

A GOOD WEED



Newsletter of The Weed Society of New South Wales Inc.

ISSN 1325-3689

In This Issue

2016 Committee Members	1
President's Report & Season's Greetings	2
Life Membership Award - Warwick Felton	3
Life Membership Award - Lawrie Greenup	4
President's Annual Report	5
Treasurer's Annual Report	6
CAWS Report to Annual General Meeting	8
Dealing with weed issues within Lake Macquarie - a mini seminar	9
Erratum	9
Root exudates in Sorghum species. Potential constraints for species establishment in infested soils	10
A prickly history - two new Onopordum species in our list of aliens	11
Chemical and apps updates from Dow AgroSciences	13
Study Assistance Grant report	15
Sponsorship thank you - Robert Stephens	16
NSW Weed Society Awards for 2016	17
20th Australasian Weeds Conference	17
Society News	18

"A Good Weed" is published by:

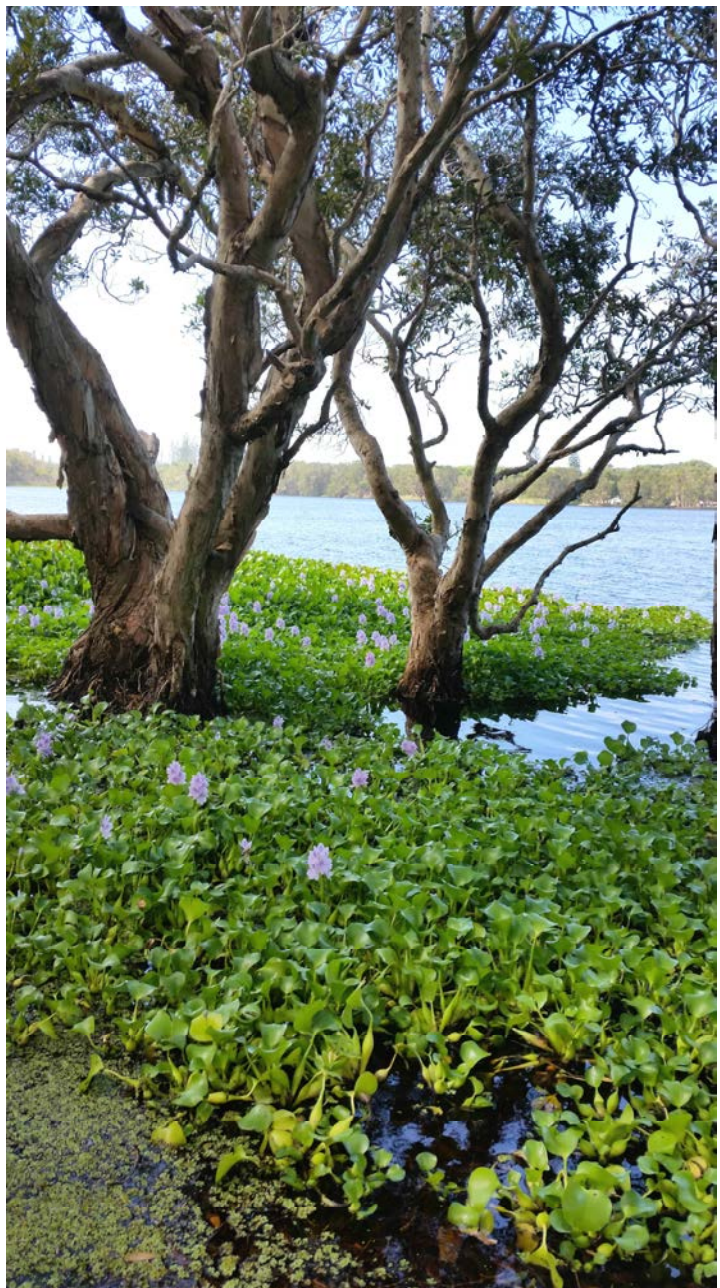
The Weed Society of New South Wales Inc.
PO Box 8040 KOORINGAL NSW 2650

Secretary: Stephen Johnson

Editor: Lawrie Greenup

Assistant Editor: Hanwen Wu

#73 Summer 2015/16



No Christmas joy for weed operators when it comes to water weeds! Water hyacinth growing on Lake Ainsworth, a tea-tree stained freshwater dunal lake at Lennox Head. Image: Kim Hignell.



