



Newsletter of the Weed Society of Victoria Inc.

volume 28 issue 1 2017

Weedscene

Parks Victoria Kookaburra Awards 2016

Congratulations to the Hawkweed Eradication Volunteers

International Volunteer Day was held on Monday 5th December 2016, which gives Parks Victoria an opportunity to recognise outstanding volunteers and the significant contribution they make to Victoria's parks. To celebrate International Volunteer Day, Parks Victoria hosted the biennial Kookaburra Awards on Sunday 4th December 2016.

Events were held across the state to recognise and celebrate the nominees and award winners. All winners of the Kookaburra awards are listed at this link: <http://parkweb.vic.gov.au/get-involved/volunteer/kookaburra>.

WSV would like to congratulate the Hawkweed Eradication Volunteers, who won a 2016 Parks Victoria Kookaburra

Award in the category of 'Conserving Special Places' for the Eastern Victoria Region.

This award seeks to celebrate the commitment and dedication by the groups conserving the place that is most special to them. Many WSV members have participated in this program and will know that congratulations also goes to Yohanna Aurisch, Volunteers Coordinator for the hawkweed eradication program.

The Hawkweed program has contributed thousands of hours of survey in the Alpine National Park since the beginning of the volunteer program in 2008 and averages approximately 100 volunteers each season.

Rebecca Grant – WSV Secretary



Photo credit: Yohanna Aurisch.

Back (L to R): David Sprunt, Geoff Hughes, Rod McQueen.

Front (L to R): Fran Callinan, Linden Gillbank, Janice Chesters, Yohanna Aurisch.

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WSV Membership Rates 2016–17

Pay for 1, 3 or 5 years

Concession*	\$20
Ordinary	\$60
Corporate	\$140

* Students and Pensioners

WSV is not registered to collect GST

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COVER PHOTO: *Pittosporum undulatum* (courtesy Rob Richardson)

Joining the Weed Society of Victoria

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.

- Contributions to Weedscene are welcomed. Please contact the editor for further information.
- Readers are free to circulate and reproduce Weedscene material with acknowledgment of the author and source.
- The views expressed in Weedscene are those of the contributors and are not necessarily shared by the WSV Executive Committee.

Want to receive Weedscene as a PDF? Contact the Secretary.

Society Sponsorship

Annual Sponsorship \$300

- Logo displayed on 'Weedscene' – four issues per year
- Logo and sponsor name on the Society's website
- One promotional article in 'Weedscene' per year (subject to ed. control)
- One free membership per year (optional)

Advertising rates

■ One sixth page	56 mm wide × 128 mm high	\$50
■ Quarter page	180 mm wide × 64 mm high	\$75
■ Half page	180 mm wide × 128 mm high	\$150
■ Whole page	180 mm wide × 257 mm high	\$300

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www.weedinfo.com.au

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Invasive Plants PhD Research Projects

This is the seventh in our series on invasive plants research projects being undertaken by PhD candidates in Victoria.

Investigating the management and response of native Victorian plant communities after the removal of weedy *Pittosporum undulatum* populations

PhD candidate, Benjamin O'Leary, is supervised by Professor Ros Gleadow and Associate Professor Martin Bird (Monash University), and Dr Susanna Venn (Australian National University)



The invasion of exotic species often results in the dramatic loss of biodiversity, community function, altered disturbance regimes and reduced ecosystem services. Native species can also act as weeds within their natural environment, placing further pressure on communities. The pattern of native weeds disrupting community composition and function is expected to become more common with the onset of global climate change. The field of restoration ecology draws on concepts from all forms of environmental and social sciences to provide the broad tools and knowledge necessary to restore environments degraded by weeds.

Pittosporum undulatum (sweet pittosporum) is a native plant that has become weedy. *P. undulatum* is a shade tolerant tree, native to coastal south eastern

Australia. Present across a range of habitat types, *P. undulatum* is most common to wet and temperate rainforests. Altered fire regimes, introduced vectors, peri-urban disturbance and horticultural propagation are all thought to have contributed to the spread of this species after European arrival.

