

Weed Management Society of South Australia Membership

The Weed Management Society of South Australia 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 to all financial members. Please advise the Secretary if you wish to receive WeedWise via e-mail.

Please remember that annual memberships are due and arrange payment if you wish to remain a member.

Weed Management Society of South Australia Inc. Membership Form

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

I want to become a member of the Weed Management Society of South Australia.

☐ I enclose a cheque for \$ _____
Annual Membership with Plant Protection Quaterly Subscription: \$90
standard, \$75 Concession/Student
Annual Membership only: \$30 , \$15 Student; Free for community groups
(payable to Weed Management Society of South Australia)

☐ I have made electronic payment of \$ _____ to the WMSSA Account *
please ensure payment is clearly identified.
Account Name: Weed Management Society of SA
Institution: Peoples Choice Credit Union
BSB: 805-050
Number: 2378 7221

Name: Mr/Mrs/Miss/Ms/Dr _____
Address: _____

Telephone Work: _____ Home: _____
Facsimile Work: _____ Home: _____
Email: _____

Forward with payment to:
Secretary, WMSSA - c/- John Heap
PO Box 517 Torrens Park, SA 5062

www.wmssa.org.au

President: Susan Ivory - wmssa01@hotmail.com

Secretary: John Heap - john.heap@sa.gov.au

WeedWise Editor: Sam Buxton Stewart - jstewart01@dodo.com.au

Upcoming Events

Find out how you can be involved.

The WMSSA Executive welcomes new members and would like for you to come along to celebrate the society's achievements of the last year.

For more information please call
Susan Ivory on 0401 288 946 or
wmssa01@hotmail.com

Grant applications are now open for the
2015 Science and Innovation Awards for
Young People in Agriculture, Fisheries and
Forestry.

If you're 18-35, this is your chance to
apply for a grant of up to \$22,000 to fund
your project on an innovative or emerging
scientific issue that will benefit Australia's
primary industries.

The Science Awards encourage young
scientists, researchers and innovators
with original projects that aim to keep
Australia's rural industries sustainable and
profitable.

More information can be found at [http://
www.greencareer.net.au/events/2015-
science-and-innovation-awards](http://www.greencareer.net.au/events/2015-science-and-innovation-awards)

19th Australasian Weeds Conference,
1-4th September, Hotel Grand Chancellor,
Hobart.

The theme for this year is Science,
Community & Food Security: The Weed
Challenge. Enquiries and bookings can be
made at: [http://australasianweeds2014.
com.au/](http://australasianweeds2014.com.au/)

We'd love to help you publicise your next
weed related event in our next edition.
Please contact the Editor

WeedWise

Volume 15 Issue 1 September 2014

From the President....

Welcome to the first edition of WeedWise for 2014. And here's hoping you all had a great start to the year. The WMSSA Executive had been focused on organising the 4th South Australian Weeds Conference for the 6&7 May 2014, and it turned out to be another great conference. We had four excellent keynote speakers for the conference starting with Dr Chris Preston who gave us an overview of his world renown work on herbicide resistance and integrated weed management. Tom Low, author of Feral Future and the New Nature, provided us with his insights into current and future weed management policy and stirred up quite a bit of discussion. Dr Andy Sheppard, from CSIRO, who took us on a journey through the achievements of 100 years of successful biocontrol. Professor Chris Daniels, Presiding member of the Adelaide and Mount Lofty Ranges NRM Board, wound up our conference with an entertaining discussion on citizen science.

Feedback on the conference, both verbally and through the feedback form, was overwhelmingly positive. We had a record attendance of 122 registrations and a broad range of presenters and topics up for discussion. Of course I'm biased towards anything biocontrol but it was great to see and hear about the important work done by volunteers in the regions managing significant areas in the state. What I found very heartening is that government agencies have been working hard to support the community through policy and regulatory improvements and these people take the time to mingle and discuss their work and yours in the conference breaks.