**Kim Hignell
President**



**Birgitte Verbeek
Vice President**



**Rex Stanton
Immediate Past President
& Treasurer**

2016 Committee Members



Dan Austin



Doug Campbell



Hillary Cherry



Tony Cook



Maria Edmonds



**Lawrie Greenup
Editor**



**Stephen Johnson
Secretary**



Reece Luxton



**Hanwen Wu
Assistant Editor**



From the President

I am honoured to be re-elected as president for another year and I would like to say thank you to our members who have worked hard for the Society during 2015 and congratulations to the new committee members. The face of the committee has changed this year, with us saying good bye to our long serving executive members Alan Murphy – Secretary and Jim Swain – Treasurer. Both Alan and Jim have been with the Society since the 1960's and, hopefully, they will help us celebrate our 50th anniversary next year. We said goodbye to Michael Michelmore, DPI, and Ruth Armstrong, NPWS. Thank you all for your time and hard work for our Society.

Further long serving members of the Society, Warwick Felton and Lawrie Greenup (Editor), were each awarded the Life Membership to the Society and was presented with their medal and certificate at the Annual Dinner at Speers Point. Congratulations to you both for achieving this milestone.

An exciting year is coming for the Society, being our 50th anniversary, with planning of a special supplement to be printed for our members. In 2016, we are moving forward with the planning of the 21st Australasian Weeds Conference in 2018 and looking at the idea of a new logo for the Society.

The Society is still examining the possibility of expansion of membership to include invasive animal management and continuing with our very popular publications 'A Good Weed' and the 'Punnet Tray'. Any member is welcome to bring to the committee any ideas that they believe are important to the Society and to help us celebrate our special year.

It is good to see new members joining the Society and I would like to thank all members who have helped to increase this membership. It would be great to look at a membership and sponsorship drive next year, so keep watch out for potential new members for the Society.

Finally, I would like to wish everyone a joyous festive season and may the new year bring everything you are hoping for.



Happy New Year Weeding, Kim



Christmas bush, *Ceratopetalum gummiferum*

Season's Greetings from the Society's Executive and Committee

We would like to thank you for your support throughout 2015 and extend to you all our best wishes for the festive season and may the New Year bring you answers to your weed issues.

Let's look forward to an exciting 2016 - the year to celebrate 50 years of the Society.

Happy Weeding, Kim & the Committee.



Warwick Felton Awarded Life Membership The Weed Society of New South Wales Inc.



Warwick Felton being presented with his Life Membership medal and certificate by Jim Swain, another Life Member

Warwick has been a member of the society for over 40 years and has served as President in 1987 - 1988 and 2005 - 2006.

He has served on the committee for more than 20 years and during that time has always been an active participant and willing helper at society seminars and functions where he has for a number of seminars been responsible for the editing of the seminar abstracts. In addition to his role as President he has served for varying amounts of time as a CAWS delegate, assistant secretary and a member of the Conference Future Fund Committee.

Warwick is a graduate of Hawkesbury College (1965). He joined Lanes Chemicals and worked in Narrabri investigating weed control in cotton before being offered an Agronomist-in-Training position at Yanco investigating weed control in cotton. He then commenced studying at the Faculty of Agriculture - Sydney University as a NSW Department of Agriculture Trainee graduating in 1970 before moving to Tamworth as a weed agronomist where he remained until his retirement in 2004.

On retirement he was a Senior Research Scientist, NSW Department of Agriculture (NSW DPI) at the Agricultural Research Centre Tamworth having worked on weed control in various crops including lucerne on the Nemingha Flats, summer and winter

crops on the Liverpool Plains, no-tillage farming systems, and weed detecting technology of which the latter has now been commercialised internationally by Crop Optics.

Warwick has received a number of awards which resulted from his weed control work viz. The Brownhill Cup for conservation farming (1991), Land Inventor of the Year AgQuip (1991), Excellence in Engineering Awards, Australian Institute of Engineers Sydney Division (1991 and 1992), Council of Australian Weed Science Societies Medal (1992), and a NSW Agriculture special staff achievement award (1998) together with the NSW Weed Society Medal for Excellence in Weed Management in 2011.

