

# A GOOD WEED



Newsletter of the Weed Society of New South Wales Inc.

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**Boneseed Flower** *Chrysanthemoides monilifera* ssp. *monilifera*  
Image: Paul Marynissen

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## Committee Meeting Dates

Committee meetings will be held in February, April, June, August, October & December 2020.

The Annual General Meeting will be held in the new month of February 2021.



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## Office Bearers for 2020

### *President*

Kim Hignell (Lake Macquarie)

### *Vice President*

Birgitte Verbeek (Albury)

### *Secretary and Public Officer*

Maria Edmonds (Cessnock)

### *Treasurer*

Doug Campbell (Scone)

### *Newsletter Co Editors*

Kim Hignell (Lake Macquarie)

Terry Bignell (Maitland)

### *Other Committee Members*

Andrew McConnachie (Orange)

Hanwen Wu (Wagga Wagga)

Hillary Cherry (Hurstville)

Megan Wyllie (Yass)

Michael Walsh (Narrabri)

Paul Marynissen (Wyong)

Wendy Gibney (Mullumbimby)

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The opinions expressed in both publications by contributors are not necessarily those of *the Executive Committee of The Weed Society of New South Wales Inc.*

## From the President

Hello fellow members

As I write this message to you, I wonder when the Covid-19 pandemic will end. Try as we might, there is nothing anyone can do but weather this global storm. The madness of even wanting to buy toilet paper takes me back to when I was a child on the farm and most of the time we had newspaper / magazine strips on string in the out-house up the back of the yard. Looks like it may come back to this or even taking some weed material to use..... but not anything with thistle-like leaves.

It was great to see some rain especially after the drought conditions and bushfires. Watch out for new weeds that may grow, especially after bringing in feed for livestock and natives from all over Australia. Weeds could be brought in with bales of feed so be vigilant and keep a look out where ever you go.

I have just got news that many of the conferences to be held this year have been postponed. If you have planned to attend any conference, please check to ensure that they are still running the event or change of date.

I hope that you and your family all remain safe during this trying time. Take care.

**Happy Weeding**  
**Kim Hignell**



## Welcome to our New Members

Our new members for this edition are

- **Eric Koetz** – NSW DPI Wagga Wagga
- **Mark Allen** - Bulli
- **Harley Baker** – ACT Parks
- **Ben Mott** - Hilltops Council
- **Tom Pickering** - Hilltops Council
- **Guyo Gufu**- Macquarie University
- **Jennelle Jenkins** - NPWS
- **Jan Mitchell** – Albury City Council
- **Charles Daaboul** – Albury City Council
- **Alex Watson-Deal** - Boorooma

Welcome to the Society, everyone.

### Benefits

New members receive all the benefits of Society membership including:

- opportunity to network with others interested in weed management;
- discounted registration for Society seminars and workshops;
- opportunity to apply for Society Travel Awards;
- the Society newsletter, *A Good Weed*, delivered quarterly and the electronic newsletter, the *Just a Little Weed*;
- discounted registrations to attend the Australasian Weeds Conference and the NSW Biennial Weeds Conference, and additional financial prizes for the winners of the Buerckner Award, Stephenson Award & NSW Weed Industry Award.



**Your 2020 New Committee Team**



**Kim Hignell**  
President / CAWS Rep / Newsletter Co Editor



**Birgitte Verbeek**  
Vice President



**Doug Campbell**  
Treasurer/ Website Master



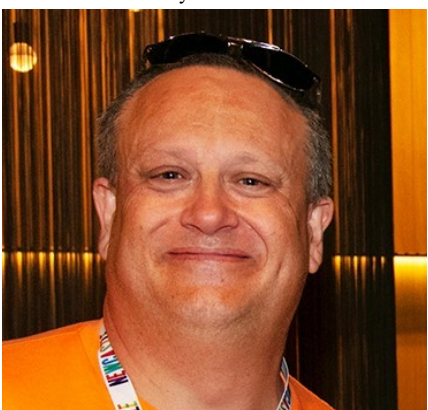
**Maria Edmonds**  
Secretary / Public Officer



**Hillary Cherry**  
CAWS Rep / Committee Member



**Terry Bignell**  
Newsletter Co Editor / Committee Member



**Paul Marynissen**  
Social Media / Committee Member



**Hanwen Wu**  
Committee Member



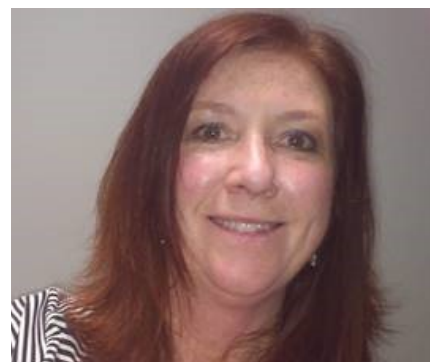
**Andrew McConnachie**  
Committee Member



**Michael Walsh**  
Committee Member



**Wendy Gibney**  
Committee Member



**Megan Wyllie**  
Committee Member

## News Articles



**22<sup>nd</sup> AUSTRALASIAN WEEDS CONFERENCE**  
10-13 Oct 2021 - Adelaide Oval  
#22AWC | [wmssa.org.au/22awc](http://wmssa.org.au/22awc)

**22AWC**  
**A WEED ODYSSEY:  
INNOVATION FOR  
THE FUTURE**  
WEED MANAGEMENT, RESEARCH,  
BIOSECURITY, POLICY.

PHOTO: BEN GOODE

Council of Australasian Weed Societies Inc. Weed Management Society of South Australia

## New conference dates announced 10–13 October 2021

The Weed Management Society of South Australia (WMSSA) with the support of Council of Australasian Weeds Societies Inc. (CAWS) have decided to postpone the 22nd Australasian Weeds Conference (22AWC) due to the COVID-19 Coronavirus pandemic.

The WMSSA and CAWS look forward to co-hosting the event next year and are excited to announce a new date at our venue Adelaide Oval on **10-13 October 2021**.

We are now looking forward with optimism to 2021. By delaying the event, we will progress with confidence in our ability to host the conference that everyone knows and loves at a time when society is more positive and secure (note that we will also continue to monitor all advice from the Australian Government and heed their future directive).

Outlined below are a few key pieces of information regarding the status of registration and abstract submissions.

Please read this information carefully.

### **ABSTRACT SUBMISSION:**

Thank you to everyone who has submitted an abstract. Authors will be contacted regarding their submissions towards the end of this year with the option to modify or change the status of their abstract. Notifications regarding selection into the conference program will be sent shortly after. During this time the abstract portal will remain open allowing for changes to current submissions as well as additional opportunities for new papers.

### **REGISTRATION:**

The decision has been made to keep the conference registration portal open allowing delegates the chance to get in early and pay their registration this financial or calendar year. Individuals who have registered up until now will be contacted by the conference organisers.

