A Good Weed

Newsletter of The Weed Society of New South Wales Inc. ISSN 1325-3689

In This Issue

A Good Weed is published by:
The Weed Society of New South Wales Inc.
PO Box 438 WAHROONGA NSW 2076

Secretary: Alan Murphy
Assistant Secretary: Warwick Felton

Editor: Lawrie Greenup
Assistant Editor: Hanwen Wu

#59 Winter 2012

Broom *Cytisus scoparia*

Broom infestation in a wet sclerophyll forest of mountain gum, *Eucalyptus dalrympleana* and snow gum, *Eucalyptus pauciflora*, with a ground layer dominated by snow grass, *Poa sieberiana*.

Research site, Tomalla, Barrington Tops. Image: P. R. Sullivan

President's Column

As always, the committee is keen to be proactive in ensuring that the society remains relevant to the general membership. Accordingly, the committee would welcome comments or ideas from the general membership to enable worthy goals to be set and achieved. The society operates for the benefit of members, and I would strong encourage people to both continue to maintain their membership, and to contribute where they can to the society.

Recently, twelve new Weeds of National Significance (WoNS) were announced: African boxthorn, asparagus weeds, bellyache bush, brooms, cat's claw creeper, fireweed, gamba grass, madeira vine, opuntioid cacti, sagittaria, silverleaf nightshade, water hyacinth. These species will be added to the existing list of 20 WONS. These weeds pose significant environment threats, and in some instances can impact on crop and livestock production. More details on these WoNS, and how this listing can increase awareness of these weeds, are provided in this newsletter.

Hillary Cherry, member of the society executive, is liaising with Ben Gooden from the Ecological Society of Australia to investigate how the two organisations can collaborate for the benefit of both memberships. Weeds are a major ecological issue, and this linkage represents an opportunity for society members to provide knowledge and experience in weed management in any joint ventures by the two societies. Plans are being developed for a weeds forum to be held at the upcoming Australasian Weeds Conference in October; details will be circulated as they become available.

The 18th Australasian Weeds Conference will be held in Melbourne in October. The program is shaping up well, and I would encourage members to consider attending if they have not already registered. Congratulations to one of our new student members, Xiaocheng Zhu, who has recently received a CAWS Student Travel Award to assist with his attendance at this conference.

The bid by the Weeds Society of Western Australian to host the 7th International Weed Science Congress has reached the final round of considerations. There is only one other bid in contention, so we wish the Australian bid every success in bringing this international event to Australia.

Strong interest was expressed for hosting the 2013 NSW Biennial Weeds Conference, which the society co-ordinates in conjunction with the Weeds Officers Association and the NSW Department of Primary Industries. Six expressions of interest were received, with Corowa being named as the location for the event. More details will provided in due course.

In conjunction with Hunter Central Coast Weeds, the Society has recently co-sponsored a successful Hunter Weeds Forum in Cessnock. I commend the time and energy contributed by weed society members in helping bring this event to fruition, particularly, Kim Hignell and Paul Marynissen. More details on this event are provided in this newsletter.

The society is in the process of reviewing their website. It is hoped to increase the depth of material available through the site and streamline the current maintenance practices. Amongst the suggested improvements are ideas such as loading all past newsletters back to the very first edition in 1966, and to create a conference page as a means of promoting upcoming NSW biennial conferences, as well as hosting past proceedings. Any other suggestions on how to improve the website would be most welcome.

Happy Weeding.

Rex Stanton
President

Have you renewed your membership subscription?

New Members

The Society would like to welcome the following two new members:

Gilbert Whyte
Ecobiological, Jilliby NSW.

Dan Tan (Dr)
Senior Lecturer in Agronomy
University of Sydney NSW.

Members' benefits include:

- a quarterly newsletter,
- reduced registration fees for Society functions,
- reduced membership fees for students, and
- the opportunity to become involved in all of the Society activities.

New Sponsor

Yamaha Sky Division Australia has become a sponsor of The Weed Society of New South Wales Inc.

25 years ago Japan had the dubious honour of the highest number of manned helicopter fatalities in the world. Thousands of small rice fields surrounded by buildings, the short spray season and the huge number of obstacles meant that spraying was an expensive, high risk activity.

The Japanese government asked several companies to develop unmanned helicopters for agricultural spraying. Yamaha developed an unmanned aerial vehicle (UAV), Yamaha RMax, which quickly dominated the Japanese market.

Yamaha Australia has embarked on a program to use this technology to spray small area crops and weeds in Australia. Agricultural uses include spraying, seeding, remote sensing, precision agriculture, frost mitigation and variable rate dispersal.

The RMax units are being franchised to operators who will undertake contracting with them.

Further information visit the website:-
rmax.yamaha-motor.com.au/faq

Twelve (12) new weeds added to Weeds of National Significance (WoNS) list

Hudson pear, *Cylindropuntia rosea.*

Broom, *Cytisus scoparia.*

Madeira vine, *Anredera cordifolia.*

Three of the twelve new WoNS weeds.

Images: **Top - © Stephen Johnson.**
Middle - ©P.R. Sullivan (cropped).
Bottom - ©Tony Cook.

'Weeds - Our Focus, Our Future'

A seminar organised by Hunter Central Coast Weeds Committee & co-sponsored by The Weed Society of New South Wales

Part of the hard working organising committee - Kim Hignell, Paul Marynissen and Michelle McLachlan.

Hunter Central Coast Weeds display showing the excellent and informative weed literature available to the public.

Kim Hignell presenting the Society's door book prize to the winner Kerry Bacon, Hunter Botanical Gardens. Kerry will be donating the book to the Hunter Botanical Gardens' library.
The book, 'Weeds of the South-East' was kindly donated by Rob & Fiona Richardson, Publishers.

Some of the Society members present at the seminar - Stephen Johnson, Hillary Cherry, Tony Cook, Geoff Sainty & Lawrie Greenup.
Geoff gave the Keynote Address 'Future of Aquatic Weeds in Australia', Stephen outlined the Noxious Weeds Amendment Bill, Hillary spoke on the new WoNS and Tony new approaches to Madeira vine and cat's claw creeper control.