In 1986 he was awarded a M.Sc. Agr from the University of Sydney for his work in applied ecology and weed control.



Kim Hignell and four life members. L-R Jim Swain - Life Member; Warwick Felton - new Life Member; Kim Hignell - President, Lawrie Greenup - new Life Member, and Alan Murphy - Life Member.

Past Life Membership Recipients

2014 Alan Murphy

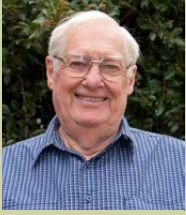
2011 Mike Barrett & Jim Swain

2003 Alex McLennan

2002 Kelvin Green

1999 Nelson Johnson

1989 Peter Michael



Lawrie Greenup Awarded Life Membership The Weed Society of New South Wales Inc.



Lawrie joined the Society in the mid 80's when he was located in head office of the NSW Department of Agriculture. During this time he developed an interest in urban weed issues whilst on the Bushland Management Committee of the National Trust of Australia (NSW).

He has served on the committee for more than 20 years and during that time has always been an active participant and willing helper at society seminars and functions.

A Good Weed the society's newsletter which is the main method by which the society communicates with its members is now due to Lawrie's influence as newsletter editor for the past 8 years, the excellent publication that it now is. He has transformed it from a black and white newsletter to the full colour publication that it is today with a wide range of articles of interest to our diverse membership supported by excellent photos which reflects his interest and expertise as a photographer. He assumed the role of editor after Mike Hood's untimely death. Prior to that time Lawrie had worked with Mike as Assistant Editor for a number of years.

Whilst not holding any of the Executive Positions in the society he has been the principal organiser of many of the successful seminars that the society has held over this period taking the lead role on the organising committee.

Lawrie graduated from the Faculty of Agriculture, University of Sydney in 1961 and joined the NSW Soil Conservation Service carrying out an erosion and vegetation study of the Kosciusko High Plains area of the NSW Snowy Mountains. He left the Soil Conservation Service after the survey was completed and was employed as an entomologist with the NSW Department of Agriculture followed by three years with Monsanto Chemicals developing Agricultural Chemicals before returning to the NSW Department of Agriculture. He worked in Tamworth as a field crop and pasture entomologist before spending almost a decade in Sydney at the Department's head office dealing with pesticide residues and the protection of prime agricultural land. He left the Department to take on

a consultancy with the fresh fruit and vegetable industry dealing with consumer and industry food safety and environmental issues.

Lawrie has received a number of awards associated with his work with pesticide residues, urban weeds and landscape conservation: Churchill Fellowship on Disposal of Small Quantities of Pesticides on the Farm; Australian Fresh Fruit and Vegetables Association Award for outstanding contribution to the fruit and vegetable industry; National Trust of Australia (NSW) Meritorious Service Award; National Trust of Australia (NSW) Award in recognition of voluntary service, and the NSW Weed Society Medal for Excellence in Weed Management.



A proud and reflective Lawrie Greenup with his Life Membership medal and certificate.

Life Membership



A special honour recognising outstanding commitment, service, and support to the Society for a long period of time.



50th Annual General Meeting

The 50th Annual General Meeting of The Weed Society of New South Wales Inc. was held on Thursday, 19 November 2015, at Lake Macquarie City Council Depot, Gatehouse Building, Reserve Creek Road, Speers Point commencing at 4.00 pm.

The following reports were tabled: Annual Report (Kim Hignell), Financial Report (Jim Swain) and Annual CAWS Report (Kim Hignell & Hillary Cherry). All reports were adopted.

The election of officers resulted in the following:

President - Kim Hignell

Vice President - Birgitte Verbeek

Immediate Past President - Rex Stanton

Secretary - Stephen Johnson

Treasurer & Public Officer - Rex Stanton

Committee - Dan Austin, Doug Campbell, Hillary Cherry, Tony Cook, Maria Edmonds, Lawrie Greenup (Editor), Stephen Johnson, Reece Luxton, & Hanwen Wu.

Kim Hignell, President, welcomed the new executive and committee members.

The resolution was passed:

“It is recommended by the current committee to increase the 2016 membership subscription rates to \$50.00 for ordinary members and \$25.00 for student members”.