Thank you for your continual support of the conference and for now, please save the dates in your diaries as 22AWC will be a conference not to be missed!

Kind regards

22AWC Organising Committee

<https://wmssa.org.au/22awc/>

## News Articles

### European Weed Research Society (EWRS)

#### EWRS meeting on glyphosate



Glyphosate is the most frequently used herbicide in the world and is registered in more than 130 countries. In 2015, the World Health Organization's International Agency for Research on Cancer (IARC) identified glyphosate as a probable human carcinogen. The IARC evaluation created societal concern and political space beyond the scientific debate. Following a detailed toxicological and ecological risk assessment based on the most extensive and relevant datasets, the Commission reached the decision in 2017 to renew the glyphosate registration until the end of 2022.

Glyphosate has probably been exposed to more scrutiny and debate in the media and public perception than any other pesticide. However, few "what-if scenarios" exist for a prediction of possible consequences and challenges of a glyphosate ban for EU agriculture. Therefore, the EWRS within the framework of EWRS's social and scientific responsibilities decided to organize a dedicated workshop to discuss agronomical, social and economic aspects of scenarios hypothesizing a total ban on glyphosate and analyzing if producers and agronomists/weed scientists are ready for this challenge.

The expert meeting will take place at the campus of the Czech University of Life Sciences in

**Prague -Suchdol, CZECH REPUBLIC,**

**September 2 - 4, 2020**

which is located in the close proximity of the Prague airport.

<https://www.ewrs.org/en/info/Upcoming-events/Glyphosate-towards-2022-in-Europe>

### International Aquatic Plants Group

The International Aquatic Plants Group is comprised of researchers, scientists and practitioners who are based at universities and research organisations throughout the world. The IAPG is an interest group whose members specialise in all aspects of aquatic plant science, including botany, genetics, ecology, physiology, conservation and management.



#### 16th International Symposium on Aquatic Plants

**Aarhus, DENMARK**

~~14th – 19th June 2020~~

**June 14th - 18th 2021**

<http://www.internationalaquaticplantsgroup.com>



### The Joint XXIV IGC and XI IRC congress

will be held in

**Nairobi, KENYA,**

~~October 25th to 30th, 2020.~~

**October 23rd - 29th 2021**

The theme of the Congress is "Sustainable Use of Grassland and Rangeland Resources for Improved Livelihoods".

<http://2020kenya-igc-irc.rangelandcongress.org/>

## News Articles



Was to be held in Bangkok THAILAND in May.

### **Postponement of International Weed Science Congress 2020 (IWSC2020)**

Dear Weed Science Members,

We hope everything goes well with you even though the COVID-19 has been threatening our daily life.

IWSS Board and IWSC-2020 LOC and SPC have intensively been monitoring the status of the COVID-19.

As the participants' health and safety are the most important than anything else, we have finally decided to postpone the Congress to [7-12 December, 2020](#).

<b>Abstract submission date extended to</b>	<b>: <u><a href="#">30 June 2020</a></u></b>
<b>Early bird registration date extended to</b>	<b>: <u><a href="#">31 July 2020</a></u></b>
<b>Pre-congress workshop including the EWRS training workshop moved to</b>	<b>: <u><a href="#">7 December 2020 (TBC)</a></u></b>

Please find the attached the official announcement of the IWSC-2020 postponement.

Please save the new dates on your calendar.

If you've already submitted abstract or registered (early-bird registration) and are able to attend the IWSC-2020 in December, you don't need to do any further work. However, if you are unable to attend, please let us know in advance. If you have any inquiries concerning the IWSC-2020, please feel free to contact LOC Chair Chanya ([chanyaku36@gmail.com](mailto:chanyaku36@gmail.com)) or Pat ([pat@idext.co.th](mailto:pat@idext.co.th)).

Regarding the issues related to the IWSS, please feel free to contact our secretary Do-Soon ([dosoontkim@snu.ac.kr](mailto:dosoontkim@snu.ac.kr)).

Thank you very much for your understanding and continuous support.

We wish you a very good health and safety under this harsh period of COVID-19 outbreak.

Best regards,

IWSS Board and IWSC2020 Organizing Committee.

## News Articles

### The Department of Regional News South Wales (DRNSW).

On 2 April 2020, the Secretary of the Department of Premier and Cabinet, Tim Reardon announced the formation of the Department of Regional News South Wales (DRNSW).

The new Department has formed to support regional communities in the wake of devastating drought, bushfires and more recently the COVID-19 pandemic.

#### DRNSW's focus

Led by Gary Barnes, DRNSW will be the central agency for regional issues, building resilient regional economies and communities, strengthening primary industries, managing the use of regional land, overseeing the state's mineral and mining resources and ensuring government investment in regional NSW is fair and delivers positive outcomes for local communities and businesses.

#### DPIE's focus

Led by Jim Betts, The Department of Planning, Industry and Environment (DPIE) will continue to lead planning, environment, energy, housing and property and water.

It will continue working with DRNSW on a range of important issues to balance the needs of regional communities and economies with environmental sustainability and protection and a strong and robust planning system. DPIE will continue to support industry in NSW and create the conditions for a prosperous State.

#### The transition

Deputy Premier, the Hon John Barilaro MP will be the lead Minister of the new Department, supported by the Hon Adam Marshall MP, Minister for Agriculture and Western NSW.

The Department will bring together all of the Regions, Industries, Agriculture and Resources (RIAR) Group, including:

- Department of Primary Industries,
- Local Land Services,
- Division of Resources and Geoscience, which

will be known as Geoscience, Exploration and Mining,

- Regional NSW Group, which will be known as Public Works Advisory and Regional Development,
- Regional Growth NSW Development Corporation,
- Office of the Cross-Border Commissioner,
- Office of Drought Response,
- Office of Regional Youth, and
- Office of the Coordinator-General, RIAR.

The NSW Resources Regulator will also join DRNSW from EES, and Anthony Keon will continue as Executive Director.

There will also be a group of Corporate Services, Legal and Governance, People, Performance and Culture, and Cabinet staff who will transferred immediately into the new Department to ensure that it has a base capability from which to operate.

DRNSW will continue to rely on DPIE for a number of its corporate functions for the foreseeable future.



### Covid - 19 Impacts to Research

by Dr Hanwen Wu - DPI Wagga Wagga

All planned field days, farm walks and workshops will have to be cancelled. This will slow the extension and adoption of research updates.

There is an increased operating costs especially with associated travel. Multiple vehicles are required for field spraying and sowing due to the restrictions of numbers of people allowed in each vehicle.



## The Weed Society of NSW 'Kelvin Green' Student Prize - WINNER

My name is **Alex Watson-Deal** and I am currently in my 3<sup>rd</sup> year of studying a bachelor of Agricultural Science at Charles Sturt University in Wagga Wagga. I have always had an interest in science and agriculture, particularly the plant/agronomy side rather than livestock. I have worked in agricultural research surrounding pasture grasses and grains for a few years now but studying my degree has opened up new areas that I have found great interest in.