Last year WMSSA was one of a number of community organisations that made a submission to Phase 3 of the Declared Plants Review. This review saw the proposal of a number of environmental weeds for declaration highlighting the importance of weeds in the environment and that some environmental weeds can also be a threat to property and agriculture.

WMSSA also wrote to Minister Hunter and Minister Bignell seeking continued support for Chris Brodie as the Weed Botanist at the State Herbarium. Maintaining his position means that the knowledge on weeds across the state can be analysed, managed, processed and stored. Chris's enthusiasm and skills with people and plants are a rare combination that the WMSSA is keen to see stay in this field.

WeedWise, one of our important tools for communicating with our membership, has undergone a change in editor. I would like to thank Heidi Hodge for her great work in previous editions of WeedWise. We have had some teething problems trying to get WeedWise out, but with David Blewett's excellent work in preparing this edition and Sam Buxton Stewart's equally fantastic work finalising the newsletter, you finally have it for your reading pleasure.

Keep an eye out for details of the next AGM. My tenure as President ends and it would be amazing to see new fresh faces and weed wise people take on the next phase of the WMSSA

Enjoy this issue of WeedWise and thank you for your continued support and involvement.

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 1st October 2014

Contact: Sam Buxton Stewart Email: jstewart01@dodo.com.au



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Would you recognise a new weed?

Deb Agnew, Weed Management Society of South Australia Executive Committee

This year, about 10 new weed species will be found in South Australia – because each year, on average, this is the number of new weeds that are recorded. It seems a lot, but could there be even more out there, lurking unnoticed? New weeds are plants growing in the wild that have never before been recorded by the State Herbarium of South Australia. Some are carried in by mistake (on vehicles, clothing and equipment), and others, already growing here, quietly creep out of gardens and cultivated areas - and spread. Finding new weeds before they get out of hand makes good sense, because once they spread it is like cleaning up confetti after a wedding - very difficult. This is why the Weed Management Society of South Australia is helping scientists and policy experts get the word out, about what to do if you find a plant that looks out of place.

Chris Brodie, the Herbarium's Weeds Botanist, knows just how difficult it is to recognise a new weed species. *'On a trip down to the south-east [of South Australia] to see what was there, we found nine populations of this plant that everyone had thought was African Lovegrass [Eragrostis curvula];' Chris says. 'But when you have a good look, it is different. It could be a completely different species. I reckon it probably is'. An infectious laugh, full of enthusiasm for his work, interrupts Chris's words. 'You have to get a specimen to document a new find,' he says. 'We compare it with our collection. In some difficult cases we may ask other experts, either interstate or overseas, how it compares with their collections, and with what we think it might be.'* It seems like identifying a new weed can be complicated. For now, Chris is waiting to hear back from his colleagues, to confirm whether he has found yet another new weed in South Australia.

The Herbarium 'documents' native and non-native plants that go wild and become weeds in South Australia. A specimen plant is pressed, and detailed information about where it was found and what the living plant looks like, is recorded. This information goes into a database and is made publicly available online. Almost one-third of all plant taxa that have been recorded are weeds. *'There are 1 500, give or take 10 or so, [recorded weeds in South Australia] and the number is going up,'* says Chris. The public can have a role in finding and identifying plants that could be new weeds. Chris explains: *'It would be terrific if people could keep a look out there, and if they see a plant that looks out of place, and that is not known in the local area, think, I will send it to Chris, or give Chris a phone call. If they think, he is probably busy, I'm not going to bother him, then no-one contacts me. But that's what I'm here for - to help people identify their weeds.'*

Tim Reynolds from Biosecurity SA is also interested in new weed incursions. His agency publishes a list of 'significant detections' on its web page. Since 2011, seven new weeds have been recorded on this list. He says when a new weed is found the process is first to identify what it is, then to determine if it's

a threat. Tim settles on Yellow Waterlily (*Nymphaea mexicana*) as an example of an aquatic weed first found in January 2013 on the River Murray. *'It started out with one infestation - now there are over 20 that we know of,'* Tim says. *'Officers from the region [Natural Resources, South Australian Murray-Darling Basin], made a deliberate effort to look for it by taking a boat up and downstream. The more they searched, the more they found.'* Tim says because it has spread, apparently very quickly, it is a serious threat to river health.