2015 President's Report 49th Annual General Meeting The Weed Society of NSW Inc.

Kim Hignell

I would like to extend a welcome to everyone who has been able to attend this meeting and thank you for being here today. The tireless input from our members who volunteer their time helps this Society to succeed and grow in strength, and attending meetings is a vital part in delivering benefits to our members and a necessity to ensure that we strive to meet expectations. I thank you for your time and effort.

I would like to congratulate all our winners for this year's grants and awards.

The Undergraduate Award - Joash Parker from Charles Sturt University. It's wonderful that the Society continues to encourage future weed scientists in their undergraduate studies in weed science.

The Travel Assistance Grant winners, Laura Williams who travelled to the 13th International Conference of Ecology and Management of Alien Plant Invasions in Hawaii and **Terry Inkson** to attend the 18th NSW Weeds Conference at Cooma.

The Buerckner Award - James Browning, New England Weeds Authority.

The Stephenson Award – Terry Inkson, Great Lakes Council.

NSW Weed Industry Award – Lorna Adlem, Hunter Local Land Services.

The NSW Weeds Conference, held in Cooma this year, was successful and many members from our Society members attended this event. A great range of topics, covering most aspects of weed management, was presented each day and three great field trips enabled the delegates to see how the Cooma – Monaro region deal with weed issues. Congratulations also to the New England Weeds Authority for their successfully bid for the 19th NSW Weeds Conference to be held in Armidale.



50th Annual General Meeting

The Society's newsletter 'A Good Weed' and e-newsletter 'Punnet Tray' continues to be the key output for information. I would like to thank Lawrie Greenup and Hanwen Wu for their efforts in maintaining the high quality of the newsletter. The website continues to grow by the exposure not only from visitors from NSW and Australia but from overseas as well. I would like to thank our webmaster Rex Stanton for maintaining and keeping the website up-to-date. Finally, yet importantly, the standard of our publications would not be as high without the support of our sponsors, so I would like to thank, Dow AgroSciences, ChemCert Australia, Scotts, Australian Catchment Management, Truxor Australia and Hunter Central Coast Weeds. Thank you sponsors, for support us during 2015.

I would also like to thank the present executive committee for their participation and service to the Society in the various roles that they have played. Having such an active executive committee helps ensure the Society collectively gets the best outcomes for all.

Before I wrap up with this review of the last 12 months, I would like to state that today is a sad day for the executive committee as two of our long-term serving members are retiring from the committee. Both members have been with the Society from the beginning and have spent countless hours over the years working to make the Society the success it is today. Thank you Alan Murphy, Secretary and Jim Swain, Treasurer for helping us over the many years. The input from Alan and Jim was very much appreciated by all pass and present committee members.

Finally the new executive committee will have some exciting times ahead, with the Society celebrating our 50th anniversary. Let all join in the celebrations next year.



Happy weeding

**Kim Hignell
President
The Weed Society of New
South Wales Inc.**

2015 Treasurer's Report 50th Annual General Meeting The Weed Society of NSW Inc.

Jim Swain

It is with pleasure that I present the treasurer's report and financial statement for The Weed Society of New South Wales Inc. for the 2014/15 financial year – 1 October 2014 to 30 September 2015.

This will also be my last report as I am retiring from this position. I would like to thank the Society for giving me the opportunity of serving in this capacity and wish the Committee and its members all the best for the future.

Membership

As at the 30 September 2015 the Society has 157 members which include 5 life members. 122 are financial for 2015.

Reminders were sent to 30 members who were in arrears for 2015, advising them that if payment was not received by the 31 December 2015 they would not continue to receive *A Good Weed* and other benefits offered. Their arrears will be included with the 2016 subscription renewal notices to be sent out in the New Year. 23 who were in arrears for 2014 and 2015 were removed from the membership list on the 30 June 2015.

Sponsors

There are six sponsors of the newsletter – **A Good Weed** - Dow AgroSciences, Scotts, ChemCert Australia, Truxor Australia, Australian Catchment Management and Hunter Central Coast Weeds

Financial Report

The financial report for the financial year 1 October 2014 to 30 September 2015 is presented for approval

A full copy of the financial report can be seen on the website: www.nswweedsoc.org.au



50th Annual General Meeting

The Society made a loss of \$13,283.29 compared to a profit of \$9,304.35 for the previous year. This turnaround is due to the fact that the return from the Society's share of the profit from the 18th NSW Weeds Conference is at this stage unknown together with a significant sponsorship of the 18th NSW Weeds Conference.