The weeds and pesticides subject in which I undertook to win this award was one of my first real introductions into the study of weeds. I thoroughly enjoyed this subject from the practical application as well as the ability to recognise the constraints of agricultural systems from the pressure of weeds.

Identification of weeds and the ability to understand their biology in order to control is a perfect example of how science is intricately used in agriculture. It is this combination of science and practical application necessary for the understanding and control of weeds which made the subject so enjoyable for me. There is also something satisfying about going into a paddock and having an idea of what weeds you're looking at and what to do about it.

I am excited for the future as some of my upcoming subjects this year will focus on the issues and management of weeds. That will lead into my fourth year which includes an honours research project or industry placement where I hope to build on my weed knowledge and be able to apply it in an industry relevant practice .



## Biocontrol of Hudson Pear

by Dr Andrew McConnachie - DPI Orange

Hudson pear (*Cylindropuntia pallida*) is a native of Mexico. In Australia, it is a weed of national significance (WONS) and invades Queensland, New South Wales, Victoria, the ACT, South Australia and Western Australia. The weed is a significant pest which can form dense infestations (Figure 1). As a result, the access of animals to feed is reduced and other farm activities are hindered. It also poses a danger to landholders and livestock due to its sharp spines.



**Figure 1.** Hudson pear invasion at Cumborah, NSW.

Through a collaborative project between Biosecurity Queensland (QDAF) and the NSW DPI (Weed Research Unit), an insect biocontrol agent was identified and tested to target Hudson pear. The insect, a sap-sucking bug or cochineal (*Dactylopius tomentosus*, ‘californica var. parkeri’ lineage) was imported from the southern USA (Figure 2).



**Figure 2.** The Hudson pear cochineal, *Dactylopius tomentosus* (californica var. parkeri lineage).

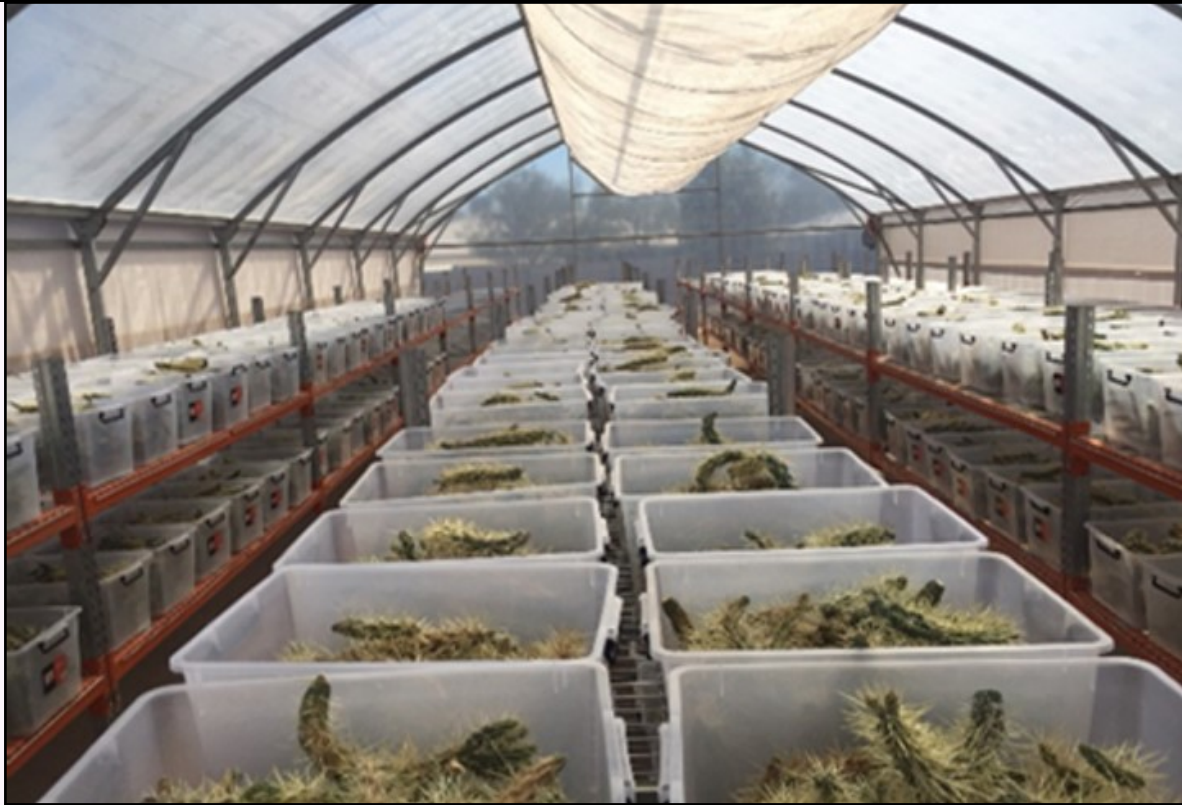
With funding from the Australian Government Department of Agriculture, Water and the Environment as part of its Rural R&D for Profit program, releases of the cochineal have taken place in NSW, QLD and WA. The cochineal has established at many sites in these states. At two long-term monitoring sites in NSW (Cumborah and Grawin), all plants in the monitoring area have become infected with the cochineal and plants are succumbing to it (Figure 3). The cochineal has also spread up to 500 metres from the point of release at the Cumborah site. The cochineal for Hudson pear is currently reared by NSW DPI and Castlereagh Maquarie County Council (CMCC) in Orange and Lightning Ridge respectively.



**Figure 3.** Hudson pear release plant in monitoring plot at Grawin (NSW) after biocontrol.

Funding from the Office for Environment and Heritage (OEH) has afforded the biocontrol program on Hudson pear the opportunity to build a purpose-built mass-rearing facility in Lightning Ridge (Figure 4). The facility will rear the Hudson pear cochineal exclusively over the next 2 years. Thereafter, it will be utilised to rear a variety of different biocontrol agents relevant to the area. The facility will operate through a novel ‘exchange program’ whereby affected landholders will be able to swap tubs of uninfested Hudson pear for tubs of cochineal infected material.

## Biocontrol of Hudson Pear (Cont.)



**Figure 4.** Hudson pear in tubs for mass-rearing the cochineal.

Hudson pear will be managed into the future using an integrated strategy, which will see biocontrol tackling the core invaded range, while herbicides will be used to eliminate outlying and high-risk populations of the weed. The strategy involves close collaboration between multiple stakeholders, headed up by NSW DPI, CMCC, North West Local Land Services and Northern Slopes Landcare. Community engagement will play a key part in the success of this program.

For further information regarding the biocontrol of Hudson pear contact in NSW:  
Dr Andrew McConnachie ([andrew.mcconnachie@dpi.nsw.gov.au](mailto:andrew.mcconnachie@dpi.nsw.gov.au))

One of the many Sponsors of 'A Good Weed':



<http://www.hunterregionalweeds.net.au/>

## Covid 19 - Considerations for Weed Officers



The NSW Department of Primary Industries (DPI) recognises the important role that weeds officers play in protecting the biosecurity of NSW.

