

WeedWise

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Newsletter of the Weed Management Society of SA



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From the President,

August already! Your committee has been (mostly) having “a well-earned rest” following the hectic, but very rewarding, build up to the SA Weeds Conference in May. It's been great to catch up with our day jobs, but now it's time for us to roll up our sleeves and look to the future.

But first, my apologies to Phil Cramond. Phil's name was left off of the WMSSA Award for Excellence list circulated at our May conference. Phil's dedication and passion for weed management is known widely in SA, and it is very fitting that he is our newest recipient.

Leah Feuerherdt and her helpers have delivered another quality issue of WeedWise. We are always happy to receive material for publication and I encourage all members to share their thoughts, views, experiences and ideas – just send them to Leah.

In this August issue we visit some of the excellent presentations from the May Conference, and look at your feedback that will be used to shape future conferences. Yes, someone really does look at and discuss your feedback forms! Thanks to Leah for collating and presenting the material to the committee. It looks like there is some room for improvement, but we were generally not far from the mark. It is now likely that concurrent breakout sessions will become an ongoing feature of our conferences. We are also keen to develop the concept of a “plant pressing competition” (with appropriate prizes!) to encourage submission of specimens to the SA Herbarium. As a society, one of our main roles is to encourage “active surveillance” (i.e. looking for and identifying new weeds) – one of the most important things that our members can do when in the field.

In closing, I would like to remind members that our AGM is on 13 October (7pm at Waite), and I encourage members to consider serving on the committee. As previously flagged, my term as President will be up at the AGM, and I intend to stand down to make room for new ideas! Please give nomination for the job some thought. We hope that you get a lot out of this issue, and please send us your own “weedy stories” to share with our membership!

Best wishes,
John

WEED ARTICLES NEEDED

Would you like to contribute an article, book review or some of your technical expertise battling a weed in your patch? Is there an event you would like to publicise?

We welcome submissions for the next issue of WeedWise
by 30th October 2016

Contact: Leah Feuerherdt
Email: Leah.Feuerherdt@sa.gov.au

5th SA Weeds Conference Feedback

The 5th SA Weeds Conference may be over, but the Committee have still been in conference mode, processing the feedback and beginning planning for the next one. Thanks very much to the 44 people who took the time to provide some feedback; your input will help us improve. Overall, the conference was very well received, and some excellent suggestions were provided. A summary of some of the key findings is presented below.

- The information given at the event was helpful for participants' needs; 23 strongly agree and 21 agree.
- The information was presented in a readily understood format; 21 strongly agree and 23 agree.
- The event improved participants' understanding; 18 strongly agree and 26 agree.
- A photo competition would be a worthwhile contribution to the conference; 8 strongly agree, 17 agree and 17 unsure.

It was suggested that a plant pressing competition could be run instead of a photo competition. Either for the best pressed specimen, or the total number of specimens provided to the herbarium from a member over a period of time. The aim of this competition would be to increase the diversity of samples at the herbarium.

The commonly mentioned highlights of the conference were:

- Networking, within state and local government, and private sector, making personal contact with researchers and officials in key positions (x15)
- Regional roundups, NRM updates on their regional programs (x10)
- Variety of topics (x7)
- Location, well catered, great food (x6)
- Glyphosate information, gave background information that is not readily available (x6)
- The breakaway sessions (x4)
- Most of the presentations were well presented, good length, excellent, relevant and informative (x4)
- News on innovations/research in the industry, current techniques and thinking, including social (x3)
- Biocontrol topics, prickly pear biocontrol (x4)
- Updates on weed trials/ resistance findings (x3)
- Basal bark presentation (x3)



Some suggestions for improvement next time included:

- Promoting wider attendance, DEWNR rangers and ecologists, miners, community groups
- More presentations about on-ground works and trials
- Larger/ less noisy area for breaks and lunch
- More detail (printed or electronic) about presentations to make it easier to follow during the conference
- Presentation from the Minister for Environment
- Presentation from the WMSSA on it's purpose/ achievements

Thanks again to all those who attended, and provided feedback. We will work hard to make the next one even better.