Presently, *P. undulatum* is considered an environmental weed within many municipalities across Australia. *P. undulatum* has also become a major weed globally with invasive populations in New Zealand, Lord Howe and Norfolk Islands, Portugal, Jamaica, Hawaii, and is an emergent weed in South Africa. Once established, mature trees can reach heights of between 8 and 30 metres. Individuals form dense canopies, shading out the undergrowth and reducing structural diversity, floristic composition and the integrity of ecological systems.



Our case study, conducted in collaboration with Monash University and Parks Victoria, investigates the ways in which plant communities respond to the infestation and subsequent removal of *P. undulatum*. Ten sites across peri-urban Melbourne and the Mornington Peninsula were identified to evaluate the success of *P. undulatum* removal, along with its spatial and temporal influence on community richness and structure.

At each site, three treatment areas were studied: a high quality area of remnant vegetation that would act as a positive control; an area where work had been conducted

to remove *P. undulatum*, and; an area currently infested by *P. undulatum* to act as a negative control.

Through this study we hope to gain an understanding of how plant communities respond to the presence and removal of native weeds. Furthermore, we seek to investigate how communities recover from native weed infestation and provide an indication of how long recovery may take. Finally, at the broadest level, we aim to better integrate community assembly and invasion biology theory into the restoration process.

WSV and CAWS Travel Awards

Here is a summary of the travel awards available from the Council of Australasian Weed Societies and the Weed Society of Victoria. For more detailed information, please see the webpages given below.

	Council of Australasian Weed Societies Conference Travel Awards			Weed Society of Victoria Travel Award
Award	Australasian Weeds Conference (AWC) Travel Award	Early Career Weed Scientist Travel Award	Student Travel Award	WSV Travel Award
Eligibility	Anyone currently working with weeds and residing in Australia or New Zealand, with preference given to members of societies affiliated with CAWS and applicants presenting an oral presentation or poster at the AWC	Early career weed scientists attending national or international conferences, having completed their last degree (undergraduate, Masters, PhD or other postgraduate degree) within the last 5 years	Undergraduate, Masters, PhD or other postgraduate students, or those who have completed their studies in the previous 12 months	Current WSV financial members, having WSV membership for at least one year and not having received a WSV travel award within the last 10 years, for attendance at a weeds conference
Amount	\$1000 per recipient; up to four may be awarded for any one conference (this is not expected to cover the total cost of the conference – societies affiliated with CAWS may offer additional funding for recipients)	\$2000 per annum (this is not expected to cover the total cost of the conference – societies affiliated with CAWS may offer additional funding for recipients)	\$3000 per annum (this is not expected to cover the total cost of the conference – societies affiliated with CAWS may offer additional funding for recipients)	Maximum \$1,500 per recipient (can be used in conjunction with a CAWS travel award)
Recipient Obligations	Successful applicants are expected to send a written report about their experiences to CAWS, to be placed on the CAWS website and to be circulated to CAWS committee members who may wish to use the report in society newsletters	Successful applicants are expected to send a written report about their experiences to CAWS, to be placed on the CAWS website and to be circulated to CAWS committee members who may wish to use the report in society newsletters	Successful applicants are expected to send a written report about their experiences to CAWS, to be placed on the CAWS website and to be circulated to CAWS committee members who may wish to use the report in society newsletters	Successful applicants are expected to give a report to WSV, either as a written report for WeedsScene or as part of a seminar, meeting or workshop conducted by WSV
Dates	Application: by March 1st in year of conference. Notification of success: by May 1st in year of conference	Application: by March 1st each year. Notification of success: by May 1st for travel during the following 12 months	Application: by March 1st each year. Notification of success: by May 1st for travel during the following 12 months	Application: by May 1st each year Notification of success: within 4 weeks. Awarded by July 1st for travel during the following 12 months.
Further info and application form	http://caws.org.au/awc_travel_award.php	http://caws.org.au/early_career_travel_award.php	http://caws.org.au/student_travel_award.php	www.wsvic.org.au/node/26



Secretary's Report

by Rebecca Grant

WESI Workshops



Weeds at the Early Stages of Invasion (WESI) workshops were held around Victoria by DELWP's Kate Blood in late 2016. Kate provided six workshops highlighting weeds to note within the

hosting region. I was lucky enough to attend the Alpine regional workshop held at the very new and glamorous DELWP office in Swifts Creek.