As Australia actively responds to an outbreak of respiratory illness caused by coronavirus (COVID-19), we acknowledge the challenges and impact this response is having on the ongoing assistance and protection that weeds officers provide to landholders and their ability to continue to perform this essential service.

In line with all government agencies, our top collective priority is ensuring the health and safety of all employees and customers. At the same time, we all acknowledge and understand that our customers rely on our services and that these services are important for business continuity.

In the days and weeks ahead, our collective goal is to balance safety with service, and make adjustments as needed in order to adapt and continue to accomplish our mission of protecting the health and value of agriculture and natural resources in NSW.

Many government agencies are continuing to provide services, but not in the traditional manner we are used to. There has been an overall reduction in face-to-face interactions with the public and each other to reduce the risk and impact of COVID-19. Many local government and council offices are open by appointment only, online or via telephone.

While the DPI is preparing alternative procedures for some activities, weeds officers are continuing to inspect land for weeds while still able to travel locally, with the following considerations:

- ◆ Increased focus on maintaining personal hygiene (e.g. increased hand washing)
- ◆ Social distancing practices (1.5 metre separation between persons)

- one officer per vehicle
- contactless inspections (landholders requested not to accompany or meet with officers)
- communicating advice to landholders over the phone or electronically
- ◆ Prioritising inspections
  - reducing routine inspections and focussing on high risk weeds, sites and pathways
  - focussing on larger, rural and primary production properties

Weeds officers working from home can contact their Regional Weeds Coordinator for guidance on desktop work that is important in their area.

Check the Weeds Extranet for updates: [extranet.dpi.nsw.gov.au/weeds](http://extranet.dpi.nsw.gov.au/weeds)

Operational decision making is at the discretion of each local control authority.

### More information

NSW Department of Primary Industries has established a COVID-19 Primary Industries Liaison Team to help primary producers navigate the challenges and impacts of COVID-19 on their business and industry.

You can contact the Primary Industries Liaison Team by emailing [covidinfo@dpi.nsw.gov.au](mailto:covidinfo@dpi.nsw.gov.au) to discuss your individual business or industry circumstances.

For more information please visit <https://www.dpi.nsw.gov.au/home/covid-19>

The NSW Government continues to work with national and international agencies to provide the most up to date information as this issue is rapidly evolving. The NSW Government recommends that people follow NSW Health guidelines as this issue evolves.

© State of New South Wales through Department of Planning, Industry & Environment 2020. The information contained in this publication is based on knowledge and understanding at the time of writing (April 2020). However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Planning, Industry & Environment or the user's independent advisers.

## Australian farmers and scientists make a surprise discovery when they team up to fight an invasive weed

**Innovative partnership shows local knowledge could be the secret ingredient for making science matter.**



Photo courtesy of Max Rosenthal

Dryland rancher Vivan Mawhinney spends a lot of his time thinking about invasive African lovegrass. As he drives around his property in Australia's Bega Valley, halfway between Melbourne and Sydney, he's continually planning how and when he'll move his Angus cows and Merino ewes around so that he can beat the spread of the densely tufted weed.

Mawhinney's property covers 600 hectares (1,500 acres) of gently undulating country, 20 kilometres (12 miles) east of a line of blue hills that mark the edge of the Great Dividing Range. About a third is severely infested with the invasive non-native weed, with thick, meter-high tussocks waving fluffy grey heads over most of the paddock. Mawhinney also has smaller infestations over another third of his property.

Lovegrass, once thought to have value as a pasture crop, is hardy and competitive, produces vast quantities of seed that cattle spread via their hair and dung, and it's well suited to the climate of the valley, in the rain shadow of the Snowy Mountains. But cattle won't eat it until they've chewed every other pasture species to the ground.

"They eat everything else first, so lovegrass gets a distinct advantage," Mawhinney says. If a farmer's not careful, it can quickly take over a paddock, making the land all but useless: Cattle can't survive when they have nothing but lovegrass to eat. Unless it's fertilized, burned and watered, lovegrass has little nutritional value.

The problems with African lovegrass extend beyond its failure as forage. Tussocks can become so big that cattle can't get between them to search for more palatable grasses. Herding takes longer. Sheep get lost in it. Farmers damage their vehicles going down wombat burrows they can't see because the lovegrass is so tall.

"If left alone, it's only a few years and it can actually wipe you out. You end up with no farm at the end," Mawhinney says.

## Australian farmers and scientists make a surprise discovery when they team up to fight an invasive weed (CONT.)



Prolific but unpalatable, non-native invasive lovegrass is the bane of farmers in southern Australia. Photo courtesy of Harry Rose

Photo by Anne Green-Armytage *Getty Images*

Lovegrass could also wipe out what little is left of the Bega Valley's endangered lowland grassy woodlands. With their scattering of eucalyptus trees growing over native pastures composed of tussock grasses, short grasses and herbs, grassy woodlands have been valued historically as a low-cost, drought-resistant source of forage and shelter for cattle and sheep. As agriculture has intensified in the valley, clearing, sowing of non-native pasture species, fertilizer use and intensive grazing have greatly reduced the extent of these native pastures. African lovegrass is rapidly invading what remains. Losing native pastures to lovegrass hurts not only the livelihood of farmers, but the conservation of an endangered ecosystem.

Something needed to be done to help farmers gain control over lovegrass. What started as casual conversation among a local plant ecologist, an agricultural officer and a farmers' representative snowballed into a collaboration between a team of scientists and an engaged community of farmers that not only led to better lovegrass control, but demonstrated a new way to approach research on invasive species.

### **Massive Problem**

The Bega Valley is famous for its dairy industry — the words “Bega” and “cheese” are inextricably linked in the minds of most Australians — but land in the region is mainly used to graze meat cattle and sheep.

Five years ago, the Far South Coast Landcare Association set up the Bega Valley Farmers' Network to help the increasing number of dryland farmers in the valley improve the productivity and environmental health of their farms. When the network coordinator Wayne Schaefer first approached farmers to discuss their concerns, African lovegrass emerged as the most important.

Some landholders were managing to keep lovegrass out of their paddocks, while others weren't. Farmers were divided about how best to control it. Some believed you could manage infestations of lovegrass and still be productive and profitable. Others believed that once lovegrass began to take over a native pasture there was little choice but to convert it to a kikuyu-based pasture that resists lovegrass invasion. Unlike the native tussock grasses, kikuyu, another species introduced from Africa, can compete with lovegrass for soil water and nutrients when it's grazed

Despite the abundance of farmers' opinions on lovegrass, there was little evidence that might guide them on the best thing to do. “It seemed like such a massive problem, and no one was working on it,” says ecologist and Bega Valley resident Josh Dorrrough, now principal scientist with the Office of Environment

## Australian farmers and scientists make a surprise discovery when they team up to fight an invasive weed (CONT.)

and Heritage New South Wales. It was a thought Dorrough (then working as an ecological research consultant) shared with Schaefer and Local Land Services officer Andrew Taylor. Together they gained a small amount of funding to start to bring some science to bear on the issue.

