

RIRDC invests \$12.4m in weeds research

The Rural Industries Research and Development Corporation (RIRDC) has boosted its investment in weeds research, commissioning major new projects to significantly advance Australia's response to its on-going weeds challenge. This follows the recent announcement by Parliamentary Secretary for Agriculture, Fisheries and Forestry, Dr Mike Kelly, of 33 research projects worth some \$6.1 million and brings the total to \$12.4 million being invested by the Australian Government's National Weeds and Productivity Research Program. The new projects will be conducted by some of Australia's leading research institutions and government agencies.

"The research projects funded by RIRDC will advance our understanding of weeds on all parts of the continent, build knowledge on the ecology of weeds, improve understanding of management approaches at a landscape scale, identify potential treatments, and improve governance and funding to continue the challenge of reducing the impact of weeds on agricultural productivity and the environment," RIRDC Weeds Advisory Committee Chairman John

Kerin said. "Weeds cause significant social, economic and environmental problems, costing billions of dollars in control measures and lost agricultural production. It is vital that Australia continues to invest in cutting edge research to ensure stakeholders including farmers and other land managers have the necessary knowledge and tools to prevent new weeds or control present weeds."

Among the commissioned projects being funded by RIRDC is research by the University of Melbourne to develop a prototype and test whether it can use microwave energy to kill weeds in a cost-effective manner suitable for use on farms.

The Victorian Department of Primary Industries is investigating the use of biological control agents as a cost-effective and environmentally friendly option to reduce the impact of 21 existing priority weeds, including eight Weeds of National Significance.

Other projects are looking into the use of hyperspectral remote sensing using unmanned aerial vehicles for enhanced detection of weeds; how to future-proof the National Post Border Weed Risk
Management Protocol; how climate change
will impact the risk of weed invasions in
the Murray Darling Basin; and building
a national weeds web portal to inform,
educate, and interact with stakeholders,
enhancing their capacity to prevent or
control weeds.

These commissioned projects follow on from an open call for research applications.

In total, the RIRDC Weeds Program is providing around \$12.4 million (GST inclusive) to more than 50 projects, which will report back in May 2012.

More information on the projects being funded is available on the RIRDC website at www.rirdc.gov.au/weeds.

Enquiries:

Ken Moore, Senior Research Manager, National Weeds and Productivity Research Program, Rural Industries Research and Development Corporation 02 6271 4127.

> Media release, Monday 16 May 2011

WSV Directory

Correspondence and enquiries

Weed Society of Victoria Inc. PO Box 987 Frankston Vic 3199 Telephone/Fax (03) 9576 2949 ACNA0011723W ABN15 496 325 152

Web Site

www.wsvic.org.au

Secretary

Ros Shepherd secwssv@surf.net.au

Weedscene Editor

Position vacant

President

James O'Brien

James.OBrien@landmark.com.au

Past President

Michael Hansford (CAWS rep) Michael.Hansford@dpi.vic.gov.au

Vice President

Rodney Jones rodney.jones@dpi.vic.gov.au

Treasurer

Jackie Steel
Jackie.Steel@dpi.vic.gov.au

Committee Members

John Burley (CAWS rep)
John.R.Burley@dpi.vic.gov.au

Bonnie Gelman lucasassets@iinet.net.au

Ann Lawrie aclawrie@rmit.edu.au

Matthew Stephenson
M.Stephenson@basscoast.vic.gov.au

Co-opted Members

Chris Knight

cknight@lmsonline.com.au

Greg Wells

WELLS1@dow.com

Country Representative

Les Mitchell

Les.Mitchell@agrisearch.com.au



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The benefits of membership to WSV include:

- Weedscene: newsletter packed full of information
- eWeedscene: regular electronic bulletin on weed news and events
- Discounts to WSV seminars, workshops, conferences and other events
- Opportunities to network with others.

To apply for membership, download and print the membership application form from the WSV website, www.wsvic.org.au, complete the details and mail to the WSV Secretary.

Weedscene Newsletter of the Weed Society of Victoria Inc.

