



Newsletter of the Weed Society of Victoria Inc.

volume 26 issue 4 2015

Weedscene

6th WSV Biennial Weed Conference

— Celebrating 50 Years —

Invasive Species Management in Victoria: Past, Present and Future

RACV Goldfields Resort, Creswick, 7–9 June 2016

The Weed Society of Victoria is dedicating the 6th Biennial Weed Conference to its 50th birthday celebrations. The conference theme is past, present and future – history of invasive species management in Victoria, current work being conducted on invasive species, and applying lessons of the past to plan for the future.

The three-day conference program will include:

- pre-conference canapés
- two days of presentations
- one field trip day
- conference dinner
- WSV Annual General Meeting

Presentations will be divided into sessions covering topics such as:

- historical invasive species management – successes, failures and long term outcomes
- continuing and emerging issues
- changes of attitudes and management strategies
- community education and partnerships
- changes in technical and operational techniques
- application of new and existing technologies
- use of apps and/or social media
- future directions in invasive species management.



Photos: Creswick Regional Park

WSV Directory

Correspondence and enquiries

Weed Society of Victoria Inc.
PO Box 234 Batman Vic 3058
Telephone 0437 861449
ACNA0011723W ABN 15 496 325 152

Web Site www.wsvic.org.au

Secretary

Rebecca Grant
secretary@wsvic.org.au

Weedscene Editor

Ingrid Krockenberger
editor@wsvic.org.au

President

Matt Stephenson
m.stephenson@basscoast.vic.gov.au

Vice President

David McLaren
David.McLaren@depi.vic.gov.au

Treasurer

Keith Primrose
keithprimrose@hotmail.com

Committee Members

Isabella Amouzandeh
isabella.amouzandeh@depi.vic.gov.au

Andrew Cox (CAWS Rep)
andrewcox@invasives.org.au

Rebecca James
rebecca.james@depi.vic.gov.au

Mark Uren
(email TBA)

Co-opted Members

Kate Blood
kate.blood@depi.vic.gov.au

Jackie Steel
jackie.steel@depi.vic.gov.au

Greg Wells
Wells1@dow.com

CAWS Representatives

Andrew Cox
andrewcox@invasives.org.au

Ingrid Krockenberger
editor@wsvic.org.au



WSV Membership Rates 2014–15

Pay for 1, 3 or 5 years

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

* Students and Pensioners

WSV is not registered to collect GST

Contents

6TH WSV BIENNIAL WEED CONFERENCE

Celebrating 50 Years – Invasive Species Management in Victoria: Past, Present and Future 1

FROM THE PRESIDENT 3

10TH ANNIVERSARY FOR THE TARRANGOWER CACTUS WARRIORS 4

POSTCARDS FROM IRELAND 6

THE WSV'S FREQUENTLY ASKED QUESTIONS 8

DATES FOR YOUR DIARY 9

IN THE MEDIA 10

NEW PUBLICATIONS 12

COVER PHOTO: *Ulex europaeus* (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

Design R.G. & F.J. Richardson, PO Box 42, Meredith Vic 3333
www.weedinfo.com.au

Printing Maroondah Printing, 42 New Street, Ringwood Vic 3134

Printed on 100% recycled paper



From the President



The time between our last edition of Weedscape and this one has been a solid period of 'transition' for yours truly! At times like these it is important to recognise the importance of teamwork. Whilst I have been between jobs I have relied heavily on Rebecca to keep things ticking along toward our 50th Anniversary Celebrations next June. She has been ably supported by Keith Primrose who has contributed toward the development of the program and associated organisational aspects.

It is also pertinent to pass on our best wishes to Isabella who is recovering well post-illness. Isabella who was re-elected as Treasurer at the last AGM has had to resign from the position, she has been an outstanding asset to the Society. Her determined organising of our online banking facilities has led to what should be a very positive position for the incoming Treasurer Keith Primrose. Keith was elected to the Committee at this year's AGM. He has been delivering invasive species management projects in the Victorian Alps since 2011. Welcome Keith! Isabella is remaining on the Committee and we are fortunate to have her.