Alison Davey, Mayor of Cessnock, opening the seminar and welcoming all the participants to Cessnock and the surrounding region.

Over 95 persons attended the seminar 'Weeds - Our focus, Our Future' held at the Crowne Plaza Hunter Valley, Lovedale, on Thursday, 7 June 2012.

The morning program addressed a number of important weed issues including the future with aquatic weeds, the Noxious Weeds Amendment Bill 2012, the new WoNS, new approaches to Madeira vine and cat's claw creeper control, weed control with the RMax UAV and the Truxor Weed Harvester. The afternoon session was a stakeholder forum which looked at regional case studies, review of the Hunter & Central Rivers Catchment Management Authority (CMA) strategies and Catchment Action Plans followed by an open forum seeking feedback from the stakeholders.

Participants came from local government and government authorities, private industry and consultants. Displays were set-up by a number of organisations.

The organising committee are to be congratulated on a well attended, well run seminar at an excellent venue with top class catering.

Alligator weed *Alternanthera philoxeroides*

New infestations in the north and south of New South Wales

Riverina

Three new sites have been detected in the Riverina this year – doubling the number of known sites across the Riverina!

Backyard infestation of alligator weed in Albury. Image: Jan Mitchell.

In 1996 NSW Department of Primary Industries with Local Government embarked on a state-wide search after detecting alligator weed in residential backyards. Alligator weed looks similar to the Sri Lankan vegetable Mukunuwenna or Poonankani. It was identified in more than 30 backyards throughout NSW after it was mistakenly planted in the residential gardens.

Fifteen years on, after pulling together a history of alligator weed in the Riverina, Paula Bosse (Riverina's Noxious Weeds Project Officer) has located information on the 1996 search that confirms infestations had been detected in Albury, Culcairn, Griffith, Hay, Narrandera and Wagga.

Prior to this there were only three known alligator weed field sites in the Riverina – Woomargama, Barren Box Swamp & the Wah Wah Irrigation District.

After circulating the data to the relevant weed officers, three new residential sites have been detected; one in Wagga and two in Albury at previous backyard locations. Sites at Culcairn, Griffith, Hay and Narrandera were reinspected and given the all clear.

Further information:
Paula Bosse pbosse@greaterhume.nsw.gov.au

Namoi and Peel Rivers

Tony Woods inspecting an alligator weed infestation downstream from Carroll. Image: Lee Amidy.

Seventeen separate infestations of the highly invasive alligator weed have been located in the Namoi River. North West Noxious Weeds Officers and Namoi Catchment Authority Officers are trying to establish the source of the infestations.

The last infestation was found at the junction of the Peel & Namoi Rivers and since then, no more plants have being detected upstream in either river.

After an inspection of Lake Keepit noxious weeds officers are confident there are no plants at current water level. However, there is a possibility recent flooding may have inundated plants as the level of the dam rose.

A spraying program had commenced on currently located infestations.

Further information:
Lee Amidy leeamidy@infogunnedah.com.au

Alligator weed identification & what to do when found!

Alligator weed is generally distinguished from other plants by its combination of the following three features: small white papery flowers on short stalks; leaves in opposite pairs and hollow stems.

Alligator weed has potential to be in residential locations. If you find something suspicious in your lawn or garden please contact your local council weeds officer.

Potential invasiveness of Agave in Australia

Daniel Tan (Dr)
The University of Sydney

Agave in Australia

Blue agave (*A. tequilana and A. angustifolia*) has been explored as a potential biofuel crop in Australia (Figure 1), and lifecycle analysis showed that the bioenergy created is five times the amount required to produce it (see http://onlinelibrary.wiley.com/doi/10.1111/j.1757-1707.2010.01083.x/abstract)).

Figure 1. Blue agave at Kalamia Estate, Queensland in 2011 during the crop's second wet season. Image: D. Cham-

Agave is native to Central and South America and belongs to a group of succulent plants with crassulacean acid metabolism (CAM). These plants include cacti, *Aloe vera* and pineapple, and are well-adapted to arid and semi-arid habitats. Since agave is so well adapted to the Australian environment, there is some concern with the potential invasiveness of agave.

Potential invasiveness

Both *A. americana* and *A. sisalana* (sisal) are listed on the Global Invasive Species Database and the Global Compendium of Weeds. Both *A. americana* and variegated agave are listed as potential sleeper weeds in Australian Grazing Management Zones (GMZs). Agave species are reported to be invasive on sandy soil and wasteland in Spain and China. In Australia, *Agave* spp. were included in the list of ornamental plant species that have invaded sandy beachfronts in Queensland. Agave (*A. sisalana*) leaf leachates also have allelopathic potential on the germination and growth of rice, wheat and green gram (*Vigna radiata*). However, agave is not listed in the noxious weed lists under both state and federal legislation, and no agave is declared in New South Wales under the Noxious Weed Act 1993. Why is this so?

Lack of competitiveness and limited dispersal means

Abandoned agave plantations in Mexico are quickly re-colonised by other native species and new vegetation often reach diversity values similar to undisturbed natural habitats. This is due to low population growth of agaves, and their low level of competitiveness with other species. Most agaves are monocarpic (i.e. die after fruiting) and use up their sugar stores to produce a lot of seeds (Figure 2). The main reproductive system of agaves in native habitats is seed production, but the rates of successful establishment are very low and many seedlings die 8-9 days after germination. Many agave do not reproduce sexually in Australia (introduced varieties of *A. sisalana* and *A. fourcroydes* are sterile) and of those that do, pollinators are uncommon or not present.

Figure 2. Flowering ornamental *Agave attenuata* in Sydney. Most agaves are monocarpic (i.e. die after fruiting).

Image: Daniel Tan.