Attendees at the 5th SA Weeds Conference. Photo credit: Michaela Heinson

Glyphosate resistance in non-cropping areas of Australia

J. Malone, A. Cook, H. Wu, A. Hashem, S. Morran and C. Preston

Glyphosate is the most widely used herbicide for weed control in Australia, in both agricultural and non-agricultural situations. While glyphosate resistance has occurred at numerous sites in agricultural systems in Australia, it has also begun to appear in a number of non-agricultural settings including road sides, railway rights-of-way and irrigation channels. Glyphosate resistance in these non-crop areas has the ability to spread into other areas and cause management difficulties elsewhere. Herbicide resistance in non-agricultural situations has not been reported often and little is known about the risks of herbicide resistance evolving in these areas.

A physical survey of areas likely to be at high risk of glyphosate resistance was conducted across Australia to obtain a better understanding of the extent of glyphosate resistance in non-cropping areas. Surveys were conducted in WA, SA, NSW, Vic and Qld. Four different weed species were targeted in the survey: annual ryegrass (*Lolium rigidum*), fleabane (*Conyza bonariensis*), windmill grass (*Chloris truncata*), and barnyard grass (*Echinochloa colona*).

More than 400 samples of whole plants or seed of the four species were collected. Resistance was identified in all four weed species, in all states, and in all non-agricultural areas surveyed. Roadsides, often adjacent to crops, were where a majority of the resistant samples were from. However, resistance was also identified along irrigation channels, railway rights-of-way and around buildings, such as silos.

Over 50% of ryegrass and fleabane populations were resistant. Over 30% of the barnyard grass populations contained resistance, however sample number was low. Windmill grass was the only species to have a low level of resistance with only 7% of the populations tested containing resistance.

Glyphosate resistant weeds evolve wherever there is intensive reliance on glyphosate for weed control and few or no other weed management practices used. Glyphosate resistant weeds in non-agricultural areas have the potential to spread into nearby agricultural production areas and vice versa. Effective management of glyphosate resistant weeds in non-agricultural areas will reduce this risk.



Glyphosate resistant windmill grass on the roadside. Photo courtesy J. Malone

To quantify the performance of alternative herbicides to glyphosate on roadsides in South Australia, three areas of roadside at which glyphosate resistance was common, were treated with alternate herbicides. The sites were located at Millicent, Blyth and Aldinga. Seven treatments included glyphosate (Roundup, Weedmaster Duo, Ken-up Gold), amitrole, glufosinate (Basta), sulfometuron-methyl and carfentrazone-ethyl (Hammer) in various mixtures, and treatments differed slightly between sites. Assessments were made at two and four weeks after application as % brownout and at twelve weeks as % growth reduction.

- Glyphosate provided good control of all weeds, except where glyphosate resistant ryegrass was present and, despite the presence of resistance at all sites, remained among the most effective herbicide treatments.
- Sulfometuron-methyl performed poorly at all locations. Much of the ryegrass in cropped areas of South Australia is resistant to sulfometuron-methyl and it is likely that this has moved onto roadsides.
- Amitrole was generally effective on broadleaf weeds, but less effective on grasses. Two rates were used and the higher rate was not more effective than the lower rate.
- Basta performance was variable. There was a rapid effect at burndown, but at Millicent, where grass populations were higher, Basta was less effective. Basta performed poorly on broadleaf weeds at Millicent and at Blyth.
- The mixture of Basta plus Hammer was similar to Basta at all sites, except that Hammer improved broadleaf weed control at Millicent.
- The mixture of Basta plus Amitrole performed well at all sites. Where grass growth was particularly thick not all the grass was controlled. This mixture performed better where weed populations were lower.

Pepper tree control in the Blinman area of the Flinders Ranges

Paul Hodges, DEWNR, SA

The Blinman Copper Mine was established in 1862 and closed in 1918. Whilst the exact time of the introduction of pepper trees to Blinman is unknown, nursery catalogues in Adelaide first advertised pepper trees for sale between 1870 and 1880. Another clue to when pepper trees first arrived in Blinman comes from the fact that many Cornish miners in Burra relocated to Blinman at the height of the copper mine's activity. Pepper trees were introduced to Burra by the Cornish miners and it is feasible they took seed with them when they went to Blinman. It is quite likely that pepper trees have been in Blinman for over 100 years.