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Seminar report by Adam Grubb

Contentious perspectives on weeds

Weed Society of Victoria Thursday 14th April 2011

The series of seminars to accompany the 45th annual meeting of the Weeds Society of Victoria certainly lived up to the promise in the title, Contentious perspectives on weeds

Around 50 people made their way to the city fringe location of the DPI offices in Attwood where a broad ranging and passionate collection of presenters gave perspectives on weeds from the realms of psychology, culture, permaculture, beekeeping, biofuels, edibility, art, ecology, and even military strategy.

John Dwyer who has recently completed PhD thesis Weeds in Victorian Landscapes presented a paper on Weed psychology and the War on Weeds. He suggested that weeds are themselves more of a psychological rather than a botanical category and questioned the psychological reasons why 'fear and loathing' have become widespread in our approach to weeds. He asked what role emotions play in the way we engage with weeds, tracing the heritage to notions of pollutants which exist in all known cultures. John suggested a language change around the war on weeds to allow more scientific, unbiased views on the ecological roles and impacts of exotic species, that terms like 'feral', 'alien', and 'invader' are emotionally loaded.

Dr Paul Downey from the University of Canberra presented next on **The plant invasion processes, and understanding the impacts of plant invasions**. It was an impressive distillation of what seemed an uncountable number of his own published papers and field work. He questioned: if this is a war on weeds, where are the achievable goals, where are the strategies, and where is the information gathering and feedback needed to proceed successfully? He said, "We need to achieve something as a result of the killing. Not just killing *per se.*" He presented on some of his own

work with bitou bush, and offered ways to both judge the impact on biodiversity a weed has, decide strategically on areas to focus on and choose achievable goals, and report on the successes or otherwise in a standardised, statistical way. He also mentioned, what was for me, one of the most memorable part of the seminar, the Von Manstein Matrix, but you'll need to Google that!

Permaculture co-originator David Holmgren presented on the topic Weeds or wild nature? It was the broadest and most difficult to summarise presentation, which took in limits to growth and the topic of global oil peak, indigenous perspectives on nature, 19th century economic botany, ecological systems thinking, and his own work studying native ecosystems of Central Victoria. He said that weeds are adapted to disturbance, and "almost all 'weed invasions' occur in a context of human disturbance to a greater or lesser degree." He referred to weeds performing the role of ecological pioneers, stabilising soil and water resources, and providing habitat while other longer lived species become established. He showed the results of some of his own work with community in managing Spring Creek in Hepburn Springs using exotics including willows to stabilise and push forward succession in highly eroded gullies. He believes that "novel ecosystems" of mixed indigenous and exotic species are of interest and inherent value, and can serve as models for sustainable perennial agriculture.

David Severino, Chairperson, Victorian Apiarists' Association Melbourne, presented next on **The place of weeds in the honey industry**. He listed capeweed, clover and many other weedy species as essential to his personal beekeeping business and to the industry in general. Bees are required for pollinating a large percentage of the global food production,

and without weeds providing a varied diet and emergency food supply when crops fail to flower, he believes, by the way of one example, the industry would have lost thousands of colonies in the almond crops this year. Blackberry, Patterson's Curse and Blanket Weed honeys are also highly sort after by consumers for their flavour.

Graeme Allison of the DPI presented Bruce Shelley's paper based on their joint research on Some issues associated with the introduction of weedy species as biofuel crops. Echoing David Holmgren, he pointed out that the end of cheap energy is coming, and that energy security is an emerging issue. In order to produce large amounts of biomass in first and second generation (which includes the use of woody plants) biofuels, they need to look at fast growing, easy to propagate, locally adapted species, i.e. plants with the potential to naturalise. He presented their research into the likely ranges of 30 plants with biofuel potential. The research looked at both current and projected climatic conditions in 2050, as part of their risk assessment. He suggested that some declared weedy species such as Arundo donax (giant reed) can be grown with minimal risk in many areas.