Isabella's work on the 'Central Highlands Eden Project' is one of the more positive initiatives I have seen this year. Tackling new and emerging weeds in the hills around the Thompson Dam, the project addresses the threats posed by species such as Willow and established species such as Blackberry and Broom. These regions are some of the most picturesque, and ecologically important in the state, and it was a pleasure to take part in on-ground works with my new employer JGH Contracting at these sites.

Getting back to the 50th Anniversary of the formation of the Weed Society of Victoria, what a momentous occasion! The event will be held at the RACV Goldfields Resort (previously Novotel Forest Resort Creswick) on the 7th to the 10th of June with the theme 'Celebrating 50 years of invasive species management in Victoria: our past, present and future'. At this stage we have a terrific array of presenters ready to showcase their work, and there will be a formal dinner, entertainment and importantly loads of networking which is always an important aspect of these gatherings! It will also be an opportunity to recognise the efforts of foundation members of the Society and learn more about their contributions.

We will have updates and further details soon on the 50th Anniversary Celebration on NRM Jobs and through our normal communication channels. If you have any suggestions please feel free to contact Rebecca our secretary.

It is now full swing into Blackberry season (amongst others!) so good luck all with your endeavours over the summer. Field workers are reminded to keep an eye out for snakes – I'm up to number 3 sighting in two weeks, they are out and about!

Matt Stephenson



The Central Highlands Eden Project protects important vegetation communities from the threats posed by new and emerging, and established, weeds.

WSV sponsor:

NRMjobs.com.au
environmental jobs



10th Anniversary for the Tarrangower Cactus Warriors

Back in 2005, a coalition of three local Landcare groups formed a new committee, the Tarrangower Cactus Control Committee, to specifically tackle the increasing local problem of wheel cactus (*Opuntia robusta*). This Mexican plant was probably introduced into our region as a garden plant, but has invaded our native parks, farmlands, roadsides and unique heritage goldfield landscapes.

Despite evidence from a local newspaper article that wheel cactus was a problem in the Maldon area in 1963 (stating that all shire inspectors and landholders were directed to ‘carry out remedial measures immediately’), local farmers were still anxious about the spread of wheel cactus on their properties in the 1990’s.

This concern led to an enduring and productive collaboration between neighbouring landholders and Landcare volunteers, who set about to determine the most efficient ways to kill this noxious cactus plant. This group of volunteers soon discovered that, amongst other methods, surface spraying was not effective enough, and so developed an injection tool kit to apply herbicide directly into the lobes of the cactus.

In early 2005, representatives from local Landcare groups applied for, and were successful in gaining, significant funding from the Victorian State Government to work in conjunction with Parks Victoria to destroy wheel cactus on private and public lands. This funding helped to establish the Tarrangower Cactus Control Committee and they immediately organised the first of their monthly Community Field Days, to increase community awareness of this problem weed and to educate and help property owners.

The Tarrangower ‘Cactus Warriors’ have now been working for 10 years assisting and informing the communities of Maldon, Baringhup and Nuggetty. We’ve produced brochures

and a website to inform community members and field day demonstrations and workshops to train how to kill. We’ve offered physical assistance, free loans of equipment and free herbicide to encourage landowners to deal with their wheel cactus, and tried to persuade by holding stalls and using print, TV and radio media releases.

We’ve always worked hard at maintaining a happy and positive approach and friendly relationships with property owners, and make sure we also have some fun and games within the group at local events such as the annual Maldon Easter Street Parade, while further spreading the word.

Despite all these efforts and increased numbers of volunteers, wheel cactus has now infested more than 10,000 hectares around the Maldon district. There seems to be an even bigger seed bank and more properties and parklands infested over a greater radius. This continuing spread is due largely to increasing numbers of absentee ‘lifestyle’ property owners and ‘hobby farms’ without livestock who ignore their wheel cactus problem.

We believe wheel cactus will become a major environmental and economic disaster in the near future with native flora and fauna being displaced from their environment and properties becoming unworkable and valueless.