Potential invasiveness of Agave in Australia (Continued)

In Australia, the weed potential of agaves is often confused by association with the weed potential of prickly pear (*Opuntia* spp.) since they are both succulents and drought-tolerant CAM plants. However they are not closely related taxonomically. *Opuntia* is an eudicot that produces new plants (bulbils) from leaf pads (cladodes) that fall from the mother plant and edible fruit that are dispersed by birds. Isolated agave leaves cannot form bulbils but may form suckers or rhizomes from apical meristems. Bulbils can also develop from sterile meristems. Since these suckers or bulbils are produced vegetatively, they do not move very far or very fast from the parent(<20 m per decade). Occasional naturalised agave infestations agaves from garden escapes and abandoned sisal plantations (*A. sisalana*) in Queensland are localised and easily controlled by herbicides. Moreover, agave and many succulents are poor competitors in native grassland and woody shrubland in Australia.

Conclusion

In gardens around Australia, agaves infrequently set seed, mainly reproduce vegetatively, and are generally poor competitors, which may explain why agaves are not appearing on Australian lists of weeds despite widespread cultivation in gardens.

Further information:

Dr Daniel Tan
Senior Lecturer in Agronomy
Department of Plant and Food Sciences
Faculty of Agriculture and Environment
The University of Sydney
daniel.tan@sydney.edu.au

As of the end of June the early bird registration will close. This does not mean that you are not able to attend the conference as registrations are open until September, just that the cheaper registrations are closed.

We have been working to get the papers and posters refereed. I would like to thank all those people who offered to help with the refereeing, there has been a sufficient number of people helping such that three is the maximum number of papers that anyone has to referee.

Field trips are just about completed and I just hope that the weather will be kind that day as there is a little walking in some of the trips.

Thank you to people who have submitted papers and posters, you are the people who will make the Conference work.

See you at the conference.

Visit the conference website: ***www.18awc.com***

Ros Shepherd
Secretary, Weed Society of Victoria.

Stopping the spread of serrated tussock, *Nassella Trichotoma*, from heavily infested sites in the New England.

Jonathan Lawson, Border Rivers-Gwydir CMA

The Border Rivers-Gwydir Catchment Management Authority (BR-G CMA) has been working closely with local shire councils and landholders to reduce the spread, and eradicate where possible, the growing menace of serrated tussock on the New England Tablelands. It is funded through the Commonwealth Government Caring for Our Country, investment in Reducing the Impact of Weeds of National Significance (WONS). Other species being targeted are Chilean needle grass, gorse, bridal creeper, blackberry, parthenium weed, willows, parkinsonia, and athel pine.

Since 2009 about $250 000 per year has been invested in control and community education. Jonathan Lawson, Catchment Officer Invasive Species, has been responsible for this project.

The reason the focus has been on serrated tussock was it was containable with a manageable number of infestations known to the shire councils. The priority is to prevent the continuing spread of serrated tussock within the catchment, and into Queensland.

A project advisory committee was established consisting of 6 local shire councils and 4 landcare organisations. All known serrated tussock sites were recorded and mapped into a GIS database. Management plans were developed in conjunction with the landholders and local shire councils. Two core infestation sites were identified with many smaller infestations surrounding the core sites and scattered infestations from Uralla to Tenterfield.

Landholders were engaged through the BR-G CMA and project partners and incentives were supplied to landholders to implement weed control and change land management practices. Annually a spray rig is engaged to treat all the serrated tussock scattered infestation sites.

The two core sites which were more heavily infested with serrated tussock posed the greatest risk of spread. On these a 3 year pasture improvement program has been in place with annual helicopter spraying. One of these sites also has included an additional spot spraying program.

Since the project started the BR-G CMA and local shire councils have implemented on ground works over 550 hectares of core serrated tussock infestations, spot sprayed 5 000 hectares of scattered infestations, and established a 400 km containment line. There have been 10 weed identification field days, two serrated tussock bus tours, and over 500 landholders have attended these events. 3 000 WoNS Z cards and 100 A0 WoNS posters and 5 display stands have been produced to assist the community to identify WoNS species such as serrated tussock. Two previously unknown serrated tussock sites were identified as a result of community education.

Core serrated tussock site after rock picking, second spray and beginning of pasture improvement. Notice small serrated tussock plants (lighter tussock). These smaller plants germinated when the site was spray out with glyphosate and then flupropanate. Short term pasture was then drilled into the paddock. Image: Jonathan Lawson.

Photo shows same site as above with established short term pasture species. Site will be sprayed out with gGlyphosate; any germinated serrated tussock plants will be spray with flupropanate and short term pasture species drilled into paddock again. Third year will go down to long term pasture. Image: Jonathan Lawson.

Contact: Jonathan Lawson
jonathan.lawson@cma.nsw.gov.au

Broom, *Cytisus scoparius*, & broom gall mite, *Aceria genistae*, on the Barrington Tops

John Hosking (Dr) NSW DPI

Broom is present over more than 10 000 ha at the Barrington Tops. Infested natural areas on the BarringtonTops consist of open forests and to a lesser extent frost hollow and swamp vegetation. In all 253 native plant species have been recorded in these areas to date. Broom is also a weed of grazing land in the area. Impact of broom on other vegetation varies with most impact appearing to affect frost hollow vegetation.

Broom infestation near research site, Tomalla, Barrington Tops. Image: John Hosking.

A biological control program aimed at control of broom at the Barrington Tops commenced in 1990. The first agent, a twig-mining moth, *Leucoptera spartifoliella*, was released in February 1993. This agent has established in southern NSW and Victoria but after initially appearing to have established at the Barrington Tops it has not been seen in recent years. Two other agents, a psyllid, *Arytainilla spartifoliella*, and a seed bruchid, *Bruchidius villosus*, were first released in 1994 and 1995 respectively. Both have established in southern NSW and neither appears to have established at the Barrington Tops.

A gall-forming mite, *Aceria genistae*, was investigated for biological control of broom from 1993. There were taxonomic, rearing and testing complications and release of this mite in Australia did not occur until 2008. One of the major hurdles was that there appear to be a number of species under the name *A. genistae*. This mite name was based on mites collected from *C. scoparius* but is currently applied to mites that cause galls on other legumes. In tests using the mite from *C. scoparius* it was found to be restricted to *C. scoparius* and hybrids with one of the parents being *C. scoparius*. In February 2010 this mite was released at the Barrington Tops and galls were found on nearby broom plants in March 2012. A number of plants had many galls and hopefully this mite will cause significant damage to broom at the Barrington Tops.

