Kerry is Senior Lecturer in Weed Science at Massey University, and has been lecturing at Massey since 1983. Over that time, he has developed a 300-level weed science paper available to both internal and extramural students, and was taken by 75 students last year. He also teaches weed science in papers involving general plant protection, agronomy, turf culture, organic farming systems and forestry.

Kerry has been involved with a range of research projects over the years, including use of ground covers in orchards, herbicide resistance in thistles, persistence of herbicide residues in the soil, developing weed control programmes for novel crops and bowling greens, and use of goats for pasture weed control. Many of my research projects include supervision of post-graduate students.

Alison Stewart, based at Lincoln University

Born and bred in Glasgow, Scotland, Alison obtained her PhD in plant pathology from Wye College, University of London and then moved to New Zealand in 1984 to take up a lecturing position in the Botany Dept, University of Auckland. She then moved to Lincoln University in 1984 and became Professor of Plant Pathology in 1999. Her main area of research interest is in the control of soilborne plant diseases and in particular the development of biological control systems for fruit and vegetable crops. She has a particular focus on sclerotial pathogens (*Botrytis*, *Sclerotinia*, *Sclerotium* species) and their control using mycoparasitic fungi such as *Trichoderma* species and *Coniothyrium minitans*.

She has developed strong collaborative links with scientists from HortResearch and Crop & Food Research and works closely with industry partners to integrate the biological systems into current disease management practices. Recent research is focussing on the use of molecular tools to aid in the detection and characterization of plant pathogens and their biocontrol agents. She also has a general interest in mycology, mycorrhizae and lichens. In addition to her role on the NZPPS committee, she is also a member of the Marsden Ecology Evolution and Behaviour Committee and part of the organising committee for the next International Congress of Plant Pathology to be held in Christchurch in 2003.

Stephen Goldson, based at AgResearch, Lincoln

Stephen Goldson has been a practising researcher for 25 years. He is the science leader of AgResearch's Biocontrol and Biosecurity Group. He has been involved in research into weevil pests since the mid-1970s when he began his PhD on Argentine stem weevil (ASW). On completion of his PhD at Lincoln in 1979 he joined a research programme into the newly discovered lucerne pest *Sitona discoideus*. This programme developed chemical control techniques based on the pest's life cycle, before identifying and introducing a successful biological control agent. In 1988 he initiated research into the biological control of Agentine stem weevil (ASW). This programme has resulted in the introduction and commercial release of the biological control agent *Microctonus hyperodae* which has greatly reduced the impact of the weevil.

Stephen is a member of the science advisory group reporting to industry on the newly identified clover root weevil (*Sitona lepidus*) and is leader of the biological control programme for this pest, which involves extensive searches in Europe. Most recently he has contributed to considering measures that should be taken to minimise biosecurity failure and subsequent pest incursion. Stephen was elected a Fellow of the New Zealand Institute of Agricultural Science in 1998. He is the author of over 110 refereed publications on pest management in New Zealand. He has been a member of several

national science policy advisory groups and in 1996-97 worked as the science adviser to the Minister of Science, Research and Technology, the Rt. Hon. Simon Upton. In 1999 he was appointed by Cabinet to the Independent Biotechnology Advisory Council (IBAC).

Information from committee members

- Paul Brookbanks, Fruitfed Supplies Ltd., Auckland
- Richard Hill, Richard Hill and Associates, Lincoln
- Trevor James, AgResearch, Hamilton
- Philippa Stephens, HortResearch, Mt. Albert
- Mike Butcher, Lincoln Ventures Ltd, Christchurch

will appear in the next newsletter.

IAPPS - a new group formed to promote global IPM

(article reproduced with kind permission from IPMnet NEWS #77 and Dr Allan Deutsch, Oregon State University)

NZPPS became affiliated with IAPPS in 1999. NZPPS President Dr Max Suckling is the national representative with Dr Paul Welling, CSIRO being the Australasian contact. You would have received an IAPPS membership brochure with your last newsletter.