Participants included staff from Parks Victoria, DELWP, catchment management authorities, and Indigenous land managers. Discussions were framed around the content of the WESI guides – identifying new plant incursions, your knowledge network, how to decide on appropriate responses and practical weed hygiene practices for field staff.

Photo inset above: Rebecca Grant (left) and Kate Blood.



Kate bought an impressive array of approximately 70 weeds collected on her two day journey between Beaufort and Swifts Creek via the Bogong Highplains Road through Falls Creek.

This provided an ID challenge to even the most seasoned participant! Kate's take-home message was to seek help from anyone from your local networks who you think might be able to give you advice on your weed of interest, including Landcare or friends group members. When in doubt, post your query on the WSV facebook page or use #weedID on social media.



Photo credits: Kate Blood.

Weeds of the South-East 3rd edition

It is a great pleasure to congratulate Rob and Fiona Richardson, along with Ros Shepherd, on the outstanding success of their recent book release, *Weeds of the South-East* 3rd edition. Over 600 copies have already been sold of this new edition, which has also allowed them to reimburse the WSV in full for the financial loan provided to assist in publishing it. Not only is this an indication of their enduring reputation in the weeds industry, but a sign of the importance of such a resource and a growing awareness of weed issues in the field.

Available from www.weedinfo.com.au or call Fiona on 03 5286 1533.



President's Report

With each year seemingly busier and more challenging than the last, we seldom take the time to draw breath and look back at our achievements. So, in our first issue of the year, I'd like to look back briefly at 2016 and acknowledge the hard work and tireless enthusiasm of our members. I'd especially like to acknowledge the work of volunteers and community-based natural resource management groups, whose contribution often goes unheralded. As incoming President in 2016, I was also impressed with the success of the Weed Society of Victoria's conference in Creswick; definitely a credit to the efforts of the past committee.

As I look forward to the coming year I am heartened by my recent experiences working with farmers, students, Landcare and community volunteers, and public land managers. In my own area of research, weed biological control, I've noticed a keen interest from students at undergraduate and post-graduate level. An encouraging aspect is the diversity of students working on weed issues, with science, agriculture and conservation students from several universities making substantial contributions.

Finally, in the spirit of acknowledging past achievements, I'd like to publicise a local initiative; a pest and weed 'photovoice'. Agriculture Victoria is currently working with community pest management groups for gorse, blackberry, serrated tussock and rabbits to gain a better understanding of the social context within which management occurs. As part of this initiative, weed managers are invited to share their stories on the 'photovoice' blog. To share your story, simply go to <www.weedsandrabbits.com> and contribute a photo and 300 words that address one of the following questions:

- What motivates your efforts to control blackberry, gorse, serrated tussock or rabbits?
- What hinders your efforts to control blackberry, gorse, serrated tussock or rabbits and how do you overcome the hindrance?
- What are your ideas for community action to control blackberry, gorse, serrated tussock or rabbits?

I look forward to reading your story.

Greg Lefoe



CAWS report

8 December 2016

By Ingrid Krockenberger



A quorum wasn't achieved for the entire December meeting (someone had to leave early), but fortunately there were no decisions to be ratified.

President, Rachel Melland, reported on the presentation of the prestigious CAWS Medal to Dr John Scott at the 20th Australasian Weeds Conference (AWC) in Perth, in recognition of his 35-year distinguished career in the weed sciences. The 21st AWC will be held in Sydney in 2018 with the theme of 'Weed Biosecurity, Protecting Our Future' and organised by the Weed Society of New South Wales. More information at <http://www.21awc.org.au/>.

Rachel, as President, was invited to be on the International Organising Committee of the 26th Asia Pacific Weed Science Society (APWSS) conference to be held in Kyoto, Japan, on 19–22 September 2017. Her role is to provide advice and promote participation of researchers from our region. She has requested that societies promote the conference at state level. More information at www.c-linkage.co.jp/apwss2017/.

CAWS made a submission to the Australian Weeds Strategy which is being revised for 2017–2027 (www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds). Rachel represented CAWS at the Environmental Biosecurity Forum and the 2016 National Biosecurity Forum run by the Federal Department of Agriculture and Water Resources in Canberra during October and November, respectively. She reported that the Chair of the Intergovernmental Agreement on Biosecurity Review Panel gave an update of the review and that the consultation document will be released over December/January.