In New Zealand this mite has caused significant damage to broom in some areas, decreasing flowering and seeding and in some cases causing plant death. Biological control is the only option for this widespread weed at the Barrington Tops and hopefully the mite begins the process.

Galls caused by gall-forming mite on broom stems. Image: John Hosking.

Further reading:

Hosking, J.R.; Sheppard, A.W.; Sagliocco, J.-L. (2012). *Cytisus scoparius* (L.) Link - broom, Scotch broom or English broom. *Biological control of weeds in Australia*. Julien, M., McFadyen, R. and Cullen, J. (*eds*) CSIRO publishing: Collingwood. pp. 203-210.

The Weed Society of New South Wales Inc.

We are up-dating the Society's website www.nswweedsoc.org.au and we need your input. Please send any ideas or suggestions to Alan Murphy secretary@nswweedsoc.org.au

A new "dirty dozen"!
Australia's WoNS list grows by 12

The Australian Weeds Committee declared an additional 12 Weeds of National Significance (WoNS) in April. This announcement further strengthens Australia's commitment to protecting Australia's natural ecosystems and primary industries.

Since 1999, the WoNS initiative has assisted weed managers and community groups to prioritise investment and provide strategic management of widespread weeds that have serious detrimental environmental, economic and social impacts.

The additional WoNS were selected based on their economic, environmental and social impacts and their potential to spread. The new species are: African boxthorn, asparagus weeds, bellyache bush, brooms, cat's claw creeper, fireweed, gamba grass, madeira vine, opuntioid cacti, sagittaria, silverleaf nightshade and water hyacinth.

Sagittaria. Image: ©Stephen Johnson

Adding these 12 weeds to the Weeds of National Significance list, which already contains 20 weeds, will ensure that they managed in a strategic and coordinated manner. The focus will be on reducing the risk of spread to new areas while managing outlying infestations, as well as building the capability and willingness of community groups and weed managers to better manage these 'dirty dozen' weeds.

As with the current 20 WoNS, each weed will have a National Coordinator. NSW DPI will host the water hyacinth, sagittaria and fireweed programs, and NSW OEH will host the asparagus weeds and brooms programs.

One of the first actions is to develop a national strategy for each of the new WoNS. Workshops and meetings are being held around the country to engage weed managers and community groups in drafting National Strategies. These are expected to go on public display between June and September and comments will be sought from all stakeholders.

African boxthorn infestation. Image: Lindsay Tanner

The extensive partnerships developed under the WoNS program across Australia have allowed an efficient and effective response to managing the most serious weeds, at national, state and regional levels. The program has helped to contain the impacts and associated costs to agriculture and the environment by minimising the spread of WoNS to uninfested parts of Australia.

Key achievements include:

- Educating land managers on best practices for managing WoNS and equipping them with extension materials to successfully plan and implement weed control operations.
- Up-to-date national mapping of WoNS infestations to provide a clearer understanding of actual and predicted distribution.
- Strengthened networks between landholders, research providers and government to encourage sharing of information and technology.
- New herbicide and biological control options.
- The establishment of containment lines to prevent further spread and targeting of national outlier infestations.

Further information on Weeds of National Significance visit **http://www.weeds.org.au/WoNS/index.html**

Workshops address emerging fleabane issue in the Southern region

Hanwen Wu (Dr) NSW DPI

Two successful workshops - a regional workshop and a national workshop on fleabane were run by the Graham Centre, in collaboration with Queensland's DEEDI, at Wagga Wagga on 21-22 March. The workshops were timely, and organised in response to the rapid spread of flaxleaf fleabane in the southern region over the last five years. Workshops were supported by funding from Grains Research & Development Corporation (GRDC), as well as the E H Graham Centre.

A total of 70 growers, advisors and researchers attended the two workshops. The close collaboration between researchers was a key highlight of the workshop.

Invited speakers from across Australia covered a broad range of topics including the biology and ecology of fleabane, identification of fleabane species, dispersal mechanisms, glyphosate resistance, the most up-to-date management information on fleabane control in crops, pastures and fallows, and the potential for biological control of fleabane.

The results produced by researchers from the northern grain region have led to better management options for fleabane in the southern region.

Workshops evaluation

Feedback was sought from workshop participants, with about half the delegates completing evaluation forms.

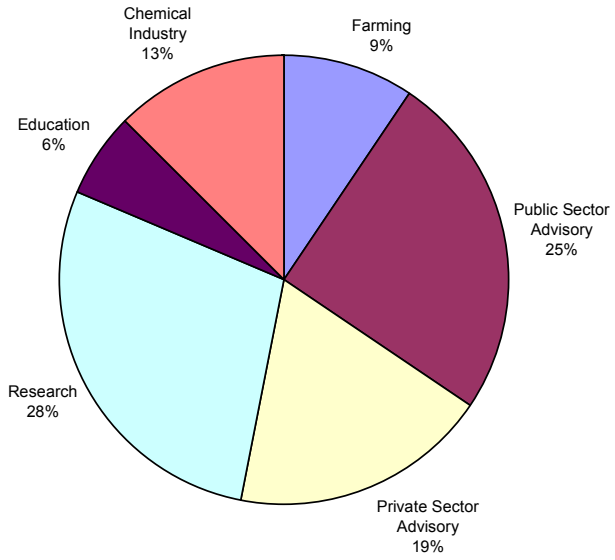
One of the great outcomes of the workshops was the identification of knowledge gaps for future research. Pastures, as key components of the mixed farming systems in southern Australia, have been identified as one of the weakest links toward the overall management of fleabane control, along roadsides and fence lines.

Several responses by workshop attendees highlighted the need for a better understanding of the impact of fleabane on livestock.