Photo by Steve Brock, Natural Resources SA Murray-Darling Basin

Figure 1: Yellow Waterlily infestation in the Bow Hill shack area, River Murray, January 2013;

Once identified, it is possible to find out more about the behaviour of close relatives of a new weed, which helps assess threat. Tim cites another example in the Giant Ice Plant (*Mesembryanthemum guerichianum*), aptly named because it can grow nearly two and a half metres across. Chris Brodie and an honorary researcher from the Herbarium, found it first growing near Renmark during 2012. *'In this one locality there are three sites - two with only single plants, but one with about 200 plants,'* Tim says. *'Its relative, the Common Ice Plant (Mesembryanthemum crystallinum) is a known transformer species - meaning its impact on natural systems can be so severe it is irreversible, so the Giant Ice Plant find was treated with a fair degree of concern,'* Tim explains.

We can't be sure how many more weed species are yet to be found. As Chris Brodie says, 'some of these weeds have been out there for 20 or more years and no-one has noticed.' He grabs a pen and a pencil and lays them side by side on the bench to illustrate. 'They may look the same, but they are different, one could be a different species – you see what I mean?'

Notes: Chris Brodie and Tim Reynolds presented at The Weed Management Society of South Australia's 2014 Conference. To gain access to their presentations enquiries can be made to: wmssa01@hotmail.com.

WMSSA Annual General Meeting

The Weed Management Society of South Australia Executive Committee invites you to our Annual General Meeting on:

October 2014 @ 4.00pm

To be held at the Soil, Water & Environment Centre (SWEC) meeting room, Adelaide University, Waite Campus

The invited speaker will be

The WMSSA Executive welcomes new members and would like for you to come along to celebrate the society's achievements of the last year. Find out how you can be involved

For more information please call Susan Ivory on 0401 288 946 or susanivory2@sa.gov.au

Gunnera tinctoria (chilean rhubarb)

Sturt Upper Reaches Landcare Group have recently published a weed warning pamphlet regarding *Gunnera tinctoria* (chilean rhubarb), a garden escapee, regarded as a threat within their region.

Gunnera tinctoria (chilean rhubarb) originally from Chile and Colombia, can grow 2m high with a flower spike of 1-1.5m high which can produce up to 250,000 seeds dispersed by birds and water. Currently the infestation has a range along the Sturt watercourse from Stirling to Coromandel Valley.

If found there are a number of treatment options:

- cut & swab with watercourse safe Glyphosate formulation;
- spray during the growing phase when there are too many plants for manual treatment. Follow up will be required for root/rhizome reshoots;
- remove flower spikes before mature seed is developed. Double bag the seed heads and dispose in general rubbish bin.

Mechanical removal is not recommended as plants can grow from pieces of roots/rhizomes.

Report any sightings or treatment actions of *Gunnera tinctoria* (chilean rhubarb) in the Adelaide Hills to the Department of Environment, Water & Natural Resources, Lobethal office on 8389 5900 to inform any ongoing eradication programs.



Book Reviews

WHICH WEED? Invasive Plants of the Central Mount Lofty Ranges'

Geoffrey C Bishop (2013) published by Adelaide Mount Lofty Ranges Natural Resources Management Board.