### “Landholder-First” Approach

Dorrough began working with farmers’ groups on a research project to better understand how lovegrass affected farmers in the valley, and whether and how they were controlling it. He invited ecologist Jennifer Firn, an associate professor at Queensland University of Technology, to help out. Firn had tested control methods for African lovegrass in southern Queensland and, like Dorrough, saw the value of tapping into the knowledge that farmers had gained from observing lovegrass on their farms over many years, through good seasons and in drought.



To find out what best foils lovegrass, researchers asked local landholders how they controlled the weed, then tested the effectiveness of various approaches. Photo by Max Rosenthal

Dorrough, Firn and research assistant Emma Ladouceur began studying lovegrass in the Bega Valley using what they call a “landholder-first” approach. Dorrough interviewed 15 landholders in the valley about which parts of their farm were being invaded by lovegrass and how they were controlling it. The researchers then tested the landholders’ ideas for controlling the weed in field trials on the same 15 properties. This strategy not only tapped the farmers’ knowledge but also was specifically designed to yield information the farmers would find useful.

Some farmers thought that slashing lovegrass and then putting a large number of cattle per hectare into the paddock was an effective and profitable strategy. But the researchers showed that slashing did not reduce the density of lovegrass. Not only that, but when Dorrough and agricultural economics consultant Jim Crosthwaite analysed the costs of this approach, they found it was costing farmers more to slash lovegrass than could be earned from grazing cattle in that paddock.

Similarly, many farmers thought an alternative control technique, “roller-wiping” with herbicide, was a waste of time. To roller-wipe a paddock, farmers let their cattle eat down palatable pasture species to less than 15 centimetres (6 inches) in height, then tow a carpeted drum roller covered in herbicide over the taller, uneaten lovegrass. The research showed that roller-wiping was a successful way to reduce even heavy infestations of lovegrass, that it could be cost-effective and that native pastures were likely to recover because the seeds of many native species remained, waiting to germinate, in the soil beneath.

## Australian farmers and scientists make a surprise discovery when they team up to fight an invasive weed (CONT.)

### Seriously Practical

The “seriously practical” approach of the researchers impressed Mawhinney, who was one of the farmers involved in the project. He’s now using a roller-wiper on his lighter infestations of lovegrass, and he’s steadily beating it. Word of Mawhinney’s success has spread in the valley: Farmers he doesn’t even know stop him in the street to ask him how he manages his lovegrass, and 60 people attended a recent information session held on his farm.

Such opportunities to share stories of success are important but, Mawhinney says, farmers won’t go to information days where they suspect there’ll be a “total disconnect” between the research that’s being presented and the way farmers actually manage their properties.

The landholder-first approach that Dorrough, Firn and colleagues used for lovegrass reflects an evolving recognition by scientists of the value of engaging with local experts to help understand and solve conservation problems.

“There’s a massive opportunity that gets overlooked, to do science as a social outreach process,” says Andrew Knight, a conservation scientist at Imperial College London. Conservation relies on the values and actions of people, he says. Science plays a key role in solving problems but, Knight argues, the idea that science can do so alone is mistaken. Scientists are rarely the ones implementing their own recommendations, so building relationships with the people that actually manage the land is as important as collecting the ecological data.

Acknowledging that people on the ground matter to the landscape is a shift in thinking that is slowly happening in ecological science, Firn says. The perceptions of those who live on the land “matter more in that community than any scientific paper we can publish, so if we can test the existing ideas — evidence they’re potentially right or evidence they’re potentially not right — then we’re more apt to influence management than just another pamphlet coming to your door.”

***Ensia Editor’s note:** Viki Cramer produced this feature as a participant in the Ensia Mentor Program. Her mentor for the project was Hillary Rosner.*



Writer [Viki Cramer@VikiCramer](mailto:VikiCramer@VikiCramer)

Reprinted from <https://ensia.com/articles/invasive/>



## ChemCert AQF 3 Online

ChemCert is a not for profit Registered Training Organisation (RTO 90855). Currently offering online AQF3 Chemical Accredited Courses.

The AQF3 course focuses on upskilling chemical users on the industry's best practice methods and national standards. It includes the two units **AHCCHM304 Transport and Store Chemicals** and **AHC-CHM307 Prepare and Apply Chemicals to Control Pest, Weeds and Diseases**. It is nationally recognised for five years and enables the holder to legally use restricted chemicals unsupervised.

The aim of this course is to raise awareness of the potential hazards and risks associated with pesticide use and to provide practical information with regards to safe chemical handling and application.

The course is approximately 10 hours, at student own pace (depending on student's prior knowledge and skills) and up to 2 months to complete the course from enrolment commencement.

### Topics Covered:

- Safe Transport & Storage
- Determining weather conditions suitable for spraying
- Understanding chemical application issues
- Equipment calibration techniques
- Knowledge to limit spray drift
- Managing chemical residues
- Risk assessments & hazard control forms
- Self audit & compliance checklists
- Integrated Pest Management
- Record keeping requirements

### Requirements:

- Access to a stable internet connection
- A computer/tablet/phone able to run Acrobat Reader
- Equipment for practical assessment at <http://bit.ly/2mqOVHv>
- Standard data charges apply when not using wifi
- Unique and valid email address
- Up to date internet browser

ChemCert is continually seeking new and innovative ways it can grow, and by doing this we are able to offer you the best courses available.

**If you need to update your AQF3**

**Chemical Accreditation visit:**

[www.chemcert.com.au](http://www.chemcert.com.au)

or call 1800 444 228.



## Groundsel Bush Management in the Hunter Region

by Terry Bignell – Maitland City Council

Groundsel bush (*Baccharis halimifolia*) is native to the West Indies, the Atlantic and North America. It was introduced to Australia as an ornamental plant, becoming naturalised in Queensland, and subsequently emerging as a serious weed in northern NSW. It has gradually spread southwards along coastal fringes with records as far south as Eden in NSW. Groundsel bush has considerable scope for further expansion in Australia to the south and west of its current distribution.



**Figure 2.** Distinctive toothed, waxy leaf of groundsel bush.

Groundsel bush is an erect, densely branched, perennial shrub which can reach up to 7m in height. The leaves are waxy and distinctly toothed (Figure 2). Reproduction of groundsel bush occurs via seed however, the species is dioecious (male and female flowers appear on separate plants). In a single season, a large mature plant can produce over one million seeds.