Integrated management, with more detail sought on systems approaches and the economics of various management approaches was raised by workshop participants.

Packaging and dissemination of currently available information was another key issue identified at the workshops.

Respondents indicated they gained new knowledge in the areas of fleabane biology/morphology, chemical usage, in terms of tank mixes, legal options and timing.



Evaluation responses by industry sector.

Contact: Dr Hanwen Wu, T: 02 6938 1602 hanwen.wu@dpi.nsw.gov.au

Editor's note: The workshop proceedings are available on the Graham Centre website www.csu.edu.au/grahamcentre/conferences_workshops

Cat's claw creeper, *Macfadyena unguis-cati*, one of the new weeds added to the Weeds of National Significance (WoNS) list. Image: Royce Holtkamp.

Noxious Weeds Act 1993
Moving with the times

Stephen Johnson (Dr) NSW DPI

Introduction
Although any plant that is in the wrong place at the wrong time could be considered to be a weed, only plants that have a significant impact on the economy, environment or community are candidates for declaration as 'noxious' under the *Noxious Weeds Act 1993*. By their spread, such weeds impose substantial and uncompensated costs on third parties who do not want these weeds spreading to land they manage (an externality). The *Noxious Weeds Act 1993* seeks to address this situation.

Recent changes
The *Noxious Weeds Act 1993* has recently been amended to better reflect current weed management approaches and needs, for example through the New South Wales (NSW) Invasive Species Plan (see http;//www.dpi.nsw.gov.au/agricultur/pests-weeds/nsw-invasive-species-plan)). Amendment occurred through two significant pieces of legislation, these being the *Noxious Weeds Amendment Bill* (NWAB) *2012* and the *Primary Industries Legislation (Biosecurity) Amendment Bill* (PILBAB) *2012*. Amendments contained in the NWAB arose from a five year statutory-review of the *Noxious Weeds Act 1993* while those from the PILBAB were part of a larger group of changes designed to amend multiple pieces of biosecurity legislation to ensure that emergency responses continued to be best-practice.

The following information covers some of the amendments and what they will mean for local government, other advisors and landowners/occupiers.

Objectives
The objects of the *Noxious Weeds Act 1993* have been amended to the following (changes are underlined):

> prevent the establishment…of significant new weeds; and
> prevent, eliminate or restrict the spread….of particular significant weeds; and
> effectively manage widespread significant weeds…".

These changes help better recognise the many complementary biosecurity approaches needed to restrict the spread and manage the impact of weeds across the state.

Delegation of inspector/authorised officer powers
Previously section 68 of the *Noxious Weeds Act 1993* stated that

> "A local control authority may delegate to a person any of the local control authority's functions under this Act other than this power of delegation."

Some Local Government staff felt that delegation for noxious weeds functions (under the *Noxious Weeds Act 1993*) could be performed under section 377 of the *Local Government Act 1993* – General power of the Council to delegate).

This situation has now been clarified so that section 68 now states (changes are underlined):

> "A local control authority may delegate to a person any of the local control authority's functions under this Act (other than this power of delegation) but only under this power of delegation."

Further clarification is provided in the note appended to this section which states:

> "Accordingly, a council may not delegate any of its functions as a local control authority under this Act under the council's power of delegation under the *Local Government Act 1993*."

This means that local government weed officers performing functions not directly delegated by section 68 of the *Noxious Weeds Act 1993* should alert their management to this and seek new authorisations under the *Noxious Weeds Act 1993* **only**.

Strengthened powers for inspections and investigations
Inspectors and authorised officers now have broadened powers when entering premises to (changes are underlined)

> "examine, take samples, photographs, or video recordings of, seize, detain, or remove any thing in or about those premises that the inspector or authorised officer reasonably suspects to be noxious weed material or to be vegetable matter, or any other thing, containing noxious weed material" and
>
> "remove or destroy….any thing in or about those premises that the inspector or authorised officer reasonably suspects to be noxious weed material or to be vegetable matter, or any other thing containing noxious weed material"

New powers added to this section also include the following:

> "test, treat or disinfest any noxious weed material or any vegetable or other matter that the inspector or authorised officer reasonably suspects contains noxious weed material" and
>
> "test, treat or disinfest any box, container, package or receptacle (including any place that could be used as a receptacle) in or about those premises that the inspector or authorised officer reasonably suspects contains any noxious weed material or vegetable or other matter containing noxious weed material"

Inquiry into the powers to determine the source and/ or destination of noxious weed material have also been strengthened with the following changes (changes are underlined):

> "An inspector or authorised officer who reasonably believes that a person has information that may assist in tracing or determining the source or destination of any matter that the inspector or authorised officer reasonably suspects to be noxious weed material may require the person to answer questions for that purpose"

Expansion of the range of machinery/equipment that may spread noxious weeds

Expansion in the sections relating to the spread of noxious weeds/material on machinery and equipment has occurred. The previous restricted conditions which applied to agricultural machinery and equipment from Queensland to NSW have been broadened to apply to any machinery or equipment specified by an order and applies to movement to NSW from all states and territories and movement within NSW.

Notification of notifiable weeds

A new section (16A) has been added to the *Noxious Weeds Act 1993* to broaden the reporting obligation of consultants/ agronomists/advisors, departmental staff (including Catchment Management and Livestock Health and Pest Authority officers), council staff and contractors that:

> "A person who, in a professional capacity, becomes aware or suspects that a plant on land is a notifiable weed must notify the local control authority for the land of that fact within 24 hours of becoming aware or suspecting that the notifiable weed is on the land"

A notifiable weed is any Class 1, 2 or 5 weed for the land described in the Weed Control Order.

Other changes

There are a range of other changes which include:

- new requirements to ensure land owners provide details of occupiers to allow a Local Control Authority to issue written notice;
- stronger restrictions to regulate/prohibit noxious weed material introduction;
- changes to declarations of a quarantine area;
- clarifications of aspects of weed control orders and in the dictionary;
- changes for emergency weed control order terms and in their notification;
- an expansion in the range of emergency orders, actions and periods; and
- the notification of weeds on Lord Howe Island.