Members' subscriptions are slightly lower \$380.00 than last year, however if members paid their subscriptions on time then the income would be \$1,200.00 higher than that reported.

We have continued to use the Bendigo Bank at Turramurra for the societies banking and have a cheque account together with the credit card facility.

In addition we have 2 term deposits with a total credit of \$50,147.60 compared with \$77,162.81 last year when 4 term deposits were held with the Bendigo Bank.

This reduction in the number of term deposits is due to the impending retirement of the Treasurer, where, to ensure that there is an orderly transfer of funds to the new bank account, term deposits as they mature are being transferred to the cheque account.

As a result the cheque account has a balance of \$13,845.24 compared to a balance the previous year of \$1,013.24.

The balance sheet with net assets of \$63,992.84 for 2014/15 (which is \$13,283.29 less than for 2013/14) shows that the Society is in a sound financial position. It is however recommended that net assets should not be less than \$50,000.00 if the Society is to be considered in a sound financial position.

The current level of net assets will enable the new committee to continue allocating funds to projects/promotional activities that meet the Society's objectives. In this financial year only \$1,147.30 was allocated to these projects, despite a note appearing in *A Good Weed* inviting members to apply for funding of projects that meet our objectives.

In this year financial year we had no income from seminars only a small cost for the seminar held before last year's AGM. The return from the 18th NSW Weeds Conference is expected to be lower than previous years so it is essential that any activities conducted show a profit.

It is also hoped that the motion proposing an increase in subscription fees will be approved.

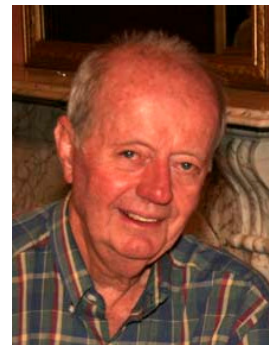
Auditing Procedures

By law we do not need to have our accounts audited by an independent auditor and this year the accounts have been reviewed by an audit committee comprising Warwick Felton – Chair, Lawrie Greenup and Jim Swain.

It is recommended that this procedure continues and that the new committee appoint an audit committee.

Approval of Report

I would like to move that the financial report for the year ending the 30th September 2015 be approved and the statement by members of the committee signed.



Jim Swain
Honorary Secretary
26 October 2015





50th Annual General Meeting

2015 Annual Report Council of Australasian Weed Societies

The CAWS strategic plan is underpinned by three annual operational plans, which were reviewed by the three respective subcommittees with a view to keeping activities focussed and achievable. The committee recognised that due to time limitations, activities in the operational plans will need to be scaled back to be realistic.

The Advocacy subcommittee was very active and submitted responses to both the Federal Government's Department of Agriculture *Discussion Paper on Managing Established Pest and Diseases of National Significance* as well as the *Senate Inquiry into Environmental Biosecurity*. A pleasing outcome of the Senate Inquiry is that CAWS is quoted a number of times, with two of the 26 recommendations including those from CAWS. As a consequence, CAWS has continued to increase its presence and relevance nationally. Compiling advocacy submission documents takes considerable time and effort.

CAWS has also continued to review and develop policy and procedural guidelines to assist its executive members in decision making processes. This has included reviews of the Regulations for Travel Awards, and the development of a procedure for making constitutional amendments.

Successful CAWS awards applicants were:
Student Travel Award – Jason Ferguson (University of Qld), and Joshua Buru (Queensland University of Technology), Gayle Somerville (University of Western Australia); and
Early Career Award – Claire Wainwright (University of Qld).

Thank you to member societies for promoting these awards.

The main challenge for CAWS this year has been in the area of CAWS procedures when attempting to change sections of the Constitution. The need for these changes was identified by previous CAWS executive members as well as the WA Department of Commerce. CAWS has experienced a number of inadvertent procedural oversights associated with the requirements of the Associations and

Incorporations Act regarding specific timeframes for notification of constitutional changes and payment of membership fees. Unfortunately these oversights have occurred over previous years when these changes have been undertaken by the CAWS executive and have only come to light this year as a result of complaints lodged with the WA Department of Commerce. This resulted in the need to re-run the constitutional amendment changes at the 2015 AGM. Work is ongoing by CAWS to correct all issues regarding these matters.