However despite these negatives we continually remind ourselves that we have destroyed possibly millions of wheel cactus plants over the past 10 years, potentially preventing billions more plants from invading in our beautiful landscape. We plan to celebrate this achievement at the end of this year with a party, especially to thank all our wonderful volunteers, sponsors and supporters.

Lee Mead

Vice President

Tarrangower Cactus Control Group Inc.



Cactus Warriors in the Maldon Easter Parade (above).

All photos for this article kindly provided by Lee Mead.



Typical infested property near Maldon.

Editor's note: additional resources

A description of the newly published book, 'Feral Opuntoid Cacti in Australia', is in New Publications.

Tarrangower Wheel Cactus Warriors

The Tarrangower Wheel Cactus Warriors can be found at www.cactuswarriors.org/. This website is an excellent resource which includes past and present activities, community involvement and collaboration, guides for control and disposal, and research and monitoring activities.

Weeds of National Significance (WoNS)

A very informative management guide on Opuntoid cacti can be found on the WoNS website at: www.weeds.org.au/WoNS/opuntoidcacti/docs/47053_ERGO_Weed_Mgmt_guide_CACTI.pdf

Also on the WoNS website is an identification resources page: www.weeds.org.au/WoNS/opuntoidcacti/resources.htm

The national strategy for invasive Opuntoid cacti can be found at: www.weeds.org.au/WoNS/opuntoidcacti/docs/national_strategic_plan_opuntoid_cacti.pdf

Australian Invasive Cacti Network

<http://www.aicn.org.au/> Interesting website includes explanations and photos of mechanical, chemical and biological control, and use of fire in control of invasions; photos of invasive cacti in the mainland states; and useful links (some need updating).



Postcards from Ireland

Hawkweed at Home

On a recent trip to Ireland, I was most surprised to find this little fellow shown in the photos, growing near Oughterard, Co. Galway. My hawkweed identification training provided by Parks Victoria is quite handy!

I am certain it is a hawkweed but less certain of the species, given that there are over 400 species of *Hieracium* in the British Isles (and I am no taxonomist). It looks very much like Mouse-ear Hawkweed, one of the target species of the hawkweed eradication program in the Victorian Alps. This species is native but not endemic to Ireland.



Hawkweed growing on a rock surface with not much more than a smudge of soil. New plants can be seen developing on stolons. Flower shows characteristic red markings on the underside of the petals, and hairy sepals and stem.



Roadside *Gunnera tinctoria* in the foreground, Renvyle, Co. Galway, Ireland.

Anyone for Rhubarb?

Though edible, Giant Rhubarb or Chilean rhubarb (*Gunnera tinctoria*) is not a welcome sight in Ireland (or New Zealand, where it is also a problem weed). It is subject to an Invasive Species Action Plan in Ireland.

The large deciduous herbaceous perennial can reach 2 m in height and diameter. It can form large dense colonies which rapidly dominate and displace important native species. Its impact is of particular concern for peat bog, riparian and cliff-side vegetation.



Gunnera tinctoria (Wikipedia photo).

Rogue Rhododendron

Flowering *Rhododendron ponticum* is a common and prominent sight during spring in Ireland, restricted to acid soils but occupying a wide variety of habitat types. Native to southern Europe and western Asia, it was introduced as a garden plant to the British Isles in the 18th Century.

Rhododendron ponticum is extremely invasive, forming dense impenetrable thickets with advantage over native species due to toxic leaves avoided by grazing animals and forming toxic leaf litter, with deep shade at ground level.