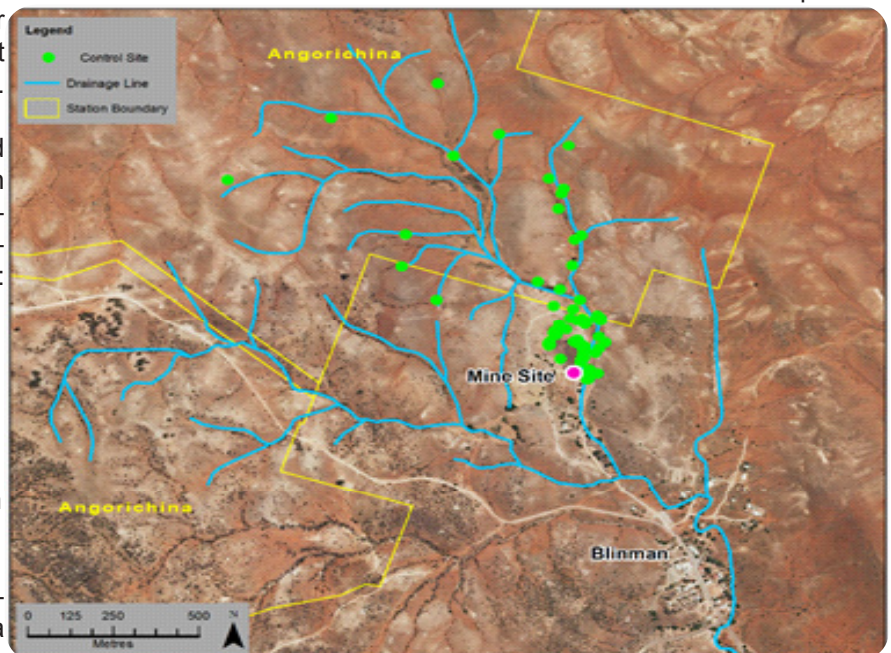
Pepper trees were popular with early European settlers in Blinman because they grew quickly, were drought tolerant, provided a good source of firewood, offered abundant shade, and possibly with the additional advantage as a natural repellent to flies. Many of the native trees were used as supports within the mine structure, fuel to fire the copper smelters and as firewood to keep people warm during the cold winters. Supplies of native trees would have dwindled quickly, once production was in full swing. The people would have learnt quickly that eucalypts were relatively slow growing and they needed a tree that grew quickly. Pepper trees fitted their needs and were grown out of necessity. However, once the mine closed and the miners moved away, pepper trees were no longer utilised. Their suitability to the location, that had once been an asset to the mine, now allowed them to thrive unchecked.

Pepper trees would have initially been grown in and near the township of Blinman. However, over time they have successfully spread 50km down the length of the drainage line to Commodore Swamp and on surrounding slopes. They have also been spread by birds, with emu scats full of pepper tree seeds a common sight. The Blinman Mine site and Blinman township now have particularly large pepper tree infestations. Over time, as the pepper trees grew, native vegetation retreated as a result of the allelopathic properties of the pepper trees and their fast growth and thick canopy that prevented light reaching the native plants. Pepper trees now form the dominant over-storey in this area. Blinman is near the top of the catchment that flows into the Parachilna Creek and then into Commodore Swamp. This means that to achieve removal of pepper trees from the drainage system, starting at the top of the catchment is a logical choice.

The Blinman Progress Association mooted the removal of pepper trees in Blinman about 10 years ago. The idea of removing the pepper trees alarmed some members of the community who believed:

- Pepper tree removal would make the town look bare,
- There would be no shade,
- Pepper trees were part of the local landscape,
- Habitat for native birds would be lost,
- Privacy of some homes within Blinman would be lost.

Another issue was the town's main tourist attraction, the Heritage Copper Mine, valued a grove of pepper trees near the mine entrance that provided shade for tourists prior to tours. The residents wanted these trees to remain.



Blinman Pepper Tree Control, March 2016. Image credit Paul Hodges.

The Progress Association worked with the community on solutions to these issues. They educated the community about the fact that pepper trees weren't native to Blinman (or even Australia) and that they were an invasive weed that had resulted in the lack of regeneration of endemic native trees and shrubs.

Pepper tree control in the Blinman area of the Flinders Ranges, continued...

They also worked with the community on planting native trees 10 years ago, that would allow the removal of pepper trees at a later time.

These efforts culminated in the town deciding that pepper tree control could commence in the creek line and in public areas in the town. The Mine site was also approved for removal of pepper trees, however, the grove near the mine entrance has been exempted until an alternative source of shade can be arranged. The Progress Association is seeking alternative funding to build an all-weather shelter outside the mine entrance. This agreement has allowed the initial pepper tree removal to begin in the priority areas.