Topics of discussion included changes to the CAWS constitution required by the Western Australian Associations Incorporation Act 2015 which came into effect in July 2016. Revisions of the CAWS constitution reflecting new requirements were presented and additional changes will be reviewed at the next meeting. A three-year transition period has been provided by the WA Department of Commerce for compliance with the new legislation.

Also discussed was the decline in financial reserves since the Weeds CRCs period and concomitant decline in profit share from conferences. A review of travel awards is being considered in light of the changed financial position. Also being considered is the potential for increased sponsorship, particularly securing long-term commitment from sponsoring organisations which can be rolled on from one conference to the next, and possible direct sponsoring of travel awards with naming rights. This will require development of new sponsorship packages and casting a wider net in search of potential sponsors.

The Communication and Advocacy Annual Action Plan for 2017 was presented for review and two additional new sub-committee members were co-opted. The 2017 Organisational Development Annual Action Plan will be reviewed at the next meeting.

The next meeting will be held on 16 March 2017.

Ingrid Krockenberger and Brett McGenniken are your CAWS delegates.



In The Media

Devil's Twine Destroys Gorse

University of Adelaide's Robert Cirocco caught the attention of New Scientist last year with his investigation of the widespread native hemiparasitic *Cassytha pubescens*, or devil's twine, as a weapon against the invasive weeds gorse, Scotch broom and blackberry. Robert observed that many gorse plants had been killed when naturally infected with *C. pubescens* in Mount Lofty Ranges in South Australia. The article includes comments from Roger Cousens and Leslie Weston about the potential as a biocontrol agent.

www.newscientist.com/article/2085389-vampire-vine-helps-to-destroy-alien-european-weeds-in-australia/

There has been more global attention of Robert's unique study of a native plant species as potential biocontrol agent, including the Global Plant Council at: <http://globalplantcouncil.org/news-and-events/latest-news/snotty-gobble-could-be-good-weed-controller>

The study was also reported on ABC Rural: www.abc.net.au/news/2016-10-17/snotty-gobbles-up-weeds/7939640

Incidentally, Robert was awarded the \$400 Australasian Weeds Conference fee by the 2016 CAWS travel award selection committee.

Robots to be Trialled to Optimise Herbicide Use

Researchers at the University of Reading (UK), Knight Farm Machinery and Precision Farming Robotics have teamed together on the 'eyeSpot' project to trial an automated spot herbicide ejector. An imaging system will be used to distinguish weeds from crops and administer an appropriate dosage of herbicide directly onto each individual weed. A proof-of-concept trial has been conducted, with researchers manually applying herbicide and achieving 92% weed control, 94% less herbicide applied and better yields than using a conventionally applied pre-emergence herbicide. Work continues on an automated prototype, which should be ready for preliminary field trials by 2018.

www.agweb.com/article/robots-the-future-of-weed-control-naa-ben-potter/

Shift to Self-Fertilisation in Herbicide Resistant Populations

A new study by University of Michigan researchers showed that herbicide-resistant morning glory populations, growing in and around corn and soybean fields in the U.S. Midwest and Southeast, self-fertilise more than herbicide-susceptible populations. The researchers also found that the distance between the anther and stigma is smallest in the most-resistant morning glory populations, facilitating increased self-fertilisation and indicating an evolutionary shift that helps the species retain valuable genes.

<http://globalplantcouncil.org/news-and-events/latest-news/>

shifts-in-mating-strategies-help-herbicide-resistant-superweeds-persist

New Zealand's Leadership Role on Invasive Species

Conservation Minister Maggie Barry announced New Zealand's commitment to Predator Free 2050, at the International Convention on Biological Diversity meeting in Cancun, Mexico. New Zealand has committed to a leadership role working with international partners to increase global efforts in achieving Aichi Target 9: that invasive alien species are controlled and eradicated. Media release: www.doc.govt.nz/news/media-releases/2016/new-zealand-taking-world-leadership-role-against-invasive-species/

An article on the coordinator of research and development for the programme to eliminate all invasive vertebrate predators from New Zealand was published online by Nature: www.nature.com/news/behind-new-zealand-s-wild-plan-to-purge-all-pests-1.21272?WT.mc_id=FBK_NatureNews

'Hell hath no fury like a scientist silenced'