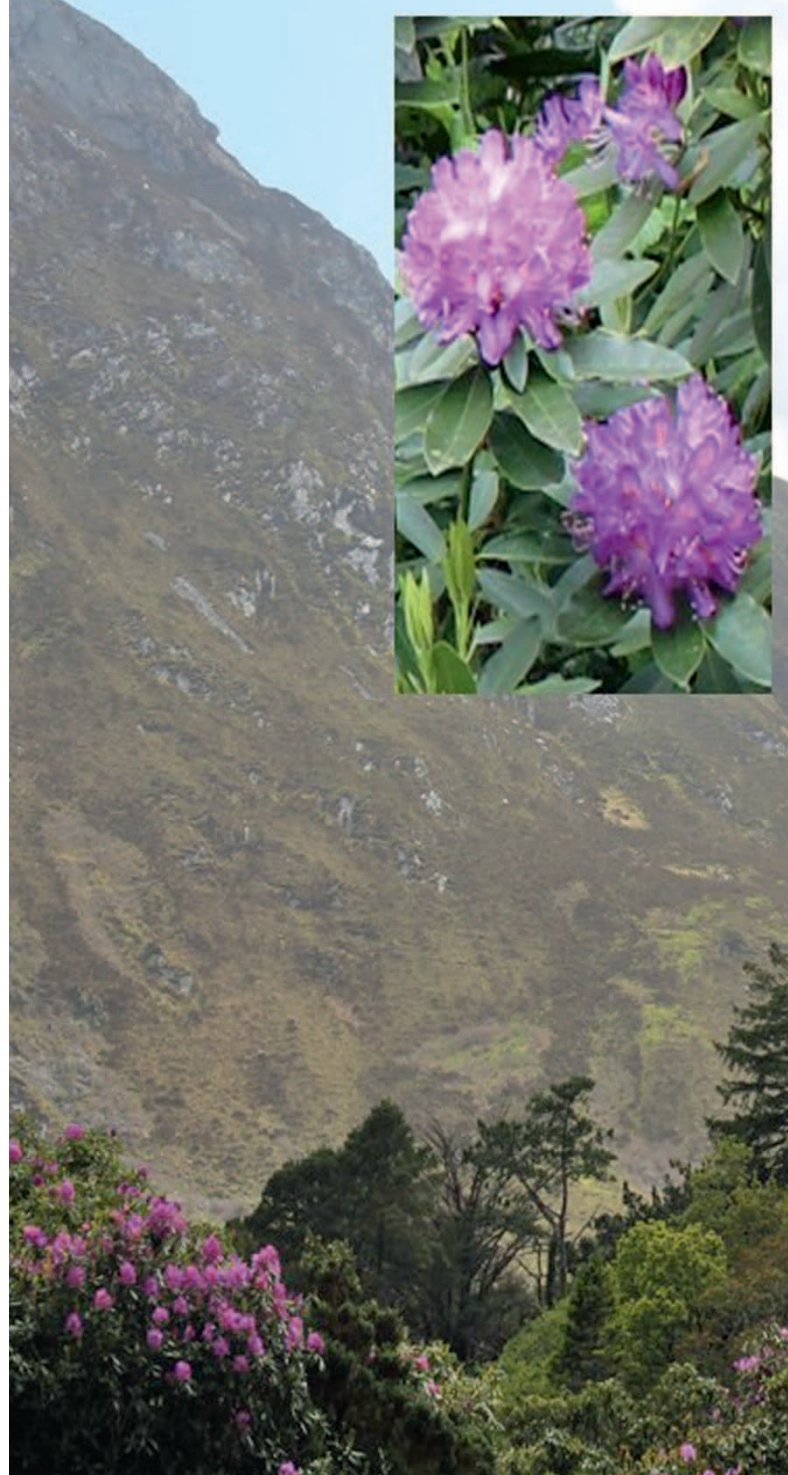
In temperate regions of Australia, *Rhododendron ponticum* is regarded as a potentially significant environmental weed and is becoming naturalised in the Dandenong Ranges in Victoria.

Gosh, it's Gorse

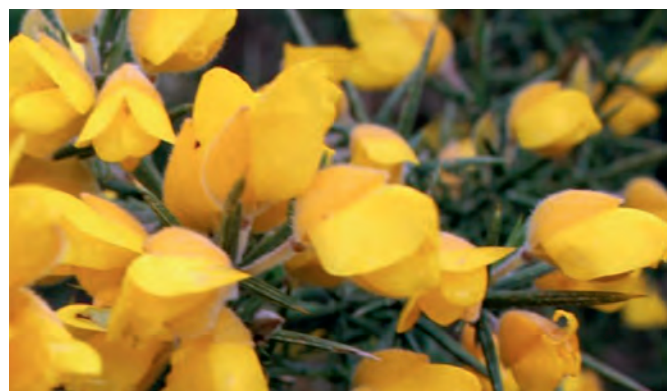
Declared weed gorse (*Ulex europaeus*) is regarded as one of the worst weeds in southern and eastern Australia because of its invasiveness and impacts. It is classified as a Weed of National Significance.