Sydney-based artist, Diego Bonetto presented on Nettle, dock, dandelion and wild fennel: environmental weeds or environmental belonging. His presentation covered the connection people from different cultures in Australia can have with weeds, which in many cases are the same plants as found their countries of origin. Diego talked about the heritage of people from both Australian rural and international backgrounds of using weedy species as food plants, and of different ways of using nature from the Anglo-Celtic traditions. He noted that some of this activity is actually illegal, where transporting of declared noxious weed material as food is involved, and went so far as to question if any plant should be illegal.

Report continued on page 5/...



Upcoming event

Talk by Prof Joe DiTomaso

Common Invasive Plant Threats and Management Approaches in the Asia-Pacific Region and United States



Ву

Prof Joe DiTomaso

University of California, Davis

Prof Joe DiTomaso from the Department of Plant Sciences, University of California, Davis, USA, will present his research on biological and ecological aspects of non-crop weeds and the development of effective control strategies.

When:

Thursday, 22nd September 2011

Time:

3.30 pm - 4.30 pm

Where:

Victorian AgriBiosciences Centre La Trobe University R&D Park 1 Park Drive, Bundoora (site map attached)

Host:

Professor German Spangenberg

Ph: (03) 9032 7000 Fax: (03) 9032 7158 german.spangenberg@dpi.vic.gov.au

Prof DiTomaso's visit to Australia is sponsored by the Council of Australasian Weed Societies (CAWS)



September 201



DEPARTMENT OF PRIMARY INDUSTRIES

biosciences research Joe DiTomaso has many years' experience working in the taxonomy, ecology, physiology, and control of rangeland, forestry and wetland weeds and poisonous plants. He has been on the faculty in the Department of Plant Sciences at UC Davis since 1995 and is the editor of the Invasive Plant Science and Management Journal. He describes his current primary focus as 'on understanding various biological and ecological aspects of non-crop weeds, and the use of this information to develop effective control strategies'. He has also worked in the use of fire to control weeds.

Joe DiTomaso is visiting Australia as a keynote speaker at the 23rd Asian-Pacific Weed Science Society Conference in Cairns. The Department of Primary Industries will sponsor his trip to Victoria to repeat his presentation in Melbourne.

The title and summary of his talk will be: 'Common invasive plant threats and management approaches in the Asia-Pacific region and United States'

- 1. Major invasives common to both sides of the Pacific
- 2. Invasive plants on both sides but only serious in one region, what should we do about these?
- Control approaches used to manage invasives in all regions (just a brief comparison)
- 4. New potential problems and how to determine their risk of establishment and spread (WRA, climate change models, etc.)
 - a. Plants becoming new problems in one region or the world, i.e. mikania
 - b. Plants widespread in one part of the world with similar climate in another where it is not yet present
 - c. Entirely new species not yet a problem anywhere, do we know what they will be?
- 5. The various pathways of entry
- 6. Ways of anticipating what may be the next invasive plant, attempts we are trying in California
- 7. Changes in distribution with climate change, examples from California.

If you wish to attend the talk by Joe DiTomaso please notify the Secretary, secwssv@surf.net.au, to assure you can be seated.

Letter to the editor

Despite previous comments published in Weedscene (Volume 22 issue 2 2011), there are flupropanate based herbicides that are registered for the control of Chilean needle grass in Victoria.

Brand names of herbicides that contain the active constituent flupropanate for the control of Chilean needle grass (*Nassella neesiana*) can be found using the APVMA search engine at http://services.apvma.gov.au/PubcrisWebClient/welcome.do.

This search engine does not recognise the botanical name for Chilean needle grass – *Nassella neesiana* – nor does it generate accurate results for 'Chilean' or 'Chilean needle grass'. Accurate results are only generated when searching for 'needle grass' and as such requires the user to validate that the label contains the correct species for which they are wishing to control.