In response to concerns about the impact President Donald Trump's administration might have on scientists, organisers have announced that a March for Science will be held on 22 April, Earth Day, in Washington D.C. Allied demonstrations will be held on the same day in 100 cities around the world. An interactive map, showing cities where it has been confirmed that marches will be held, has been provided at: www.sciencemag.org/news/2017/02/marches-science-one-global-interactive-map. The official March for Science website can be found at: www.marchforscience.com/

Danger of Rye Grass Pollen

The ABC published an explainer of thunderstorm asthma, following recent deaths in Melbourne. Access: <http://mobile.abc.net.au/news/2016-11-22/what-is-thunderstorm-asthma/8044920>

Identification of Serrated Tussock

The Victorian Serrated Tussock Working Group has produced a serrated tussock identification app which can also be accessed from the webpage: www.serratedtussock.com/idapp

Monitoring Biological Invasions in Antarctica

Monash University's Steven Chown has been visiting Antarctica for more than 25 years. He has identified 16 distinct conservation geographic regions on the icy continent, which need protection from biological invasions through climate change, economic activity and even scientific research itself. A media release from Monash University has links to further articles on Antarctic research: www.monash.edu/news/antarctica-same-but-different

Invasive Species Compendium

The Compendium on Invasive Species was developed in recognition of the threat posed by invasive species to the global economy and environment, and is hosted by the Centre for Agriculture and Biosciences International (CABI). It is an encyclopaedic resource that draws together scientific information on all aspects of invasive species, comprising detailed datasheets sourced from experts, edited by CABI's scientific staff, peer-reviewed, with images and maps, and linked to a bibliographic database of abstracts and full text articles. Webpage: www.cabi.org/isc

Aliens-L

Aliens-L is the mailing list of the Invasive Species Specialist Group (ISSG) which is organised under the auspices of the International Union for Conservation of Nature (IUCN) Species Survival Commission (see: www.issg.org). The ISSG aims to "reduce the threats posed by invasive species to natural ecosystems and their native species, through increasing awareness of invasive species and means of controlling or eradicating them". The list allows subscribers to seek and share information on invasive species (for free). The University of Auckland global mailing list server hosts Aliens-L, at: <https://list.auckland.ac.nz/sympa/info/aliens-l>

Global Working Group on the Management of Cactus Species

The Centre of Excellence for Invasion Biology, University of Stellenbosch, South Africa, hosts the Global Working Group on the Management of Cactus Species. Aims of the working group include sharing, designing, discussing and promoting best management practices of cactus species in their introduced range. The website notes that Australia is the region with the largest number of invasive cactus species (39) and the website includes photos and descriptions of 57 invasive cactus species, at: <http://academic.sun.ac.za/cib/projects/cactuswg/index.asp>

Global Compendium of Weeds

WA's Rod Randall has published, and made available for free on Research Gate, the third and final edition of the Global Compendium of Weeds. It is very large at 3659 pages and around 68 MB as pdf. Access for Research Gate members: www.researchgate.net/publication/313645439_A_Global_Compendium_of_Weeds_Third_Edition. Rod has also uploaded to: <https://www.dropbox.com/s/67b3vtjobad309p/Compendium%203rd%20Edition%20.pdf?dl=0>

Award for Sea Spurge Volunteers

Volunteer group, Sea Spurge Remote Area Teams (SPRATS), has removed more than 14 million sea spurge plants from coastal southwest Tasmania over the last 11 years. SPRATS has been awarded the Froggatt Award by the Invasive Species Council for their efforts.

ABC RN Breakfast audio at: www.abc.net.au/radionational/

[programs/breakfast/volunteers-receive-award-for-work-removing-invasive-species/8228512](http://www.abc.net.au/radionational/programs/breakfast/volunteers-receive-award-for-work-removing-invasive-species/8228512)

More information at: <https://invasives.org.au/blog/tasmania-sea-spurge-threat/>

Review of National Environmental Biosecurity Response Agreement

Submissions are sought for the National Environmental Biosecurity Response Agreement (NEBRA), an agreement between federal, state and territory governments, establishing national arrangements for responding to significant pest and disease incursions. The submission period closes at 5pm AEDST on 17 March 2017. Access: www.agriculture.gov.au/biosecurity/emergency/nebra