However, in Ireland, gorse grows within its native range and provides a pleasant sight and habitat for native fauna, common in hedgerows surrounding fields and along roadsides.

Ingrid Krockenberger



Rhododendron ponticum at Kylemore, Connemara, Co. Galway, Ireland.



Gorse on Diamond Hill. Connemara National Park, Co. Galway, Ireland (above and left).



The Weed Society of Victoria's Frequently Asked Questions (FAQs)

Have you ever had a question about the Weed Society of Victoria? Here are some questions the Secretary is asked regularly. We hope this provides some useful insights for our members and these FAQs will be appearing on our website in the near future.

What is the purpose of the Weed Society of Victoria Inc.?

The objectives for which the Society was established are:

- a. To promote wider interest in weeds and their control.
- b. To provide opportunities for those interested in weeds and their control, to exchange information and ideas based on research and practice.
- c. To encourage the investigation of all aspects of weeds and weed control.
- d. To co-operate and, where appropriate, affiliate with other organisations engaged in related activities in Australia and overseas.
- e. To encourage the study of weed science and the dissemination of its findings.
- f. To produce and publish such material as considered desirable.
- g. To foster the development of an Australia-wide Weeds Organisation.

Why doesn't the Society facilitate weed removal work?

Facilitating weed removal work does not align with our aims and objectives. We facilitate the networking and sharing of information between weed stakeholders through our members via our WeedsScene newsletter and staging events such as seminars and our biennial conferences.

Who works for WSV and how is it administered?

The WSV Committee is made up of volunteers from a variety of backgrounds including state and local government employees with weed research and management roles, private industry employees and tertiary students.

The committee is voluntary with the majority of their efforts for WSV being completed outside of work hours.

Why can't I always get a speedy response?

As the committee is voluntary, we can't always be on call. The WSV isn't a business, nor a government department. We

are a dedicated group of individuals who commit our spare time to the WSV. Our committee members all have normal day jobs or study, so WSV is administered around these commitments.

Why has WSV introduced multi-year membership?

Multi-year membership has been introduced to:

- Reduce the time the secretary and treasurer spend processing payments which could be directed to higher-value tasks such as organising events.
- Reduce the time members spend arranging payment for their membership renewal.
- Reduce the need for paperwork and associated postage.
- Reduce time the secretary spends chasing up declined and overdue payments.
- Retain more members.
- Benefit members by not requiring them to pay any membership fee increase until their next renewal.

I wish to make a direct debit payment, what are your bank account details?

Commonwealth Bank

BSB: 063195

Account number: 00900642

All direct debit payments MUST INCLUDE your membership/invoice number and surname/organisation so your payments can be traced and a receipt issued.

Is the WSV registered to collect GST?

No. The WSV is not registered to collect GST and will not be included in any amount issued on an invoice.

Why do conference/seminar speakers pay a registration fee?

Speakers are required to pay attendance fees to events as the WSV would not be able to cover the costs of all of the attending speakers. To cover the attendance fees for the speakers at WSV events would mean that staging such events would not be financially feasible for the WSV.

Although WSV events would not be possible without speakers to present, we also identify that there is a mutual benefit for the speaker in promoting their work to the

scientific community, meeting their work requirements for publishing/ disseminating their work and are provided with the opportunity to gain knowledge and network with other attendees

Why can't I register for a conference after the cut-off date?

Registering for a conference needs to be completed as soon as possible to:

- Ensure you can still reserve a placement. The 2014 conference reached maximum capacity with many disappointed they could not register at the last minute.
- It is also crucial for us to confirm attendee numbers early as the venue will have a maximum capacity which cannot be exceeded for the purposes of fire safety legislation.
- Enable the caterers enough time to prepare for catering required.
- Enable the WSV to communicate with the venue to ensure enough space and adequate facilities are provided for the registered number of attendees.
- Ensure we have enough conference resources for all attendees.