The North Flinders Natural Resource Management Group (NRM) had listed pepper trees as a priority pest plant when they developed their District Weed Strategy. When the NRM Group were discussing potential projects for the 2015/16 year, they identified pepper tree control at Blinman as a priority. The SA Arid Lands NRM Board agreed to fund the commencement of works on pepper tree control in 2015/16 and to replicate this funding for a further two years.

The Progress Association didn't want trees treated and left in situ, as they believed this would allow trees to disperse seed as they died, and dead trees would not be attractive in the landscape. They wanted the trees removed and utilised, rather than simply burnt. It was decided that the trees would be mulched and the mulch would be stockpiled at a disused dam nearby. The mulch would be kept until the seed was no longer viable after three years and then used on town landscaping projects. Ongoing management of the project site was identified as being important to prevent reinfestation. The Progress Association has committed to removing any new pepper tree seedlings that emerge in the project area from seed already present including seedlings that emerge at the mulch stockpile site.



Pepper tree (*Schinus molle*) mature fruits. Photo credit L. Feuerherdt

Works began on Angorichina Station, at the top of the catchment, through the mine site and finished at the entrance to the Mine. One hundred and forty five large pepper trees were removed from an area of approximately one square km. The contractors used a cut and swab method. As many of the trees were very large, the chainsaw operator cut each tree down and frilled the stump, then a spray operator applied the Access® and diesel mix within seconds of frilling. The branches were all fed through a 300 mm mulcher into the back of a high-sided truck. This system was very effective, with only the large trunk material not being able to fit in the mulcher. This was also time efficient, reducing travel time to the dump site, as it took a lot more trees mulched to fill the back of the truck than if they had been loaded as whole branches.

The SA Arid Lands NRM Board have been researching native trees endemic to Blinman and will discuss with the Blinman Progress Association which species could be included in a revegetation project that will complement the plantings the Progress Association have already done. The Progress Association will do the planting. As seedlings will need to be grown specifically for this project, from local provenance seed, it is likely the revegetation will occur after April 2017.

The SA Arid Lands NRM Board will liaise with the Blinman Progress Association on the timing of the next stage of the project. The Blinman Progress Association will report the success of the project to the North Flinders NRM Group. This community prompted weed program will assist in guiding how the NRM Group decide on future strategic pest plant priorities and programs.

Your chance to get involved!

The Weed Management Society Annual General Meeting will be held on Thursday 13th October 2016 at the Waite Campus. This is a perfect opportunity to become a part of the committee and drive the awareness and engagement in weed management issues in SA. The last several AGMs have had engaging and diverse guest speakers, and there is the opportunity to have a glass of wine (or orange juice) and catch up with colleagues and other like-minded folk. As John advised at the conference, and in the last issue of weedwise, he will be stepping down as President. All positions will become vacant and open for nomination. If you would like to nominate for a committee position please email John at: john.heap@sa.gov.au.

The committee have decided to create a new position for next year, in response to the conference feedback. We are after a committee member who will start some of the early preparations required for the next conference in 2018. It may seem like a long way away, but there are actions that can be undertaken next year to be properly prepared and ensure we deliver the best SA Weeds Conference yet! If you are keen to be involved in organising the next conference, please consider nominating for this new and important position. As a conference organiser this year, I can tell you it was busy, but very rewarding, and the committee are a great bunch of people to work with!

The following positions are up for nomination for 2016:

- President
- Vice President
- Secretary
- Treasurer
- Weedwise Editor
- Website Manager
- Conference Coordinator
- 2 x Exec committee members
- 2 x CAWS representatives

We are planning to have 3 esteemed guest speakers who work in the field of biocontrol. The meeting will be held in the SWEC Conference Room at the Waite Campus at 7pm. Look forward to seeing you there.

Updated Weed Control Information

The Weed Control Handbook, developed by Biosecurity SA (Primary Industries and Regions SA), has been updated since the first version. This excellent resource provides specific control recommendations for the declared weeds of SA.

The declared Plants of SA brochure has also been updated to include the new plant species added to the declared list as part of the declared plant review. The brochure is a great quick reference document to identify the declared species. Check out the latest version of these two documents here:

http://www.pir.sa.gov.au/biosecurity/weeds_and_pest_animals/weeds_in_sa



Test your plant identification

Do you recognise this plant? It has been found north east of Kingston, inland a few kilometres so not really in a coastal environment.