Nominations for Listing under EPBC Act

The federal government is inviting nominations for threatened species, ecological communities or key threatening processes to be considered for listing under the *Environment Protection and Biodiversity Conservation Act* 1999. Nominations close at 5pm on Friday 31 March 2017. Information at: www.environment.gov.au/news/2017/01/13/call-nominations-threatened-species-ecological-communities-or-key-threatening?mc_cid=c5d9fe795a&mc_eid=a11970eb9e

Top End *Sagittaria* Woes

ABC News has been following up on earlier reports that hardware stores accidentally sold 28 *Sagittaria* plants to customers in the NT. Weed management officers have located plants not associated with the accidental sale, but still need to find 13 missing plants.

www.abc.net.au/news/2016-11-18/sagittaria-found-howard-springs-nt/8035418

Fire Ants in Australia is Global News

Fire ants invading Australia has come to the attention of the BBC, which has reported the National Red Imported Fire Ant Eradication Program's recommendation of spending \$380m over 10 years to control the outbreak. Federal Agricultural Minister Barnaby Joyce's spokesperson said that \$328m had already been spent on eradication efforts and further investment would be considered at the next ministers' meeting in May.

BBC report: www.bbc.com/news/world-australia-38218119
National Red Imported Fire Ant Eradication Program: www.daf.qld.gov.au/plants/weeds-pest-animals-ants/invasive-ants/fire-ants/national-red-imported-eradication-program/fire-ant-eradication

Invasive Species Council CEO Andrew Cox has been very active in advocating for the eradication of fire ants while it is still possible: <https://invasives.org.au/>

Continued on page 10...

ABC News has also reported on fire ants: www.abc.net.au/news/2016-11-07/fears-red-fire-ant-could-spread-to-nsw/8002378, and; on ABC Radio National, audio: www.abc.net.au/radio/sydney/programs/drive/fire-ants/8104668

Turning Pest into Pesos

Start-ups in the Philippines are turning the invasive weed, water hyacinth, into charcoal briquettes. The water hyacinth based fuel is cleaner than traditional solid fuels, and its harvest helps to clear waterways and reduce the need for logging. See more at: www.gmanetwork.com/news/story/597847/scitech/science/invasive-water-hyacinths-could-fuel-phl-kitchens

Alligator Weed Promoted as Food

Water spinach is very popular as a green leafy vegetable in countries like India, Bangladesh, Thailand, China, Vietnam and Philippines. However in polluted waterbodies, accumulation of heavy metals in its edible parts poses a health risk to humans. A new Indian study has shown that the invasive alien, alligator weed (which is also consumed but is not as popular as the naturally occurring water spinach), accumulates large amounts of heavy metals in its roots but translocation to edible parts is very low. The conclusion is that alligator weed can be promoted as a food alternative, without the need for cultivation, whilst managing excessive growth of this invasive species.

Access: <https://in.news.yahoo.com/invasive-alien-plants-could-promoted-food-082403602.html>

Gorse Power

According to the National Gorse Taskforce, infestation of gorse is 60,000 to 100,000 ha in size in Tasmania. Tasmanian Renewable Energy Enterprises is building a factory to turn gorse into compacted biomass fuel, which is being called Gorse Power. Gorse Power could replace compressed coal bricks used as a fuel source for barbecues in China, providing a much cleaner/greener fuel source, whilst being a marketplace solution for gorse control. Access: <http://mobile.abc.net.au/news/2016-11-23/tasmanian-gorse-to-power-chinese-barbecues/8049580>

Field-Testing of Plant ID apps

No replacement for botanists: Professor Tim Entwisle of the Royal Botanic Gardens Melbourne discusses the limitations of various plant ID mobile apps. (Personally, I have been rather impressed by the crowd-sourced information provided by the Facebook groups, Plant Identification Australia, and Tasmanian Weeds. Kate Blood posted about social media weed ID on her Facebook page, at: www.facebook.com/weedyk8/posts/624692614387106; Kate also presented a social media talk at the 2016 Australasian Weed Conference, access: <http://caws.org.au/awc/2016/awc201612641.pdf>). Audio and article at: www.abc.net.au/news/2017-02-11/plant-recognition-apps-no-replacement-for-botanists/8251280

New Publications

For those interested in a reference guide to major global invasive plants:

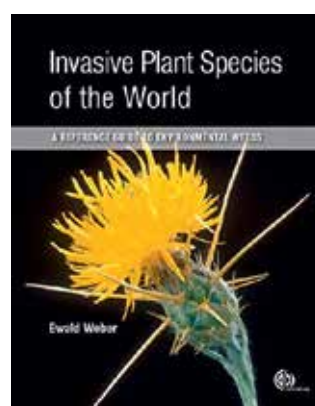
Invasive Plant Species of the World: A Reference Guide to Environmental Weeds. 2nd Ed.