Where is the WSV office?

The WSV doesn't have an office location. The Secretary works from home, or wherever she may be with her laptop.

Why did the WSV change the PO Box address and phone number?

The WSV previously had their address in Frankston, a landline phone number and a fax. The WSV was established in 1966 by staff at the Keith Turnbull Research Institute (DEPI Frankston) with the committee members living within the area. In 2014, the staff from DEPI Frankston moved into new buildings at locations in Bundoora, Attwood and Knoxfield with current committee members both working and residing at or near these locations amongst others, so it no longer made sense to leave the PO Box in Frankston.

It was also decided with consideration to the future administration of the Society, we would no longer restrict ourselves geographically to a landline and fax machine. It makes being mobile and sharing duties much easier, especially with technology favouring email communication over fax.

How is the WSV funded?

WSV is not a business, nor is it a government department, nor government funded. WSV relies on membership fees received each year, any surplus there may be from conference or event registration fees after event costs and sponsorships.

Dates for your Diary

February 2016

Species on the Move International Conference. Hobart, Tasmania. 9–12 February. www.speciesonthemove.com

March 2016

National Seed Science Forum 2016. Mount Annan, NSW. 15–16 March. www.seedpartnership.org.au/seedscienceforum

April 2016

ICWNR 2016: 18th International Conference on Wildlife and Natural Resources. London, UK. 22–23 April. www.waset.org/conference/2016/04/london/ICWNR/home

June 2016

ICB 2016: 18th International Conference on Biodiversity. New York City, USA. 6–7 June. www.waset.org/conference/2016/06/new-york/ICB

ICSEA 2016: 18th International Conference on Sustainable Environment and Agriculture. New York City, USA. 6–7 June. www.waset.org/conference/2016/06/new-york/ICSEA

Knowledge Nexus: applying transdisciplinary and systems approaches for sustainable weed management. Alberta, Canada. 6–10 June. <http://andinaalberta.weebly.com>

Celebrating 50 Years of Invasive Species Management in Victoria – Our Past, Present and Future. Weed Society of Victoria, Creswick, Victoria. 7–9 June. www.wsvic.org.au/

7th International Weed Science Congress. International Weed Science Society, Prague, Czech Republic. 19–25 June. www.iwsc2016.org/

11th International Symposium on Adjuvants for Agrochemicals (ISAA 2016) 'Creating, Bridging and Sharing the Values of Adjuvant Technology'. Monterey, USA. 13–17 June (note change of date). <http://events.isaa-online.org/page/269/welcome-to-isaa-2016.html>

September 2016

20th Australasian Weeds Conference
Council of Australasian Weed Societies,
Perth, Western Australia.
11–15 September 2016. www.20awc.org.au/



November 2016

11th Australasian Plant Conservation Conference 2016. Melbourne, Victoria. 15–18 November. www.anpc.asn.au/conferences/2016

In The Media

Funding for Weed Control

The Federal Government released the long awaited Agricultural Competitiveness White Paper in July 2015. The government's vision for Australia's agricultural future includes \$50 million commitment to manage established pests and weeds, and another \$50 million for increased emergency eradication and national response capability in the event of a biosecurity emergency, such as the outbreak of a serious exotic disease. The White Paper also makes a commitment of \$200 million to boost biosecurity surveillance and analysis nationally. Reported on ABC Rural: <http://www.abc.net.au/news/2015-07-04/agriculture-white-paper-revealed/6594970>

Document Access: agwhitepaper.agriculture.gov.au/white-paper/white-paper-at-a-glance

Further to this, the Federal Minister for Agriculture and Water Resources, Barnaby Joyce, and Victorian Minister for Agriculture, Jaala Pulford, have recently released a joint media statement to announce that \$500,000 would be made available to top up the Victorian Government's \$2.6 million Roadside Weeds and Pest Management Program as part of the Agricultural Competitiveness White Paper commitments. www.agricultureminister.gov.au/Pages/Media-Releases/agwp-500k-pest-weed-projects-vic.aspx