Dr Charles Grech, Weed Science and Emergency Response,
Department of Primary Industries, Attwood

.../Seminar report continued from page 3

Geoff Carr of Ecology Australia and the Invasive Species Council finished the seminar with a presentation covered some of what he describes as the catastrophic environmental and economic consequences weeds, entitled Conflicts in weed management: under what circumstances should we tolerate 'beneficial' invasive plant species? He earlier characterised David Holmgren's presentation as 'human-centric and old testament'. He called for better quantification of weed control outcomes and better monitoring. He echoed Paul Downey's message that intelligent strategy is often missing in weeds management, describing some of the War on Weeds infantry as something of a 'Dad's Army'. Whereas Downey had earlier questioned the concept of 'sleeper weeds', Geoff inferred they are certainly real, and "it's the people that should be noticing them who are asleep". While he mentioned some cases of wildlife being dependent on naturalised weeds, he said we must take a "guilty until proven innocent" approach to weeds.

It was certainly a highly engaging seminar. So broad were the perspectives it felt like the first and certainly not the last words on the topics covered. Kudos must go to the Weeds Society of Victoria for their bravery and particularly the organisers, and to Brendan Roughead of the DPI who did an excellent and difficult job as facilitator concluding and summarising the major points and themes of the day, and to all the thoughtful and knowledgeable presenters who put themselves into a potential firing line. Kudos must also go to the participants who were passionate yet respectful in their interactions on what are indeed a contentious and equally important issues.

The proceedings will be published in Plant Protection Quarterly Volume 26 issue 3. If you would like a copy, please contact the Secretary, secwssv@surf.net.au. Cost \$20.00 including postage.



News

Sprayer's success

A Gold Coast vegetation management company has won contracts worth \$5 million a year from councils wanting to use its new weed control sprayer that eliminates potentially dangerous over spraying.

Technigro chief executive Nick Bloor, who founded the business in 1987 when he was 19, has spent \$1 million developing the DriftProof Sprayer over the last 11 years.

The current fourth version has a number of innovations including a patented shield that encloses spray droplets, which Mr Bloor says makes it safer for operators and the public.

"Drift is a major problem for spray operators and public safety, as even a light breeze can result in potentially harmful chemicals drifting off target, which can greatly reduce productivity", he said. "The drift-proof feature means spray volumes can be reduced by up to 70 per cent," he said, and the shield means wind is no longer an issue.

Mr Bloor, whose business turns over \$7 million a year and employs the equivalent of 60 full-time employees, has won contracts with Brisbane City Council, Gold Coast City Council, Moreton Bay Regional Council and Logan City Council. Despite interest from international manufacturers, there are no export deals so far.

Bayer Environmental Science has just finished a trial of the sprayer to evaluate its effectiveness for its turf products. Zero drift occurred. Bayer will submit the results to the Australian Pesticides and Veterinary Medicines Authority, which is responsible for ensuring off-target pesticide spray drift does not harm human health, the environment or Australia's international trade.

Mark Fenton-Jones The Australian Financial Review, Tuesday 4 April 2011

War of the weeds begins in Strathewen

Parks Victoria want residents to report sightings of the exotic South African weed orchid (pictured below) after one was found in Strathewen

Park rangers have uncovered an exotic weed with the potential to ravage fire-affected areas of the Diamond Valley. Residents are asked to help stamp out the invader before it takes hold.

Parks Victoria ranger Natalie Brida found a single South African weed orchid at Strathewen late last year – an unwelcome surprise.

The weed, which has infested parts of western and southwestern Victoria, was found near fire containment lines formed in February 2009. Ms Brida said the pest had not been previously sighted in the Kinglake region.

Department of Sustainability and Environment (DSE) pest plants planning manager Penny Richards said the weed – particularly invasive at disturbed sites – was "exceptionally difficult to control".

Ms Richards said each plant produced tens of thousands of airborne seeds that could be blown many kilometres and remained viable for up to seven years.

"It only takes a few seeds to be transferred to the soil for them to establish and grow," Ms Richards said. "While only one plant has been found it is important that we continue to monitor areas."

Ms Richards said the 30–50 cm orchid, resembling a greenish-brown asparagus spear, was most likely introduced accidentally via vehicles or machinery, or "an escapee from a private orchid collection".