By Ewald Weber

Published: January 2017

Hardback ISBN: 978-178064386-1

Publisher: CABI



Invasive plant species cause severe disruption to both natural and managed ecosystems, and with range expansions and increasing international trade these problems are only becoming more serious. Globally relevant, this book is a full-colour reference guide to the major invasive plants. It includes fifty extra species since the first edition, covering a total of over 500 economically and environmentally important plants.

This book provides a complete resource on the subject, supplying illustrations, synonyms, geographical distribution, habitats invaded, morphology, ecology and references for each species.

With revised and updated species ranges presented as full colour maps, this new edition includes newly established or improved control methods for each species. It also contains increased ecology and impact information, making this book an invaluable source of information for researchers in plant ecology, nature conservation, biological control, weed science and environmental management.

Also an informative read for policy makers and practitioners, this book will additionally be a useful resource for developmental organizations and public health services concerned with invasive plants.

For those interested in a summary of the current literature on topical issues in weed management:

Detecting and Responding to Alien Plant Incursions

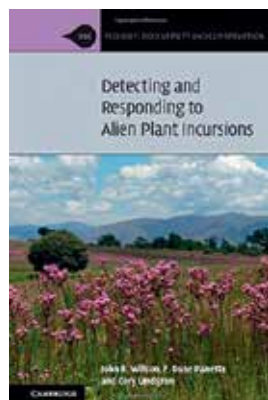
By John R. Wilson, F. Dane Panetta, Cory Lindgren

Published: December 2016

Hardback ISBN: 978-110709560-1

Paperback ISBN: 978-110747948-7

Publisher: Cambridge University Press



Ecologists, land managers and policymakers continue to search for the most effective ways to manage biological invasions. An emerging lesson is that proactive management can limit negative impacts, reduce risks and save money.

This book explores how to detect and respond to alien plant incursions, summarising the most current literature, providing practical recommendations and reviewing the conditions and processes necessary to achieve prevention, eradication and containment.

Chapter topics include assessing invasiveness and the impact of alien plants, how to improve surveillance efforts, how to make timely management decisions, and how legislation and strategic planning can support management. Each chapter includes text boxes written by international experts that discuss topical issues such as spatial predictive modelling, costing invasions, biosecurity, biofuels, and dealing with conflict species.

For those interested in best practice pest animal management in Australia:

Managing Australia's Pest Animals – a guide to strategic planning and effective management

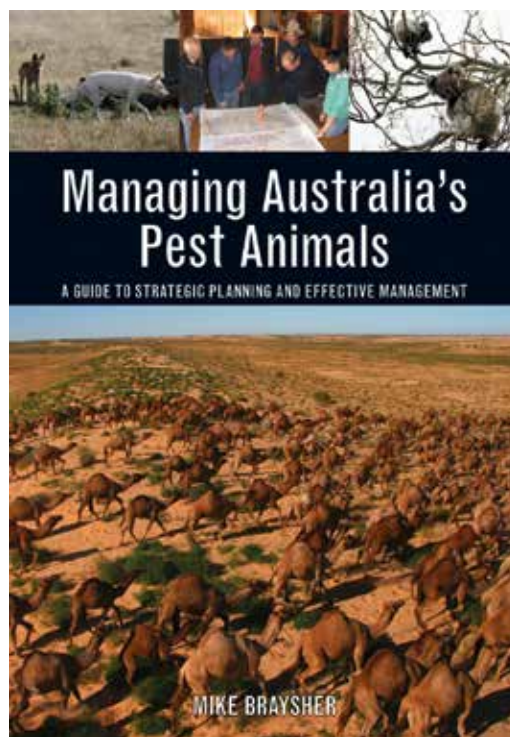
By Mike Braysher

Published: February 2017

ePDF ISBN: 978-148630444-8

Paperback ISBN: 978-148630443-1

Publisher: CSIRO Publishing



Pest animals are but one of many factors that influence the desired outcome from managing natural resource based systems, whether for production or conservation purposes. Others include diseases, weeds, financial resources, weather and fire management. To be effective, an integrated and systematic approach is required, and the principles and strategic approach outlined in this book can also be used to plan and manage the damage due to other factors.