DAFWA Targets Wheel Cactus

The Western Australian Dept. of Agriculture released a media statement in November regarding the removal of recently-listed declared wheel cactus from three residential properties. A weed surveillance project is being run in the South West, targeting 20 high priority declared species part of the \$20 million Boosting Biosecurity Defences project led by the department and made possible by the State Government's Royalties for Regions program. The Royalties for Regions policy involves the redirection of Western Australian state government spending into rural areas utilising mining and

petroleum royalty revenue. www.agric.wa.gov.au/news/media-releases/lookout-invasive-wheel-cactus

Serrated Tussock on YouTube

The Victorian Serrated Tussock Working Party (VSTWP) have published a series of videos describing serrated tussock (*Nassella trichotoma*) and presenting case studies on YouTube. (Published a year ago but only recently discovered by the WSV editor!) Video access: www.youtube.com/channel/UCvgZB5vBvLjOVf8pk6INM2Q/feed

Agricultural Robotics – Weed Control Going Smaller and Slower

ABC's Future Tense reported on agricultural robotics which is emerging as an important new technology in weed control for field crop production. Robotics can target weeds and could also provide delivery of microwave technology which would reduce the amount of chemical used in weed control, cutting costs and chemical handling, reducing environmental impacts, and addressing weed resistance to chemicals. Audio access: www.abc.net.au/radionational/programs/futuretense/robotic-agriculture-and-swarming-with-bees/6951022

NSW Weeds Conference on Facebook

Interesting coverage of the 2015 weeds conference in Cooma in October: www.facebook.com/Coomaweedsconference/

Cultivating Common Ground

Stanford Social Innovation Review has published an article about engaging the gardening and nursery industries in addressing the threat of potentially invasive ornamental plants. The article reports on California-based organisation, Sustainable Conservation, which developed a collaborative network, PlantRight, consisting of groups interested in the sale of plants such as nursery retailers, plant breeders, botanical gardens, landscape architects and designers, and garden and landscape authors, as well as environmental organisations and government agencies.

http://ssir.org/articles/entry/cultivating_common_ground_for_a_healthy_environment?utm_source=Enews&utm_medium=Email&utm_campaign=SSIR_Now&utm_content=Title#sthash.XEN5Ra2C.dpuf

Weed Work Wins Year-10 Student Young Scientist of the Year Award

ABC Rural reported on Young Scientist of the Year, Jade Moxey, who tested the effectiveness of cattle in weed control. Her year-long science project investigated which seeds eaten by cattle could germinate from manure. The most significant weed to germinate was fireweed, a noxious weed in the area, even though it is not readily consumed by cattle. The findings have implications for weed management.

www.abc.net.au/news/2015-11-26/rural-teen-wins-young-scientist-of-the-year-after-studying-cow/6977794





What's On

Join the 2015/2016 Falls Creek Hawkweed Volunteer Program

Native to Europe, Hawkweeds have recently become naturalised on mainland Australia. Hawkweeds are highly invasive and spread quickly via runners and roots forming dense mats inhibiting and outcompeting native vegetation. Hawkweeds can cause major environmental damage in alpine & sub-alpine areas, and are considered a significant threat to the Victorian Alps if not eradicated early.

Participating in volunteer surveys is a great way to help protect the Victorian Alps from this dangerous weed, as well as a fantastic opportunity to enjoy the magnificent alpine environment during the green summer months.



Accommodation will be provided at Falls Creek Alpine Resort. Transport will be provided to and from survey areas each day.