Further information

For further information or clarification of these changes, contact your local Invasive Species Officer at the New South Wales Department of Primary Industries http://www.dpi.nsw.gov.au/agriculture/pest-weeds/weeds/contacts

Dr Stephen Johnson, Weed Ecologist, Orange
stephen.johnson@dpi.nsw.gov.au

Chilean needle grass, *Nassella neesiana,* closely related to serrated tussock, *Nassella trichotoma,* is declared in NSW under the Noxious Weeds Act 1993 and is a Weed of National Significance. A flowering plant at Lucknow. Image: ©Stephen Johnson.

Survey discovers roadside glyphosate resistance time bomb

Australia has 612,000 km of roads considered at risk of developing weeds with glyphosate resistance. A recent survey found that approximately 50% of roadside weed populations surveyed were resistant to glyphosate. While annual ryegrass and fleabane were the most common glyphosate resistant roadside weed species found, glyphosate resistant awnless barnyard grass was also found in channels and drains in NSW and Queensland.

Glyphosate resistant annual ryegrass on SA roadside.

"The glyphosate resistance problem comes about because many land managers rely on glyphosate for their weed control with no plans in place to manage any potential resistance," stated project leader Associate Professor Chris Preston from the University of Adelaide and chair of the Australian Glyphosate Sustainability Working Group which is strongly supported by the GRDC.

Chris added, "Glyphosate is an excellent herbicide that helps keep management costs down, however there are no easy replacement options currently available. The rapid development of glyphosate resistant weeds and species shift to glyphosate tolerant species will have a large impact on budgets and logistics."

Market research suggests that glyphosate resistance is not on-the-radar for many roadside land managers. There is a lack of herbicide resistance training in this sector, and therefore there are low levels of understanding about herbicide resistance and what to do about it.

The best approach is to actively monitor for weeds that survive glyphosate applications and ensure they do not set seed by whatever means is suitable for the particular situation. There are a few other herbicides with different modes-of-action that can be used instead of glyphosate.

Resistant weeds start in small patches and these can be treated by hand-pulling, spot spraying with another mode-of-action herbicide or even propane flaming in some situations.

Slashing of road shoulders and around roadside furniture can be expensive and unlikely to kill the weeds. Slashing can also spread weeds rather than control them. A system of mapping, monitoring, encouraging low-growing species, and combining herbicides with other control measures may be the best long term solution for these situations.

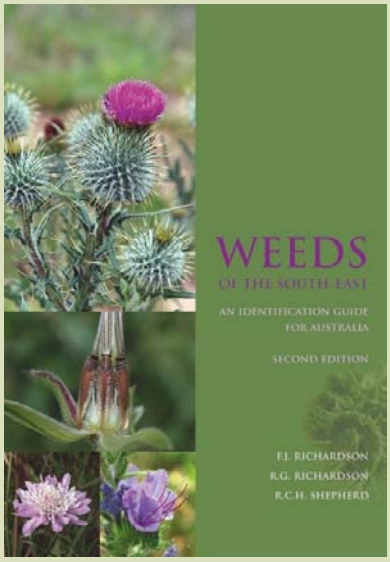
For more information:http://glyphosateresistance.org.au/

Thank you, Rob & Fiona

The Society would like to thank Rob and Fiona Richardson for their kind donation of the book 'Weeds of the South-East', 2nd edition, as the door prize at the Cessnock Seminar, "Weeds - Our Focus, Our Future", co-sponsored by Hunter Central Coast Weeds and The Weed Society of New South Wales.

The prize was won by Kerry Bacon, Hunter Botanical Gardens, who has generously donated the book to the garden's library. Both staff and visitors will have access to this excellent book.

Visit the Richardson's website: www.weedinfo.com.au



The challenges facing Australasian weed societies

Rex Stanton (Dr) President, Weed Society of NSW

These comments are based on a paper published in *Plant Protection Quarterly* (Australian weed societies – beyond the millennium, 26(4):148-151).

Recent discussions have provided impetus to reflect on the performance of weed societies and contemplate what the future might or should hold. Weed societies were formed to provide a framework for interaction at state and national level. The Weed Society of New South Wales was formed in 1966, followed by societies in other states over the next decade. The Council of Australian Weed Science Societies was formed as an umbrella organisation in 1976 to co-ordinate national objectives and activities, and to proactively communicate on weed issues.

Weed society membership has declined since the mid 1990s. Factors contributing to lower membership could relate to level of funding for weeds related work, age structure of society membership, low recruitment rate of early career weeds workers, or loss of relevance of societies to modern weeds workers.

Society members represent around 50% of delegates at Australasian Weeds Conferences (AWCs), which challenges societies to identify and address the reasons why other delegates do not see advantages in society membership.
At the time when the various societies were being formed, the challenges facing weed workers fell into three broad categories; multidisciplinary research, integrating weed management with farm operations, and the environmental and social aspects of herbicide use. These categories reflected the growing reliance on herbicides and the arrival of the concept of Integrated Weed Management (IWM).

The challenges facing weeds workers still fall within these broad categories. Additional challenges need to be addressed by weed societies to maintain relevance and membership. Engaging with future weeds workers, and potential new society members, is a challenge that must be addressed. The environmental impact of weeds is generating more public interest and participation, and also represents an area where weed societies need to develop stronger linkages and communication.

Maximum weed society membership levels.*

	1996/97	2002/03	2010/11
New South Wales	250	150	150
Queensland	250	250	350
South Australia	400	100	150
Tasmania	-	50	50
Victoria	250	150	100
Western Australia	150	100	50
New Zealand	-	-	100
TOTAL	**1,300**	**800**	**950**

* based on CAWS membership fees, which are levied in 50 member increments

Keep it clean! A new poster

Hygiene is the current theme for the "NSW No Space for Weeds" campaign and the new poster highlights the issue of the transportation of weeds by vehicles.

Weeds and seeds can hitchhike hundreds of kilometres and it only takes one seed or weed fragment to start a new weed infestation. Checking and cleaning all equipment will help stop weed spread.