Managing Australia's Pest Animals includes case studies of successful and unsuccessful pest management strategies and covers a range of topics, including the history of pest management, current best practice principles, and guidelines for planning and applying strategic pest management approaches to effectively reduce pest damage. This book is the first clear and comprehensive guide to best practice pest management in Australia and will benefit students and trainers of pest managers, landholders, people involved in natural resource management, and industry and government pest management staff.

Continued on page 12

This book will be of great benefit to students and trainers of pest managers, landholders, pest management staff, or volunteers working in natural resource management, including private and public land managers, parks and wildlife staff, pest management agencies, local councils, Landcare and catchment management groups and private pest contractors.

For those interested in a children's book on invasive species (suitable for ages 6–11 years):

Invasive Plants and Birds

By Alison Gaines

Published: August 2016

ISBN: 978-150261834-4

Publisher: Cavendish Square



In this study on birds and plants that have taken over the new environments they have been transported to, students learn the key details of what makes a species invasive and how species with better adaptations take over isolated environments. The book provides evidence through the chronology of cases such as kudzu covering the south-east [USA]. Providing explanations of the damage done by invasive species and solutions to their spread, readers discover the delicate nature of the habitats they live in.

Dates for your Diary

March 2017

World Wildlife Day – 3 March
www.un.org/en/events/wildlifeday/

International Day of Forests – 21 March
www.un.org/en/events/forestsday/

World Water Day – 22 March
www.un.org/en/events/waterday/

April 2017

22 April – International Mother Earth Day; www.un.org/en/events/motherearthday/

May 2017

North American Invasive Species Forum
Savannah, Georgia, USA. 9–11 May
www.invasivespecies2017.org/

World Migratory Bird Day – 10 May
www.worldmigratorybirdday.org/en

Challenge Accepted
2nd Global Herbicide Resistance Conference, Denver, Colorado, USA. 14–18 May. www.ghrc2017.org/

International Day for Biological Diversity – 22 May. www.un.org/en/events/biodiversityday/

Science at the Shine Dome 2017
Life on the Loose – Species Invasion and Control
Canberra, ACT. 23–25 May 2017
<https://aas.eventsair.com/QuickEventWebsitePortal/science-at-the-shine-dome-2017/home>

July 2017

2017 Island Invasives Conference
Scaling Up to Meet the Challenge
Dundee, Scotland. 10–14 July
www.islandinvasives2017.com/

IBC 2017 – XIX International Botanical Congress
Shenzhen, China. 23–29 July
www.ibc2017.cn/

August 2017

Linking Biodiversity, Material Cycling and Ecosystem Services in a Changing World. 102nd Ecological Society of America Annual Meeting
Portland, Oregon, USA. 6–11 August
www.esa.org/portland/#.WJgfYIN97IU

New Zealand Plant Protection Society Conference
Tauranga, New Zealand. 8–10 August
www.nzpps.org/conference.php

Ecology and Civilization in a Changing World
12th International Association for Ecology Congress
Beijing, China. 21–25 August
www.intecol2017.org/dct/page/1

September 2017

Weed Science for People, Agriculture, and Nature
26th Asian-Pacific Weed Science Society Conference
Kyoto, Japan. 19–22 September
www.c-linkage.co.jp/apwss2017/

October 2017

Experience the Highs – working smarter together
19th NSW Weeds Conference 2017
Armidale, NSW. 16–19 October
<http://conferencecompany.com.au/weedsconference/>

XVI Congress of the Spanish Society of Weed Science
Pamplona, Spain. 25–27 October
www.unavarra.es/congresosemh2017

August 2018

103rd Ecological Society of America Annual Meeting
New Orleans, Louisiana, USA
5–10 August

September 2018

21st Australasian Weeds Conference
Sydney, NSW
September 2018 (dates to be confirmed)