The CAWS Executive was voted in at the Sept 2015 AGM: President – Rachel Melland SA
Vice-president- Hillary Cherry NSW; Secretary – Kerry Harrington NZ; Treasurer – Alex Douglas WA

The efforts of the CAWS executive as representatives of the member societies were acknowledged by the outgoing President, Anna Marie Penna.

A former member of the CAWS Executive and the Tasmanian Weed Society, David Lane, sadly lost his battle with his cancer in late 2015. CAWS is organising an obituary to honour his memory and pay tribute to his contributions to weed management.

The WA Weeds Society is organizing the 20th AWC in 2016, and has a website up and running: <http://www.20awcorg.au/> to register your interest. The conference theme is "30 Degrees of Weeds". More information will be provided as the program themes and venues are confirmed in early 2016. Also, please remember to "like" the Australasian Weeds Conference on Facebook. You can read all past posts from the last conference and keep updated on the 20th AWC in Perth 11-15 Sept 2016.



Kim Hignell & Hillary Cherry
NSW CAWS Delegates.



Dealing with weed issues within Lake Macquarie A Mini Seminar held before the Annual General Meeting

Jason Harvey - Landcare Coordinator, Lake Macquarie City Council.

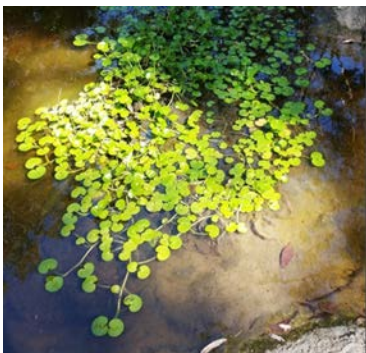
Spoke about the formation of nearly 300 active landcare groups throughout Lake Macquarie and explained the setup of the volunteers with training and guidance in dealing with weeds on their sites.



Dora Creek School planting day with Landcare.
Image: Courtesy of Lake Macquarie Landcare.

Boyd Carney - Bush Regeneration and Volunteer Co-ordinator, NSW National Parks and Wildlife Service.

Explained how NPWS managed bush regeneration with volunteers within national parks and how NPWS works and coordinates programs with others to carry out weed control across land tenures. One of these programs was working with Lake Macquarie City Council treating kidney-leaf mud plantain, a Class 1 Noxious Weed and Peruvian primrose, a Class 2 Noxious Weed within Flaggy Creek that runs through both tenures.



Kidney-leaf mud plantain, *Heteranthera reniformis*, growing in Flaggy Creek within the Glenrock State Conservation Area.
Image: Photo K. Hignell.

Kim Hignell - Vegetation and Pest Management Coordinator, Lake Macquarie City Council.

A quick talk of aquatic weeds of Lake Macquarie, showing interesting photos of many water weeds found within the Local Control Area including photos of before and after control programs at Jewells Wetland.



Alligator weed, *Alternanthera philoxeroides*, happily growing amongst seaweed along foreshore of the lake.
Image: K. Hignell.



Erratum

NSW Weed Industry Award. The Society advises of an error in the details provided on the NSW Weed Industry Award on page 2, *A Good Weed*, Volume #72, Spring 2015. Mr Terry Schmitzer, Mid North Coast Weeds Co-ordinating Committee, was also a finalist for this award.



Root exudates in *Sorghum spp.* including *S. leiocladum*, an Australian native presenting potential constraints for species establishment in infested soils

Xiaocheng Zhu¹, Resham Gautam², Pramod Shrestha² and Leslie A. Weston¹
¹Graham Centre, Charles Sturt University, Wagga Wagga
²School of Medical and Applied Sciences, Central Queensland University, Rockhampton

Australia has 18 native *Sorghum* species and *Sorghum leiocladum* (wild sorghum) is one of the native sorghum distributed across roadsides and mining sites in QLD and NSW (Fig. 1). It was reported as a problematic species that caused replanting failure in central QLD and has potential cyanide toxicity to livestock. None of native sorghum has been well characterized in terms of sorgoleone production.