She said the DSE and Parks Victoria last month began a large-scale weed control program in bushfire-affected areas. "Fire plays an important regenerative process for native plants but also leaves them vulnerable to competition from weed infestations", she said.

"A complex mapping process was used to determine where weed control would be most valuable."

Residents are encouraged to report any unfamiliar plants. More details: www.dse. vic.gov.au or 136 186.

Local News, 27 Jan 2011 @ 01:15 pm by Shaun Campbell http://diamond-valley-leader.whereilive. com.au/news/story/a-war-of-theweeds/



Stamping out noxious weeds

The NSW National Parks and Wildlife Service (NPWS) is seeking the assistance of bushwalkers and visitors to Kosciuszko National Park to stamp out a new and serious threat to the park – orange hawkweed.

Hawkweed is an iridescent orange mountain daisy from Europe that was first found in Victoria at Falls Creek where it is believed to have escaped from a domestic garden. The weed has continued to spread despite a huge effort to track and destroy it in NSW and Victoria.

It was first discovered in Kosciuszko National Park in 2004. Since then it has been found at almost 50 locations. The NPWS has now located two new sites within Kosciuszko National Park, the most recent one last week with volunteers and staff continuing to comb the park while the plant is flowering.

NPWS Southern Ranges Regional Manager, Dave Darlington, said that at the moment in NSW it is confined to an area in the middle of the park.

"The populations we know of are being sprayed and constantly monitored during the year to ensure they are killed and not spreading further. This plant has a real



Photo: Dr Keith McDougall

potential to change the whole appearance of the Australian Alps, smothering native vegetation and impacting on wildlife reliant on a native understorey," he said.

"We are encouraging visitors with an interest to help to talk to our staff in the Visitor Centres about what to look for".

Mr Darlington warned that under no circumstances should the flower be picked as this may enhance its growth. "Visitors should photograph it, take careful note of the location and if at all possible flag the site with something that can be easily spotted from a distance. Toilet paper would do the trick. They should then immediately contact the NPWS," he said.

Orange hawkweed is a daisy that comes from Europe and has escaped into the Australian Alps. A major search is now underway to track down the weed and kill it before it spreads further. It has the potential to change the appearance of the Australian Alps and become a major pest that will compete with natives.

Summit Sun, 27 Jan 2011 @ 09:13 am http://www.summitsun.com.au/news/local/news/general/stamping-out-noxious-weeds/2059003.aspx



Field Trips

Field Trip 1:	Weedy tropics – Managing weeds within rainforests, grazing and water systems
Field Trip 2:	Eating up the tropics — Managing tropical agricultural weeds
Field Trip 3:	Whirlwind tour — The dynamics of cyclones and weeds, with a snappy end

Registration

Registration Rates

Registration Rate	Full	Student	Day
Earlybird Registration (registered and paid on or before 22 July 2011)	AU\$700	AU\$400	\$400
Standard Registration (registered and paid on or after 23 July 2011)	AU\$800	AU\$500	\$500

Registration Inclusions

Full and Student Registrations

- Entry to the Conference opening and all Conference sessions (Monday, Tuesday and Thursday)
- · Arrival tea and coffee, morning tea, lunch and afternoon tea daily
- One ticket to the Welcome Reception (Monday, 26 September 2011)
- One ticket to a Field Trip (Wednesday, 28 September 2011)
- Access to the trade exhibition
- Conference satchel and materials
- Conference Proceedings

Day Registrations

- Entry to all Conference sessions held on registered day
- Arrival tea and coffee, morning tea, lunch and afternoon tea on registered day
- Access to the trade exhibition on registered day
- Conference satchel and materials
- Conference Proceedings

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Conference Office

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OF THE SOUTH-EAST

AN IDENTIFICATION GUIDE FOR AUSTRALIA - SECOND EDITION

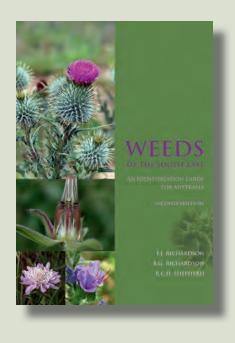
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