It is growing in sandy soil, and it has a distinct pungent smell upon crushing the leaves. The landholder has not seen it in the area before. It has come up in a dozer/grader line in sand after a new fence was erected about 18 months ago.

Both *Eucalyptus arenacea* and *E. leucoxylon* woodland is present with lots of bracken nearby.

We suspect it is *Verbascum thapsus*.

Photo Credit: Peter Tucker



Weeds of the South-East New Edition due August 2016

The third edition of popular Weeds of the South-East – an identification guide for Australia by Rob & Fiona Richardson and Ros Shepherd is due to be released in late August. Once again, this new edition has been fully updated and reorganised to recognise recent taxonomic changes and includes additional species, many new photographs and the latest distribution information.

- includes weeds of agriculture, bushland, waterways, gardens, roadsides, wasteland and amenity areas, as well as new and emerging problem species
- illustrated with more than 3000 photographs including spectacular close-up shots
- key features are described with relevant measurements for easier identification
- comparisons are made to similar species and easily confused natives
- situations where the species are likely to be found
- distribution by State using the latest herbaria records

Written in easy-to-understand language and beautifully illustrated, this is a field guide for anyone interested in the identification of pest plants and the preservation of our native flora. An essential tool for community land and bush care organisations, local and state government weed officers and advisers, rangers, agronomists, agriculturists, survey and identification botanists, horticulturists, landscapers and gardeners.

Supported by the Council of Australasian Weed Societies, Weed Society of New South Wales, Weed Management Society of South Australia, Tasmanian Weed Society and Weed Society of Victoria.

Book price \$79.95

ISBN 9780980388541, full colour, 576 pages, soft heavy-duty gatefold cover, available 22 August 2016 (approx date)

Special offer for Weed Management Society of South Australia paid-up members

Book price \$64 (20% discount) + postage/packaging charge of \$13.50

Please order by:

Email richardson@weedinfo.com.au or Fax 03 5286 1533

Special offer payment by bank transfer or cheque only – an invoice will be sent to you by return email or fax

Offer valid until 30 November 2016

Weed Management Society of SA Membership Form

The Weed Management Society of SA Inc. was formed on 15th October 1999, bringing together people actively involved in managing weeds and researchers with interests in protecting our agricultural and natural environment. The Society is a forum to share knowledge, debate issues and generate ideas, drawing on practical weed control experience and the latest research.

New members are always welcome, or simply come along as a visitor to public meetings. The Society's newsletter *WeedWise* is distributed by mail to all financial members.

Please tick relevant boxes, fill in your contact details and send to the address below (Note: GST is not charged by the Society)

Annual Membership:

- \$30 standard, \$15 Concession/Student, free for community groups

I want to become a member of the WMSSA and would like to receive the society's newsletter *WeedWise* by: ☐ **mail** ☐ **email**

☐ I enclose a cheque for \$ ____ (payable to Weed Management Society of South Australia)

☐ I have made an electronic payment of \$ ____ to the WMSSA Account.

Account Name: Weed Management Society of SA

Institution: Peoples Choice Credit Union

BSB: 805-050 **Number:** 2378 7221 **Reference:** Your surname
Payments by electronic transfer from accounts with People's Choice Credit Union will need to use: **Account number:** 2349916,
First three letters of account name: "wee".

Name: Mr/Mrs/Miss/Ms/Dr

Address:

Telephone Work:

Mobile:

Facsimile Work:

Home:

Email:

Forward with payment to:

Secretary, WMSSA c/- Henry Rutherford, PO Box 517, Torrens Park, SA, 5062

Upcoming Events

WMSSA AGM

Thursday Oct 13th, 7pm
SWEC conference Room, Waite
Campus, Urrbrae

Adelaide Mount Lofty Ranges NRM
Board Meeting
22 September. Location and time
TBA
82739100

Belair National Park 125th Anniversary
Open Day
11 September. Free entry

Parra Wirra Family Fun Day
18 September
Parra Wirra Recreation Park. Free
entry.

Trees for Life Threatened Species
Day
Wed 7 September, Finnis Oval
Register at:
8406 0500 or info@treesforlife.org.au

Nature Play Month
October
Cobbler Creek Recreation Park

20th Australasian Weeds
Conference
11- 15 September 2016, Perth,
Western Australia
<http://www.wswa.org.au/20awc>.

www.wmssa.org.au

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