The simple key message is to avoid driving through weed infestations, inspect and clean all clothing and equipment and to report suspicious plants.

The bright colours and the use of the stop, inspect and protect traffic lights make for an attention-grabbing poster which will be displayed in vehicle depots, at wash down bays and in machinery sheds across NSW.

Council of Australasian Weed Societies (CAWS) Report

The CAWS Executive Committee met on Thursday 7 June 2012.

Much progress has been achieved with providing all past Australasian Weeds Conference papers on the CAWS website. Some 38% of papers were missing in March, but this has been reduced to 8%. Limited numbers of papers from only four early proceedings need to be sourced.

CAWS has received repayment of the $13 000 seed funding loan provided for the 22nd APWSS, although the final report from this conference is yet to be completed. The 18th Australasian Weeds Conference is on track, with the program to be advertised soon. It has been confirmed that the 19th Australasian Weeds Conference will be held in Tasmania in 2014, possibly using facilities at the University of Tasmania. The bid by Western Australia to host the 7th IWSC in 2016 is one of two left in contention, and a decision will be made this month.

No progress has been made on establishing a national strategy to provide support to weeds workers in the Northern Territory in the absence of a society in that territory.

Major changes have been suggested for the strategic plan, which lapsed in 2010. The intention is to separate the one plan into a long-term strategic plan and an annual operational plan to cover routine activities. More details will be provided at the October CAWS meeting.

One concern from the society reports is the operation of state societies. At a recent AGM, one society failed to elect a President or Vice President. Another society also failed to elect a President at their AGM, but subsequently found someone to fill this position. A third society is now relying more heavily on conducting business out of session via email as their executive committee members are not always able to attend regular teleconference meetings.

The next quarterly committee meeting and the CAWS AGM will be held during the 18AWC in October.

Rex Stanton and Hillary Cherry
NSW CAWS Delegates

Corowa Shire to host the 17th NSW Weeds Conference

Corowa Shire has been successful in its application to host the 17th NSW Weeds Conference scheduled to be held during the third quarter of 2013.

This conference is regarded as the premier event in NSW to discuss noxious and environmental weeds and related vegetation issues. The conference brings together weed experts from government, business, academic and other backgrounds to discuss past and emerging issues for the control of weeds.

The conference is held every two years in NSW and can attract approximately 250-350 conference delegates over 3-4 days.

Alan Murphy, Secretary, Weed Society of NSW, received applications from six NSW councils which were assessed on evaluation criteria set by the Conference Future Fund Committee.

Corowa Shire's submission was successful as it was deemed to be most comprehensive in meeting the criteria.

The Conference Future Fund Committee comprises representatives from the Weeds Society of NSW, NSW Weeds Officer Association and NSW Department of Primary Industries.

Neil Hibberson, Chair, Eastern Riverina Noxious Weeds Advisory Group and Birgitte Verbeek, representing the Weed Society, will be initiating the formation of the Conference Organising Committee. This committee will be formed in the near future and some of the important first items for discussion will include the conference venue, date and theme.

Fred Longmire, Mayor of Corowa Shire, was thrilled about the announcement and opportunity for Corowa Shire to host the conference and showcase the wonderful region.

TREASURER'S REPORT (As of 21 May 2012)

For the period 12th April 2012 to the 21st May 2012 the society has shown a loss of $1,703.23 and for the period 1st October 2011 to 21st May 2012 a profit of $11,500.58. The loss occurs because of the payment to Dr. Peter Michael for support of the herbarium project, newsletter costs and a slow down in renewals and a delay in payment by 2 sponsors.

As is indicated in the Balance Sheet the society is in a very sound financial position and thus able to consider allocating additional funds to projects that meet its objectives.

Balance Sheet (as of 21 May 2012)

Assets

Total Cash on Hand - $83,321.10
Total Current Assets - $83,321.10
Total Assets- $83,321.10

Net Assets- $83,321.10

Equity

Retained Earnings- $19,828.12
Current Year Earnings- $11,500.58
Historical Balancing- $51,992.40
Total Equity- $83,321.10

Membership.

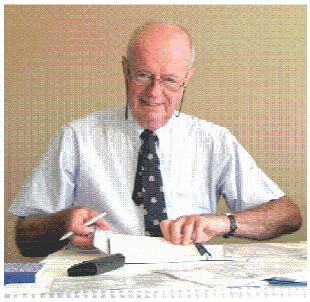
As at the 21st April 2012 the society has 185 members which include 4 life members.Renewal notices for the 2012 subscriptions were sent out at the beginning of February and at this stage 94 members have renewed.

A reminder will be sent to all who have not renewed their membership after the 1st June 2012.

Sponsors.

Seven sponsors have paid their 2012 sponsorship fees, including a new sponsor, Yamaha Sky Division.

After supporting the Society for many years Luhrmann Environment Management have decided not to continue with their sponsorship.



Jim Swain, Treasurer 21 May 2012

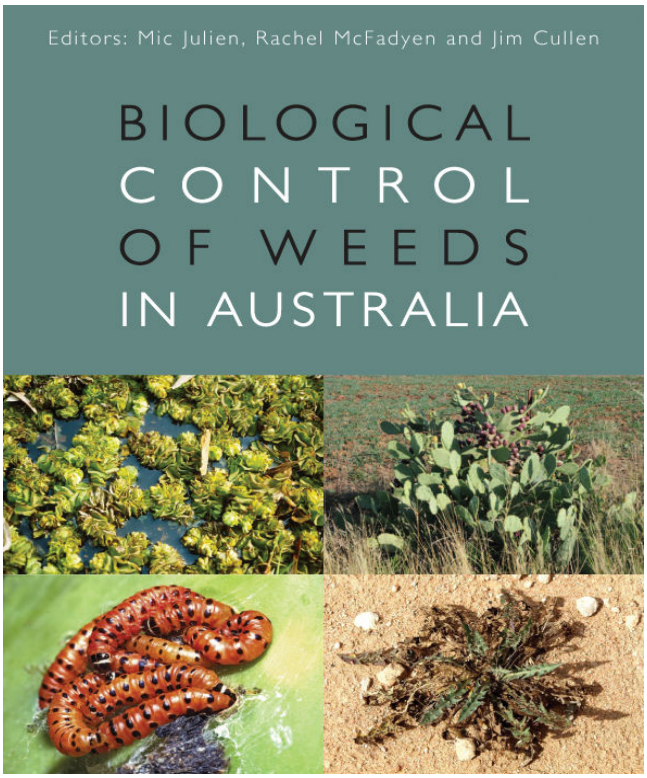
Jim Swain raises a matter regarding ways to prevent the spread of weeds

During a recent trip through Southern and Central Queensland Jim and Robin Swain were impressed with the weed wash-down facilities available at strategic points throughout this part of Queensland.