Fig. 1 *Sorghum leiocladum* and the growth environment. Dawson Mine Area, Moura, Qld. Image: Resham Gautam

Sorgoleone is one of the most well characterized allelochemicals in cultivated sorghum *S. bicolor* and is continuously exuded by living root hairs of many *Sorghum* species. It inhibits photosynthesis or respiration in sensitive seedlings by inhibition of electron transport processes. Previous studies suggested that Johnsongrass (*S. halepense*) and hybridized sorghum cultivars (*S. bicolor* x *S. sudanese*) produced more sorgoleone per g root tissue in comparison to *S. bicolor*.

The wild sorghum *S. leiocladum* from Dawson Mine area (Moura QLD) and eight conventional *S. bicolor* or hybrid cultivars were compared for their differences in germination and sorgoleone production. All sorghum genotypes produced

considerable quantities of golden root exudates (Fig. 2), with sorgoleone being the predominant compound in the root exudates along with other related long chain hydroquinones. Chemical analyses revealed both quantitative and qualitative differences in hydroquinone production among sorghum cultivars and species. Wild sorghum took longer time to germinate (48 hours) as compared with 16 hours required for the conventional and hybrid cultivars. It also produced less root hair (0.010g compared to 0.025g of hybrid and 0.104g of conventional cultivars). However, wild sorghum produced significantly more exudates per gram fresh root (28.45% yield) than other *S. bicolor* cultivars (normally less than 3%), followed by the hybrid cultivars (18.60%).

Exudation of concentrated sorgoleone by sorghum seedlings, particularly those of *S. leiocladum* may contribute to its allelopathic potential in field settings in QLD, including mining reclamation sites. Studies are currently underway to evaluate and compare site and regulation of sorgoleone

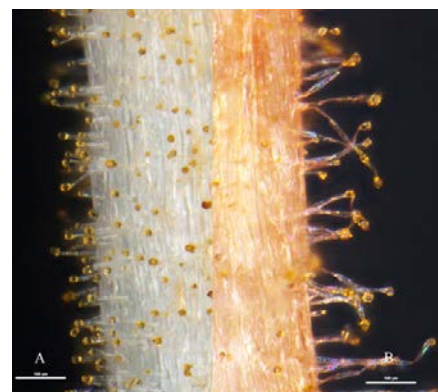


Fig. 2 Roots of *Sorghum bicolor* (A) and *S. leiocladum* (B) showing the golden exudates (A and B) and the golden root epidermal (B).

Further information: leweston@csu.edu.au



A prickly history - Two new *Onopordum* species in our list of aliens

Dr Peter Michael

Research Associate, National Herbarium of NSW

Having just completed my studies at the University of Adelaide on soursob, a well-known bright yellow-flowered *Oxalis* that infested vast areas of wheatland, I turned my attention to thistles which were believed to be a serious problem in pastures of the Southern Tablelands and neighbouring areas in New South Wales. That was way back in 1957 when I began a new job at CSIRO in Canberra.

I knew little about the thistles in question, even though I was brought up on a farm in South Australia where the very prickly yellow-flowered saffron thistle competed strongly with wheat crops and was responsible for thorny vegetable fault in the wool of sheep. It did, however, have one redeeming feature in that its large oily seeds offered good nourishment to sheep in the dry summers.

Thistles were well known in the early days of European settlement, especially encouraged by Scottish colonists who followed the horticulturalists of their day who recommended much statelier thistles than *Cirsium vulgare*, the common black or spear thistle which in my mind is the proper Scottish thistle, not *Onopordum acanthium* commonly called the true Scotch thistle in New South Wales.

In 1963, a few years after I began work on thistles in ACT and NSW they were given more prominence when the Queen at St. Giles' Cathedral in Edinburgh installed the prime minister Robert Menzies as a Knight of the Most Ancient and Most Noble Order of the Thistle, second only in precedence to the Order of the Garter.