**Figure 1.** Groundsel bush habit.

Groundsel bush is highly invasive in disturbed, open areas and can establish on a range of soil types including waterlogged, acidic and saline conditions. It is a major threat to forestry, cropping and grazing industries, significantly reducing the productivity and carrying capacity of agricultural land. It has no feed value and is considered toxic to stock. The plant also presents a significant ecological threat to swamps, wetlands and forests.



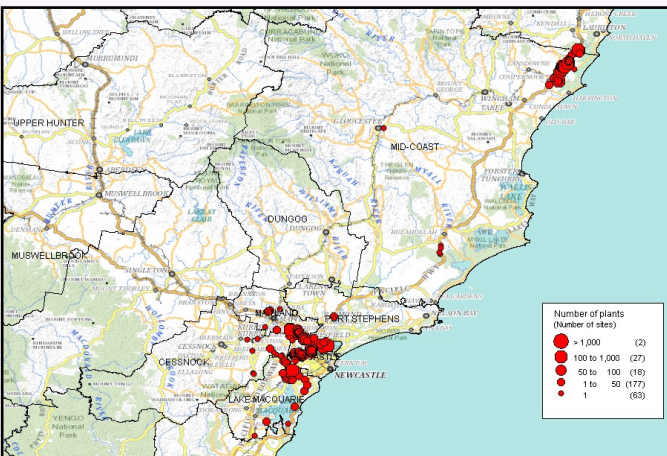
**Figure 3.** Young female groundsel bush flowers.

Dispersal of seed occurs mostly via wind and water. Seeds can spread significant distances in windy conditions or during floods, due to the pappus remaining attached for several days after release from the parent plant. Under normal conditions most seeds fall relatively nearby, which leads to the forming of dense stands of groundsel bush.

# Groundsel Bush Management in the Hunter Region

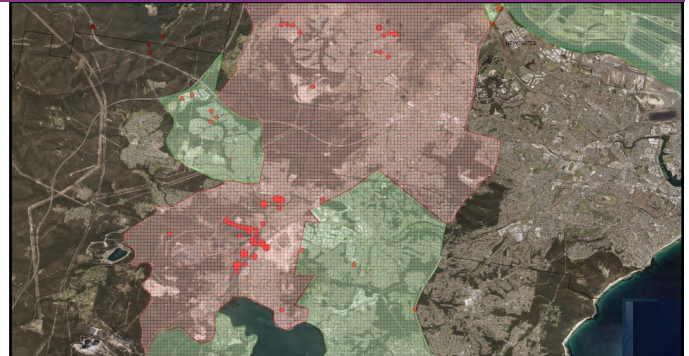
by Terry Bignell – Maitland City Council

In the Hunter region, groundsel bush is found in two significant core infestations, one in the north (Mid-Coast LGA) and one in the south (Lake Macquarie and Newcastle LGAs). Groundsel bush has been spreading from these core areas creating new infestations in the region. Roads and railway corridors are common pathways for spread. Consequently, the species is found across a wide range of private and public land tenures. As a result, it was identified that a strategic and collaborative approach is required to successfully manage groundsel bush in the Hunter region.



**Figure 4.** Groundsel bush distribution in the Hunter region.

Funding was allocated by The Hunter Regional Weeds Committee, through Hunter Catchment Contributions, for a groundsel bush inspection and mapping project. The ultimate aim of this is to develop a regional strategic management plan. Widespread aerial and on-ground inspections for groundsel bush were conducted and data collated to form regional distribution maps (Figure 4). Analysis of data led to three distinct priority management areas being formed: high priority sites, marginal areas, and core areas. High priority sites are found in outlier locations (outside of the core and marginal areas). In most cases, these sites contain less than 50 plants. Marginal areas adjoin core infestations however, numbers of plants are fewer. Marginal areas are medium priority and are identified on the maps by green shading (Figure 5).



**Figure 5.** Example of core and marginal areas (Lake Macquarie and Newcastle).

Core areas are defined by the number of sites within close proximity to each other, containing significant groundsel bush infestations. These areas are lower priority and are shaded in red (Figure 5). Each priority area has been mapped based upon strategic management, regardless of LGA boundaries or land tenure. Objectives and targets for each have been defined in the proposed plan.

To kick-start actions in the plan, the allocated funding from The Hunter Regional Weeds Committee was used for control works at high priority sites. The first round of works commenced in March 2020 which included using spray drones, boats and truxors in difficult to access areas (Figure 6).



**Figure 6.** Foliar spraying of groundsel bush using a drone.

The ten year strategic management plan has the long-term aim of achieving containment and localised eradication of groundsel bush in the Hunter region. The draft plan is currently available for comment by key stakeholders and is expected to be endorsed by the Hunter Regional Weeds Committee by the end of June 2020.



## Treasurer's Financial Report February 2020

<b>COMMONWEALTH BANK (10322878) Working Account</b>			
	Opening Balance		<b>\$98,553.96</b>
<b>Income:</b>			
Membership	4 New Members	\$	200.00
			<hr/>
			<b>\$ 200.00</b>
<b>Expenses:</b>			
	9115 - Bank Fees	-\$	1.10
	9233 - Committee T/C	-\$	141.90
	9810 - Insurance	-\$	851.19
			<hr/>
			<b>-\$ 994.19</b>
	Closing Balance		<b>\$ 97,759.77</b>
<b>COMMONWEALTH BANK (10322886) Card Account</b>			
	Opening Balance		<b>\$ 495.00</b>
<b>Income</b>			
			<hr/>
			<b>\$ -</b>
<b>Expenses</b>			
			<hr/>
			<b>\$ -</b>
	Closing Balance		<b>\$ 495.00</b>
<b>SOCIETY ASSETS</b>			
	Commonwealth Bank Account- 10322886 Card Account		<b>\$ 495.00</b>
	Commonwealth Bank Account- 10322878 Working Account		<b>\$ 97,759.77</b>
<b>Society Net Position</b>			<b>\$ 98,254.77</b>
	Operating Profit/Loss for the period		<b>(\$794.19)</b>

For the period 06/12/2019 to 11/02/2020, the society has shown an operating loss of \$794.19.

At the time of writing this report, I am waiting for the CBA to forward the paperwork to add credit card pay function to the CBA account. As the Society will not have a physical terminal, members wishing to pay by credit card will be supplied an online link to a portal which will allow them to securely input their details. Payments will then be directly credited to the Society's working account. There is a 2% transaction fee associated with these payments with the cost of the facility to the Society is a minimum of \$25 in transaction fees per month. This means if the Society doesn't have transactions fees totalling \$25 or more in a month we will be charged the difference to make it up to \$25, with the minimum cost for the year being \$300.

Membership fees are currently \$50, which would incur a credit card fee of \$1 per transaction, to recover this membership paid via credit card will

need to be \$51. Last year we had 56 members pay via credit card.

The transferring of funds into term deposits has encountered some difficulties as it appears it will require the physical presence of two of the signatories on the account to open up these accounts. I am presently waiting for a reply from CBA on my most recent enquiry.