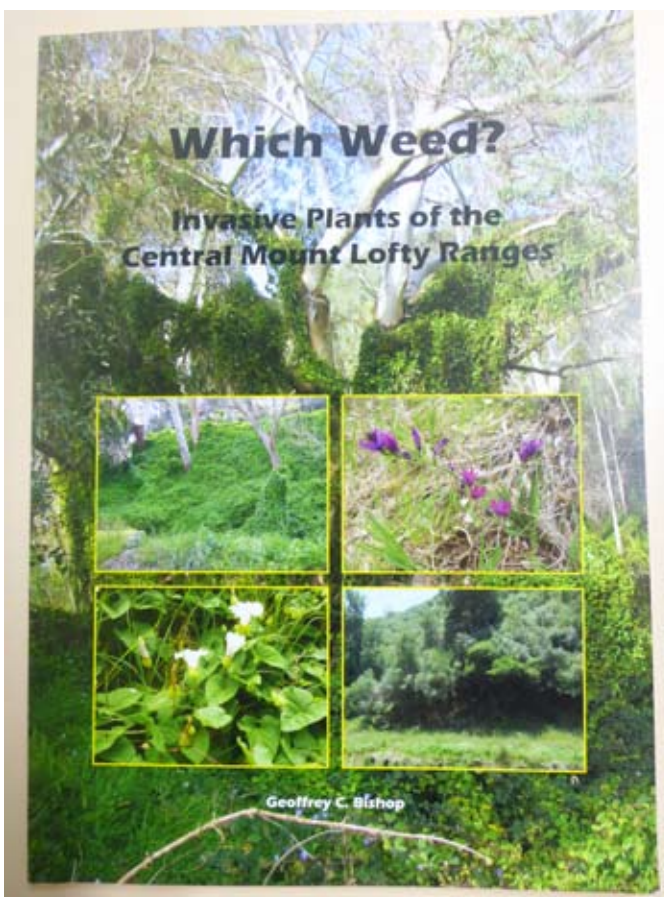
Review written by David from the Weed Management Society Executive Committee

Illustrated with colour photographs, this comprehensive A4-sized booklet details information on each species including names, place of origin, physical description and means of spread. In addition there are notes on preferred habitat, toxicity and possible confusions with look-alike natives.

There are a few editing errors and some of the pictures are not of the greatest quality, however it certainly is an extensive guide to weeds found in the central Mount Lofties and makes it easier to identify for anyone new to weed identification.

Unfortunately there are no control methods given which would make it a more comprehensive guide eliminating the need for multiple weed identification books, however this information is covered in other well known publications.

This book is available from the Adelaide Hills Natural Resources Centre at #1 Crescent Drive, Norton Summit or via Val Hunt on valhunt@ahnrc.org or phone 8390 1891 for a mail-order form.



SIMPLY SALT BUSH: A Guide to the Identification & Uses of Chenopods in the Murray Region of SA

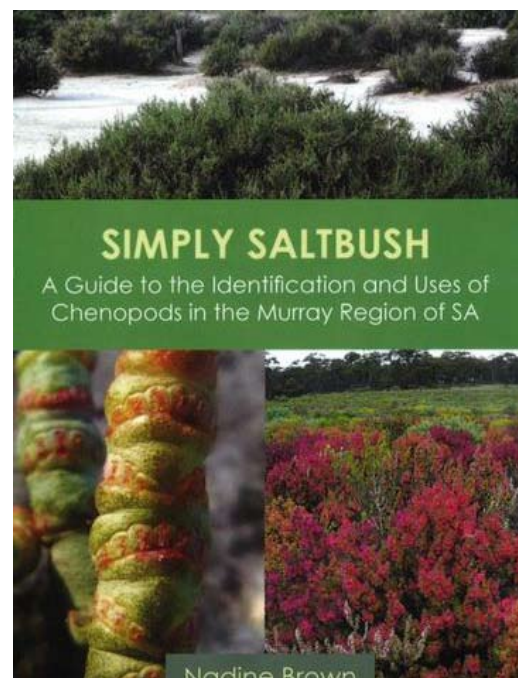
Nadine Brown (2014) published by Mid Murray Local Action Planning Group and the Murray Darling Basin Natural Resource Management Board.