The dates for the 2015/2016 season are:

- Session 1: Monday the 14th - Friday the 18th of December
- Session 2: Sunday the 20th - Thursday the 24th of December
- Session 3: Monday the 28th - Thursday the 31st of December
- Session 4: Monday the 4th - Friday the 8th of January
- Session 5: Monday the 11th - Friday the 15th of January
- Session 6: Monday the 18th - Friday the 22nd of January

To express your interest in the program please contact:

The Hawkweed Team, Parks Victoria

P: 13 1963 | E: Hawkweed@parks.vic.gov.au

Parks Victoria
Phone 13 1963
www.parks.vic.gov.au



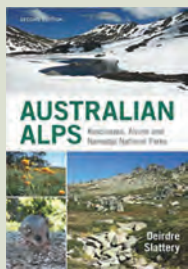
Healthy Parks
Healthy People®



New Publications

What I will be reading before the next hawkweed hunting in the Victorian Alps:

Australian Alps: Kosciuszko, Alpine and Namadgi National Parks Deirdre Slattery
Published: December 2015
Paperback ISBN: 978-148630171-3
Publisher: CSIRO Publishing



A fascinating guide to Kosciuszko, Alpine and Namadgi National Parks. It introduces Australia's highest mountains, their climate, geology and soils, plants and animals and their human history. It traces the long-running conflicts between successive users of the mountains and explores the difficulties in managing the land for nature conservation.

This new edition updates many themes, including the involvement of Aboriginal people in the region, catchment function and condition, pest plants and animals, fire and the issue of climate change.

This book acts as a detailed companion to park interpretive material and to topic-specific field guides: it caters for readers who want a broad overview of areas of interest they will come across in a visit to the mountains.

For those interested in monitoring and ecological indicators:

Indicators and Surrogates of Biodiversity and Environmental Change

Edited by: David Lindenmayer, Philip Barton and Jennifer Pierson
Published: November 2015
Paperback ISBN: 978-148630409-7
Publisher: CSIRO Publishing



This book provides insights into the use of indicators and surrogates in natural resource management and conservation – where to use them, where not to use them, and how to use them. Using an ecological approach, the chapters explore the development, application and efficacy of indicators and surrogates in terrestrial, aquatic, marine and atmospheric environments. The authors identify current gaps in knowledge and articulate the future directions for research needed.

For those interested in invasive cacti:

Feral Opuntoid Cacti in Australia, Part I. Cylindrical-stemmed genera: *Austrocylindropuntia*, *Cylindropuntia* and *Corynopuntia*
R.J. Chinnock
Published: 2015
Paperback ISBN: 978-192202743-6
Publisher: State Herbarium of SA



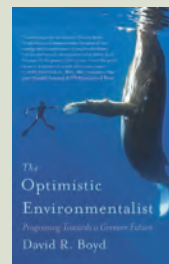
The newly published first part of this revision of weedy cacti in Australia features a field identification section, which provides an easy means to identify the plants. A taxonomic section contains detailed descriptions and notes on every species.

Introductory chapters on opuntoid morphology, how to collect and prepare pressed specimens, dispersal and biological/chemical control, and a glossary complete the book.

(Part II, containing the flat stemmed genus *Opuntia* (incl. *Nopalea*), is currently in preparation.)

Recommended by Bec Grant as a “nice change from all the doom and gloom books”:

The Optimistic Environmentalist
David R. Boyd
Published: August 2015
Paperback ISBN: 978-177041238-5
Publisher: ECW Press



Yes, the world faces substantial environmental challenges — climate change, pollution, and extinction. But the surprisingly good news is that we have solutions to these problems. In the past 50 years, a remarkable number of environmental problems have been solved, while substantial progress is ongoing on others.

The Optimistic Environmentalist chronicles these remarkable success stories. Endangered species—from bald eagles to gray whales—pulled back from the precipice of extinction. Thousands of new parks, protecting billions of hectares of land and water. The salvation of the ozone layer, vital to life on Earth. The exponential growth of renewable energy powered by wind, water, and sun. The race to be the greenest city in the world. Remarkable strides in cleaning up the air we breathe and the water we drink. The banning of dozens of the world's most toxic chemicals. A circular economy where waste is a thing of the past. Past successes pave the way for even greater achievements in the future.

Providing a powerful antidote to environmental despair, this book inspires optimism, leading readers to take action and exemplifying how change can happen. A bright green future is not only possible, it's within our grasp.