### Sponsors

Hunter Precision Agriculture has expressed interest in being a sponsor. Payment and other details are currently being finalised.

### Membership

Society received 2 new memberships over the last 2 months. As soon as the credit card payment system is in place, I will send out renewal notices to all members.

**Doug Campbell - Treasurer**

## Treasurer's Financial Report April 2020

<b>COMMONWEALTH BANK (10322878) Working Account</b>		
Opening Balance		\$97,759.77
<b>Income:</b>		
Membership	4 New Members	\$ 200.00
CAWS- 21AWC		\$ 3,000.00
		\$ 3,200.00
<b>Expenses:</b>		
	9115 - Bank Fees	-\$ 1.38
	9420 - Student prize	-\$ 250.00
	9120 - Transfers Term Deposit	-\$ 88,000.00
	9233 - Committee T/C	-\$ 151.07
		-\$ 88,402.45
Closing Balance		\$ 12,557.32
 <b>COMMONWEALTH BANK (10322886) Card Account</b>		
Opening Balance		\$ 495.00
<b>Income</b>		
		\$ -
<b>Expenses</b>		
		\$ -
Closing Balance		\$ 495.00
 <b>SOCIETY ASSETS</b>		
	Commonwealth Bank Account- 10322886 Card Account	\$ 495.00
	Commonwealth Bank Account- 10322878 Working Account	\$ 12,557.32
	CBA Term Deposit- 283650046505 (3 Months matures 26/05/2020)	\$ 18,000.00
	CBA Term Deposit- 283650046513 (8 Months matures 26/10/2020)	\$ 70,000.00
<b>Society Net Position</b>		<b>\$ 101,052.32</b>
	Operating Profit/Loss for the period	<b>\$2,797.55</b>

For the period 11/02/2020 to 1/04/2020, the society has shown an operating profit of \$2,797.55.

In the last week I was informed that the Society's application for merchant banking facility which would enable the Society's to received payments from credit card has been declined. After enquires CBA are unable to provide a reason for declining the application. I have approached Westpac regarding their merchant banking and they offer a number of different options for not for profit organisations. However, any application would require the Society to open an account with Westpac.

Funds have been transferred into 2 term deposits as outlined in the above statement. The 3 month \$18,000 deposit has an interest rate of 1.1%, with the 8 month \$70,000 deposit being 1.5%.

### Membership

Society received 4 new memberships over the last 2 months. As soon as a credit card payment system is in place, I will send out renewal notices to all members.



**Doug Campbell - Treasurer**

## WEEDS AUSTRALIA is now live

**weedsAUSTRALIA**   
Powered by the Centre for Invasive Species Solutions

Weeds Australia is designed to connect you with up-to-date knowledge to make informed decisions about managing invasive weeds within Australia.

The Centre for Invasive Species Solution (CISS) manages the Weeds Australia by receiving funding from the Australian Government. Original content on the site has been provided with permission through the Australian Government Department of Agriculture, Water and the Environment under a data licence deed, as well as content provided through the weeds working group of the Environment and Invasives Committee (EIC) and the archived CRC for Australian Weeds Management website.

Information on this site is under a [Creative Commons Attribution 4.0 International licence](#), however images must be attributed accordingly and web information cited.

Weeds Australia is now live but the website will continued to be updated and reinvigorated based on feedback. It is will be released over 4 stages as follows:

### Stage 1 – April 2020

Website contains information sourced from weeds.gov.au (ex-Australian Government weeds website), old weeds.org.au (decommissioned Australian Weeds Committee website from 1998) and weeds.crc.org.au (archived CRC for Australian Weed Management website from the early 2000's).

Website contains all weeds profiles transferred from weeds.gov.au, including links to Weeds of National Significance (WONS) and their manuals and guides.

### Stage 2 – Late 2020

Website updated to include an identification key

and better integration with Atlas of Living Australia network and changes made based on feedback collected from weeds community and committees.

### Stage 3- Early 2021

Website profiles fully reviewed and updated based on latest evidence, and connected with regional and jurisdictional information

### Stage 4 – 2021+

Website integrated to include Weeds ID scanning, monitoring and reporting functionality.

Website : <https://weeds.org.au>

CISS is after feedback of this website and through out every stage and all comments are welcome. For comments, please go to website and at the top right hand side of page is a provide feedback [link](#).



Weed of National Significance (WoNS)

*Asparagus aethiopicus*

by Chapman, A. (© Australian National Botanic Gardens)

From - <https://profiles.ala.org.au/opus/weeds-australia/profile/Asparagus%20aethiopicus>

For general enquiries for Weeds Australia, please email:

Email : [weeds@invasives.com.au](mailto:weeds@invasives.com.au)

## BLAST FROM THE PAST - Newsletter No 1 March 1993

Extracts from the Society's first Newsletter written back in March 1993 with then Editor - Deirdre Lemerle.

### REPORTS

#### Biocontrol of Ragwort and Blackberry

(Seminar organised by the Victorian Weed Society in late 1992)

Biological control programs underway in Victoria to control ragwort and blackberry should not be seen as a signal for farmers to ease up on conventional weed control methods, was a message from the meeting. David McLaren and two other speakers from the Keith Turnbull Research Institute (KTRI) at Frankston, El Bruzese and Graham Pritchard, stressed biological control must continue to be integrated with herbicides, cultivation and pasture improvement. Ragwort and blackberry are the target weeds for existing biological control programs although KTRI is also examining control for thistles.

While rust will be mainly used to control large infestations in remote areas, smaller infestations in areas with high farming, conservation or aesthetic value should continue to be cleaned up with herbicides.

There are 50 species of insects and 20 fungi in Europe suitable for blackberry control but the useful species for Australia are limited because of their effects on cultivated berries. Existing rust outbreaks on cultivated berries can be controlled with fungicides.



Blackberry infected with the rust fungus, *Phragmidium violaceum*. Image: CSIRO Entomology

The legal rusts released in 1990 and 1991, together with the illegal rust released in 1984, are now widespread in Victoria, New South Wales and ACT. The only difference between the two rusts is in their genetic

make-up. There are no visible differences under the microscope or on the plant.

Rusts can cause up to 90% defoliation depending on climate and the speed of growth of the plant. The rust attacks new growth forcing the plant to draw on its root reserves for survival.

Trials on the effect of herbicides on blackberries infected by rust have turned up.