Whilst these are primarily aimed at reducing the spread of parthenium weed people are encouraged to use them as a means of restricting the spread of all weeds.

These facilities are available all the year and are available to all people at no cost.

The Swain's believe that such a program should be considered for all parts of New South Wales and not just at the border with Queensland during the grain harvest season. At present they are aimed only at washing down harvesting equipment as it comes into New South Wales. Other vehicles carry weed seeds and, thus should have such a facility available to them.



Edited by:

Mic Julien CSIRO Entomology
Rachel McFadyen Weed Society of Queensland
Jim Cullen CSIRO Entomology

Colour photographs, Illustrations
648 pages, 270 x 210 mm
Publisher: CSIRO PUBLISHING

Hardback - March 2012
ISBN: 9780643099937 - AU $180.00

http://www.publish.csiro.au/pid/6509.htm

An eBook version is available from eBooks.com

Biological control of weeds has been practised for over 100 years and Australia has been a leader in this weed management technique. The classical example of control of prickly pears in Australia by the cactus moth *Cactoblastis cactorum*, which was imported from the Americas, helped to set the future for bio-control of weeds in many countries.. Since then there have been many projects using Classical Biological Control to manage numerous weed species, many of which have been successful. Importantly, there have been no serious negative non-target impacts – the technique, when practised as it is in Australia, is safe and environmentally friendly. Economic assessments have shown that biocontrol of weeds in Australia has provided exceedingly high benefit-to-cost ratios.

This book reviews biological control of weeds in Australia to 2011, covering over 90 weed species and a multitude of biological control agents and potential agents.

Each chapter has been written by practising biological control of weeds researchers and provides details of the weed, the history of its biological control, exploration for agents, potential agents studied and agents released and the outcomes of those releases. Many weeds were successfully controlled, some were not, many projects are still underway, some have just begun, however all are reported in detail in this book.

Biological Control of Weeds in Australia will provide invaluable information for biological control researchers in Australia and elsewhere. Agents used in Australia could be of immense value to other countries that suffer from the same weeds as Australia. The studies reported here provide direction to future research and provide examples and knowledge for researchers and students.

Have you renewed your membership?

The Society's primary source of finance is membership, sponsorship, profit from seminars and term deposits. This money enables the Society to produce the quarterly newsletter, run seminars of importance to Society's members, maintain and update the website, fund student book prize and travel awards, and to support projects of benefit to the members and the community.

Membership contributions are a very important part of the Society's overall funding.

The treasurer will be sending an invoice to those who have not renewed their 2012 membership. Prompt payment would be most welcomed.

Office Bearers for 2012

President
Rex Stanton [Wagga Wagga]

Vice President
Birgitte Verbeek [Tamworth]

Secretary & Public Officer
Alan Murphy [Glen Innes]

Assistant Secretary
Warwick Felton [Tamworth]

Treasurer
Jim Swain [Thornleigh]

Newsletter Editor
Lawrie Greenup [Westleigh]

Assistant Newsletter Editor
Hanwen Wu [Wagga Wagga]

General Committee
Hillary Cherry [Forestville]
Tony Cook [Tamworth]
Kim Hignell [Speers Point]
Jonathan Lawson [Glen Innes]
Deirdre Lemerle [Wagga Wagga]
Brian Scarsbrick [Dangar Island]

CAWS Delegates
Rex Stanton [Wagga Wagga]
Hillary Cherry [Forestville]

Committee Meeting Dates

10 August
12 October
14 December

Annual General Meeting will be held in November 2012.
All dates need to be confirmed.

Society Contact Details

THE WEED SOCIETY OF NEW SOUTH WALES INC.

Postal Address: PO Box 438
WAHROONGA NSW 2067

Secretary: *secretary@nswweedsoc.org.au*
Treasurer: *treasurer@nswweedsoc.org.au*
Editor: *editor@nswweedsoc.org.au*
Website: *www.nswweedsoc.org.au*

From the Editors

How about providing material for the newsletter?

The newsletter is the major source of information to our members and we are sure they want to read about all the exciting, interesting and unusaual things you are doing in weed management.

We want local and regional news about people and events, new emerging weed species, weed management issues, bushland regeneration, bushcare programs, weed research summaries, noxious weeds, legislative issues and book reviews.

We prefer short & interesting articles of about 200 to 500 words with good quality images which will reproduce well in colour.

If you want to submit material or discuss possible articles email - *editor@nswweedsoc.org.au*

Submission dates for material for 2012 are:

#60 Spring 2012	31 August 2012
#61 Summer 2012/13	30 November 2012
#62 Autumn 2013	28 February 2013

Sponsorship & Advertising

Are you interested in being a sponsor or advertising in the Society's newsletter 'A Good Weed'?

If you are please contact the editor or treasurer at:

editor@nswweedsoc.org.au
treasurer@nswweedsoc.org.au

If unable to deliver return to:

The Newsletter of
The Weed Society of New South Wales Inc.
PO Box 438
Wahroonga NSW 2076

A Good Weed

Print Post Approved
PP247134/00010

PRINT POST
PP247134/00010

POSTAGE PAID AUSTRALIA

The Weed Society of New South Wales Inc. acknowledges the generous support of the following organisations for their sponsorship of the Society and this Newsletter