A new international organization dedicated to "development and utilization of IPM systems on a substantially larger percentage of the world's principal crops" was formally inaugurated in mid-1999 as the International Association for the Plant Protection Sciences (IAPPS), arising both as an outgrowth of, and a move to strengthen, the half century old International Plant Protection Congress (IPPC) forum.

Conceived as a mechanism to meet contemporary communication and integration challenges among IPM's key disciplinary segments and to provide management and oversight of the IPPC fora, IAPPS aims to "promote renewed dialogue and to foster the multi-disciplinary, team approach essential for the development and maintenance of dynamic IPM systems," according to the organization's official documents.

IAPPS is envisioned as a cross-disciplinary umbrella organization through which the various plant protection (i.e., "crop" protection--ed.) disciplines can realize collective voice and strength as a major component of the agricultural sciences. The Association aims to "stimulate the development and exchange of plant protection information among researchers, extension specialists, growers, policy makers, administrators, crop protection consultants, and environmental and other interested groups."

Leading IAPPS is entomologist H.R. Herren, recipient of the 1995 World Food Prize in recognition of his efforts in developing and executing biocontrol procedures for an insect pest devastating the cassava crop in sub-Saharan Africa, and currently Director General of the International Centre of Insect Physiology and Ecology in KENYA. Other members of the Association's Governing Board include entomologists, a weed scientist, plant pathologists, a toxicologist, and a biologist. J.L. Apple has assumed the duties of secretary general.

IAPPS is structured as eight regional network centers each headed by a coordinator. Eventually countries will designate a country representative who, together, will comprise a network council in each region responsible for identifying that area's common crop plant protection problems as well as suggesting collaborative regional projects.

The well regarded international periodical CROP PROTECTION has been selected as IAPPS' official journal. A subscription to the journal's electronic (on-line) version will be included in one of the several classes of IAPPS memberships available, based on a sliding scale of annual fees. Since CROP PROTECTION does not require a page charge, it is attractive to scientists worldwide.

Allan Deutsch, IPMnet NEWS

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Web: <www.plantprotection.org>.

Symposium and Conference 2000

This will be held in Christchurch at the Commordore Motor Inn, Memorial Avenue from Monday 7 August until Thursday 10 August 2000.

The hotel is offering an attractive room rate (still being finalised) and if we occupy 10 or more rooms the conference facilities are free of charge. Please support this worthy cause ph 03 358 8129 or 0508 266663, fax 03 358 2231; free airport pickup. email info@commodore.net.nz

There are few alternative accommodation venues close by and some travel would be required. These three are about equi-distant from the Commodore.

Airport Plaza Christchurch Hotel ph 0800 100876
Airport Gateway Motor Lodge ph 0800 455855
Airport Lodge Motels ph 03 358 5119

The symposium is entitled '**Plant Protection Problems in Organic Farming**' and will be presentation / discussion based rather than workshop and will hopefully involve policy makers, industry perspective and researcher input.

The conference will continue the organic theme, at least initially, and then move into general papers.

Programmes, costs and registration forms will be mailed out early in June.

Membership subscriptions: A gentle reminder for the forgetful

Are you looking for your copy of the 52nd Proceedings into which to insert your erratum but cannot find it? Is it because you haven't paid your subs and therefore haven't been sent it yet?

2000/2001 subscription invoices are included with this mail out. They do not include conference registration information as in previous years – I'm trying to separate the two.

If our records show any arrears they are on the invoice.

If you are paying through your institution please note: **DO NOT SEND ME YOUR ORDER #**, AND REQUEST AN INVOICE, the subscription invoice is just that, a tax invoice meeting all legal requirements for an invoice, please pay on this, keep your order # internal.

Plant Protection Society Website

Don't forget to bookmark the Society's website (http://www.hortnet.co.nz/nzpps/) and check it out from time to time. It contains, for example, past proceedings of the conference, contact details of committee members and information on the upcoming conference. On it you will find a reminder that we still have copies of An Illustrated Guide To Common Weeds Of New Zealand and other publications for sale through Manaaki Whenua Press.

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