Review written by Aimee Linke from the Mid Murray Local Action Planning Group

Nadine Brown, supported by the Mid Murray Local Action Planning Group and Natural Resources SAMDB have produced a cracker of a reference book on saltbush. If you struggle to identify the Murraylands chenopods; and who doesn't, this one is for you.

There is a little photographic key to each of the 15 genera treated in this volume, with a simple key to identify at species level within each of the bigger groups. 106 species are treated in this 122 page volume. The format is one species to an A5 page with a distribution map for SA and photos of the whole plant, flowers and fruit on each page. The book is spiral bound and plastic covered for ease of use in the field.

Purchase this book for \$25 plus \$10 postage & handling from Eastern Hills & Murray Plains Catchment Group Inc or contact admin@ehmpcg.org.au



Asparagus asparagoides (bridal creeper)

Peter Tucker, Weed Management Society of South Australia Executive Committee

Bridal creeper is a vigorous environmental weed through much of southern Australia and is one of the original Weeds of National Significance (WoNS) in Australia. A national management manual was released in 2006 and can be downloaded from <http://www.weeds.org.au/WoNS/> with an additional manual also available covering a range of other weedy *Asparagus* species, including those occurring in South Australia.

Many of us are aware of bridal creeper and its control methods, however it is easy to become complacent. We can often become so engrossed in destroying bridal creeper that we forget to stop, take a breather and review our strategy. Following is a brief overview of current management strategies.

Initially, it is critical to understand how much bridal creeper is on your patch. This will greatly determine the most effective management strategy without enslaving you to decades of bridal creeper induced mental anguish. Map the extent of the invasion and record the density in your mapping. Are there isolated plants here and there, dense impenetrable mats or somewhere in between. Primarily, bridal creeper fruits are eaten and seeds spread by birds. Look for invasions where birds perch; fence lines, under trees, especially dense foliated trees like *Exocarpus* species etc.

Decide on your preferred control method. There are lots of options. Digging up small, sparsely scattered plants is very effective. Smash the tubers to a pulp, it's therapeutic! Only choose this method if plants are few or you can't use herbicides.

Carefully and accurately applied herbicide is the most efficient control strategy – seek advice from Authorised Officers or specialist bush regenerators. Generally, Glyphosate or Metsulfuron methyl are the preferred herbicides for bridal creeper control

with the choice determined by the situation and surrounding vegetation. Presumably you are killing bridal creeper to help native plants, therefore off target damage must be avoided. For best results only use these herbicides when bridal creeper is flowering (late July to early September) for maximum effectiveness. Outside this time herbicide efficiency reduces markedly, often resulting in frustration and excessive amounts of herbicide being used through repeat applications or increased rates. If the herbicide application didn't work, step back and ask why? Seek more advice. Excessive herbicide use is at best silly and at worst dangerous to nature and the operator. Remember, after Metsulfuron methyl application there is no outward sign of herbicide damage for the rest of the growing season. This herbicide does its magic over summer in the underground tuber network and hopefully the following year little bridal creeper will emerge.

Biological controls are also available, such as rust fungus and leaf hoppers. Generally rust fungus is more effective and easier to apply. It has spread through vast areas of the state and is a major biological control success story. However, biological controls should only be used on serious infestations where it is not possible to control bridal creeper in the foreseeable future with any other method. It is more effective to kill the plants wherever possible.

Once the bridal creeper mapping is complete and the preferred control method(s) determined, it is time to think about a strategy. Most people working in bushland are familiar with the bush regeneration principles, including work outward from the best quality bush. It is counter-productive to get fixated on the worst infestation. This method might make us feel good momentarily, but often leads to a sickening feeling that we'll never get on top of the bridal creeper infestation. This approach is more about making us feel better than helping our bushland. Start with the outliers where only a few plants occur then slowly move toward the infested areas. It may not seem like it, but you will defeat that bridal creeper. This is true whether you are working on

a small roadside reserve or on several hundred hectares of bushland. You will be time limited irrespective of the site's size so make the most efficient use of your time. If you can stop the bushland condition deteriorating, you are making a valuable difference.