### FEATURES

#### The Role of Industry in the Future of Weed Science

(By Jost Harr, Vice President Research Basel, Sandoz Argo Ltd, summary of an article in Weed Technology 6:177-181)

The agricultural-chemical industry has been offering solutions in plant protection for several decades. The primary role of Industry in weed control has mainly been to provide chemicals with increasingly attractive profiles regarding safe handling, ecological acceptance, and economical attractiveness. These objectives have been reached by significant developments, eg in rates, persistence, and specificity for non-target organisms. It is therefore safe to assume that in the year 2015 and beyond chemicals will continue to maintain a major role in weed control. However, as cropping systems and criteria for desirable control levels change, industry will have to change from a re-active to a pro-active participant in the development of integrated systems. Chemical solutions will be complemented by biological and agronomical methods and will be further supported by biotechnological successes in the crop area. In addition, it is anticipated that sophisticated computer models now in development will help exploit the potential of products as well as of integrated systems. Chemical solutions will be complemented by biological and agronomical methods and will be further supported by biotechnological successes in the crop area. In addition, it is anticipated that sophisticated computer models now in development will help exploit the potential of products as well as of integrated systems.

Thus, fully integrated companies active in chemical, biological, and molecular-biological research and having branches in the agro-chemical as well as in the seed business will be especially suited to be driving

## BLAST FROM THE PAST - cont.

forces in the changing world of modern weed control. The practice will ask for services much more than for single products. Industry will not only have to offer those services but at the same time assist in the education of growers to enable efficient use of the increasingly intricate methods of future weed control.

### Biological Control of Paterson's Curse

The first of a planned suite of biocontrol agents for Paterson's curse (*Echium plantagineum*), the *Echium* • leaf miner (*Dialectica scariella*), was released in 1988. The spread of the *Echium* miner since its release has been spectacular, and it is now established through Paterson's curse areas of NSW. Much of the initial spread was due to insects being distributed by NSW Agriculture. However, as predicted by CSIRO entomologists before it was released, damage due to this insect has been variable, but not sufficient to control Paterson's curse.

Unfortunately, the activity of the insect depends on warm temperatures. Its greatest activity usually occurs from late spring, after most Paterson's curse has finished flowering, until autumn the following year. The moth larvae damage the few plants present over summer and the early rosette stage of Paterson's curse, but not the large plant numbers present over winter and spring.

NSW Agriculture has been very involved in the release and monitoring of the leaf miner. Mass rearing has been undertaken at Mudgee, Yanco, Tamworth and Orange. Research into the impact on Paterson's curse is being conducted by NSW Agriculture at Mudgee and Tamworth by CSIRO in the south of the state and by Keith Turnbull Research Institute (KTRI) in Victoria.

Larvae of the *Echium* leaf miner are having a greater impact on the closely related weed species, viper's bugloss (*Echium vulgare*). This is because viper's bugloss is more prevalent during summer and consequently the leaf miner is more adapted to its life cycle than that of Paterson's curse.

Three more insects are currently being prepared for release in Australia. The root weevil, *Ceutorhynchus larvatus*, has been released in the south of the state by CSIRO and releases by NSW Agriculture are due to occur during autumn 1993. NSW Agriculture is

breeding up stocks at Yanco and Tamworth for release. The weevil is unlikely to spread rapidly because it usually produces only one generation per season.

Populations of a third agent, another root weevil, *Ceutorhynchus geographicus*, are currently being increased for later release. It is anticipated that these two weevils will have a greater impact on the weed than *Echium* leaf miner, but they will probably spread slowly.

Finally, a flea beetle, *Longitarsus aeneus*, is the next agent scheduled for release. However, difficulties have been experienced rearing this species in quarantine. Permission has been obtained to direct release this insect in the field following a half year in quarantine. Insects will be brought to Australia during the European autumn and held at low temperatures until release in the Australia autumn. Additional insects will be tested by CSIRO and KTRI for their host specificity.

### IN BRIEF

#### Spread of Silverleaf Nightshade

The area of silverleaf nightshade (*Solanum elaeagnifolium*) in New South Wales was surveyed by Jim Dellow (Weeds Agronomist, NSW Agriculture) with the help of District Agronomists and Noxious Plants Advisory Officers in September 1992. Jim estimated that there is an area of 140,000 ha of silverleaf nightshade, mainly in the wheat belt, and this



Silverleaf nightshade flowers are purple and star-shaped when fully open. Image: A. Johnson.

<https://weeds.dpi.nsw.gov.au/WeedImages/Details/686?NoWeeds=6>



## BLAST FROM THE PAST - cont.

is a marked increase on the 12,000 ha estimated in 1977. The infestations comprise 16,000 ha dense stands exceeding 100 ha, 58,000 ha scattered colonies, and 66,000 ha of widely scattered plants. The wet summer this year has probably caused a further increase in the area of silverleaf nightshade.

### Release of Biological Control Agent for Scotch Broom

The European twig mining moth (*Leucoptera spartifoliella*), a biocontrol agent for control of Scotch broom (*Cystisus scoparius*) was officially released by the Director-General of NSW Agriculture on 3rd February 1993. The release was made at the Barrington Tops near Scone, where Scotch broom infests over 10,000 ha of bushland and nearby pastures. Another release was made near Braidwood on the Southern Tablelands on 6th February.



Scotch broom infestation. Image: Paul Sullivan.

<https://weeds.dpi.nsw.gov.au/WeedImages/Details/329?NoWeeds=4>

The release marks the culmination of a research program started by Dr John Hosking in 1989 to identify, introduce, and test biocontrol agents for Scotch broom. As a result of this program the twig mining moth was imported from New Zealand in 1990, and has been evaluated by Peter Hodge who is located at the CSIRO facility in Canberra. This research and additional CSIRO investigation in Europe, have been supported by grants from the NSW National Parks and Wildlife Service, the Forestry commission of NSW and the Hunter Pastoral Company.

The twig mining moth is the first in what is hoped to be a series of introductions for Scotch broom. Peter Hodge is already evaluating the next insect, a sap-sucking psyllid.

### Chilean Needle Grass

Chilean needle grass (*Stipa neesiana*), a perennial grass, is perceived as a growing problem in northern NSW in the Glen Innes district, as well as Guyra and Ben Lomond. It is possible that Chilean needle grass has the potential to become the serrated tussock of the north, but as yet, it is in its infancy. One of the difficulties is to bring the plant to the attention of producers who may have it on their property, but are unaware of its presence. Once identified the plant has prove to be difficult to control and is capable of slow, but steady spread. It is generally unpalatable to livestock, thrives on high fertile soils and competes well with introduced perennial grasses. A meeting was held in early March to discuss the problem. Contact Mick Duncan (District Agronomist with NSW Agriculture at Armidale) for more details.



Cluster of Chilean needle grass plants with pale brown seeds and long awns. Image: John Hosking

<https://weeds.dpi.nsw.gov.au/WeedImages/Details/253?NoWeeds=7>

EDITORS NOTES: Botanical name for Chilean needle grass is now *Nassella neesiana* (Trin. & Rupr.) Barkworth. Previously known as *Stipa neesiana* (Trin. & Rupr.). Also, the photos of weeds were not in the original articles back in 1993.

**Editors Note: If you like Blast from the Past, please let the editors know.**

## Proud Sponsors of 'A Good Weed'



When we are all gone.... Image: Cameron Bennell

Weed - Madeira Vine (*Anredera cordifolia*)