Of course, you will always need to do follow up work. No-one is perfect and mistakes and setbacks will probably occur. Those birds will continue to bring bridal creeper onto your site no matter how fanatical you are. Setting time aside to walk around and look for new bridal creeper outbreaks will be imperative to your long-term success and it will also give you a chance to ENJOY the bushland patch you are working in.

In short, work smart and don't become a slave to bridal creeper control.

Lycium ferrocissimum

old weed, new focus

Michael Noble - Invasive Species Branch, Tasmanian Department of Primary Industries, Parks, Water and Environment

African boxthorn (*Lycium ferrocissimum*) is a weed that once encountered, is not easily forgotten. One key memorable aspect is the sturdy thorns that form at the branch ends of the densely branched shrub. For land managers, perhaps it is the exceptionally resilient nature of the species that impresses most.



Photo credit: Colin G Wilson & DSEWPaC

Figure 1: African boxthorn (*Lycium ferrocissimum*)

Boxthorn is a native of southern Africa and was introduced to Australia in the mid-1800s for use as a hedgerow shrub. It has been recorded in every Australian jurisdiction, though is considered eradicated from the Northern Territory.

African boxthorn displaces native vegetation in both coastal and inland situations, reducing biodiversity values. It infests rangelands, farmland and unused lands, excluding stock from grazing and water access, and harbouring pests including rabbits, foxes, starlings, and fruit fly (via its fruit).

African boxthorn is of concern for potato, tomato and capsicum growers as it would host the tomato-potato psyllid (*Bactericera cockerelli*), should the psyllid become established in Australia.

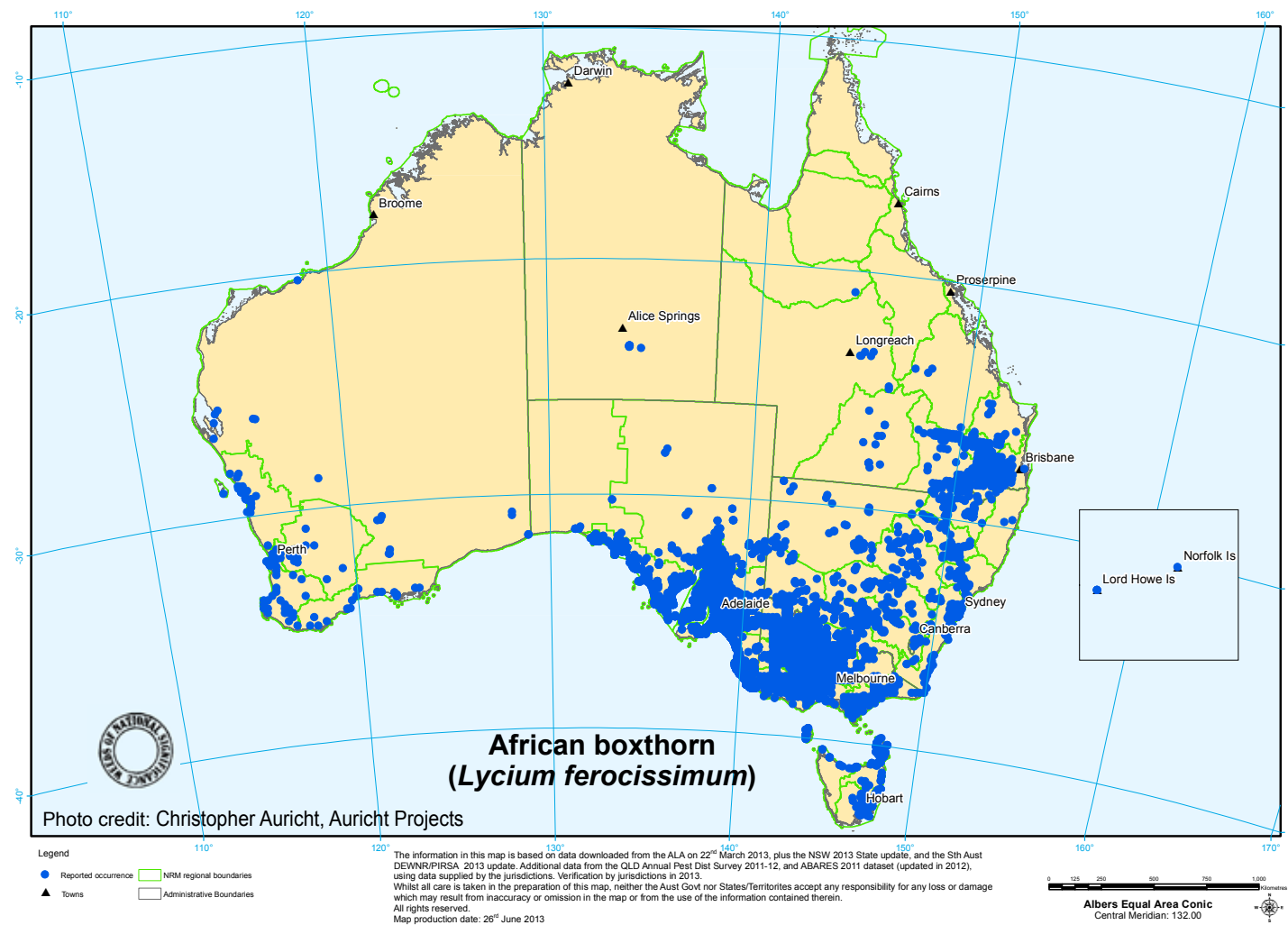


Figure 2: African boxthorn current distribution

Lycium ferrocissimum

old weed, new focus

In 2012 African boxthorn was declared a Weed of National Significance (WoNS), and an African Boxthorn Weed Management Guide was completed in early 2012.

An African Boxthorn WoNS National Strategic Plan was completed by early 2013 following consultation workshops that were undertaken across Australia. Some key feedback from national strategy workshops included concern on the lack of background and management information available on African boxthorn, and the query 'why aren't there any biological control agents available for African boxthorn?'

On seeking to answer this question, it became apparent that not only were there no biological control agents available for boxthorn, but that boxthorn is not even on the national target list for biological control research.

Action has been taken following this consultation, and an African Boxthorn National Best Practice Manual and comprehensive research report on biological control feasibility for African boxthorn are now complete and available for download at www.weeds.org.au/WoNS/africanboxthorn/ and the manual is also available via the Tasmanian DPIWE website <http://dpiwwe.tas.gov.au/invasive-species/weeds/weeds-index/declared-weeds-index/african-boxthorn>.

Some of the key outcomes of this work have been the gathering together of information such as:

- Analysis and compilation of available information on African boxthorn biology and ecology
- Compilation of available national African boxthorn distribution mapping and production of potential distribution mapping
- Compilation of information from across Australia with regard to the impacts of African boxthorn on the vast diversity of landscapes it occurs on (from offshore islands to the semi-arid inland)
- Research and compilation of national experiences on the most effective tools and techniques in managing boxthorn, including four detailed case studies
- Detailed investigation into the feasibility of biological control as a management option for African boxthorn

For further information, please contact Michael Noble, (former Weeds of National Significance Coordinator – African Boxthorn) at Michael.Noble@dpiwwe.tas.gov.au or (03) 6421 5100.



Photo credit: NSW National Parks and Wildlife Service

Figure 3: Boxthorn puller in action



Photo credit: John Fitzharding

Figure 4: Cut stumping boxthorn, East Beagle Island, WA



Photo credit: Alan Wood

Figure 5: Potential boxthorn bio-control rust photographed in South Africa