I spent 7 or 8 years doing experiments on control of *Onopordum* with competitive perennial grasses and lucerne. During this work I could not escape the difficulties in recognising different species or forms within the genus. Now I am still battling with problems of identity in the thistle genus *Onopordum*. I thought that I had made my final contribution in 1995 when I presented a paper with the title "Necessary background for studies in the taxonomy of *Onopordum* in Australia" at a symposium in Canberra. Earlier this year, however,

when the most recent Australian treatment of *Onopordum* appeared in the first volume of the "Flora of Australia" dealing with the thistle family, people who were familiar with the genus knew that little progress had been made since the 1995 symposium and I was contacted for information on the latest situation.

I had to confess that little work had been done since then and that the genus had been much neglected. A Ph.D. student had done some work but had given up and another student in Berlin had given up after preliminary studies. So! What was I to do? I was concerned enough to have another look at the specimens I had collected, now transferred from the University of Sydney to the National Herbarium of New South Wales, and other specimens already in their collection and to make another thorough investigation of all the available literature.

Would you believe it?

I discovered that two additional species had been introduced to Australia and sometime become naturalised in New South Wales.

One of them of special note collected at Flora Ponds and other places near Quirindi is *Onopordum majorii* Beauverd named after Charles Immanuel Forsyth-Major who collected it in 1887 on the small island Ikaria in the North Aegean Sea not far from Gallipoli.



Onopordum majorii greater cotton thistle. Mature head from plant collected at Flora Ponds. Image scanned from original slide. Peter Michael.



It has since been found in other small Greek Islands and in Crete. It is tempting to think that perhaps some patriotic Scot from Australia brought seed back home 100 years ago and that descendants of the original seed are now growing near Quirindi. My attempt to find something about Flora Ponds led me, thanks to Trove, to a magnificent photograph of a team of horses pulling a load of Macdonald's wool over the Flora Ponds bridge — the name Macdonald lends some support to my idea. Be that as it may, this particular thistle was considered too rare to be considered likely to be found in Australia. It can be recognized by its spiny-edged bracts surrounding the flowering heads, a feature unknown in other members of the genus.

The second thistle, another species from Greece and adjacent eastern regions is the tall spreading thistle *Onopordum myriacanthum* Boiss. (syn. *O.bracteatum* ssp. *myriacanthum* Boiss.).



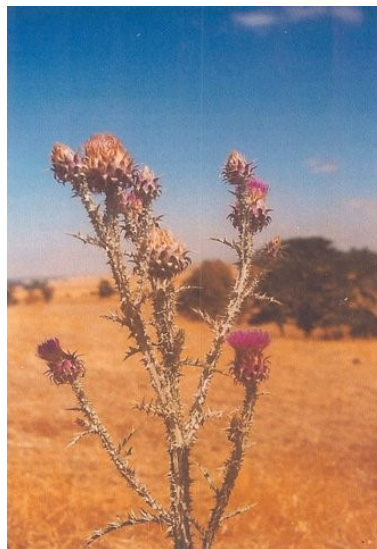
Onopordum myriacanthum plant at Piambong near Mudgee. Image scanned from original slide. Peter Michael.

It was probably introduced to Australia under the name *Onopordum bracteatum* Boiss. & Heldr. in Boiss.as an ornamental. It is listed by Randall in his "Introduced flora of Australia and its weed status", but without any annotation as a weed.

It is found in communities between Orange and Mudgee and is noted especially for its powerful thorny bracts surrounding the flowering heads. The points of the bracts are longer than in another species, *Onopordum illyricum*, native along the eastern coast of the Adriatic Sea and now common here and there in New South Wales and in Central Victoria. Illyria is an old regional name for the north-eastern coastal region of the Adriatic Sea.



Onopordum illyricum Illyrian thistle in paddock, Central Victoria. Image scanned from original slide. Peter Michael.



Onopordum illyricum Illyrian thistle in paddock, Central Victoria. Image scanned from original slide. Peter Michael.

I acknowledge the support in the collection of specimens by Bruce Auld, Dick Medd, Val and Colin Stubbs, Jim Cherry, Royce Holtkamp and John Hosking and the help from staff at the NSW Herbarium and the volunteers who have so painstakingly mounted the prickly specimens.

The results of these studies indicate the value of the resources given to the National Herbarium of New South Wales. When one considers the great number of specimens available for further study, the Weed Society of NSW should perhaps consider ways in which further support and encouragement could be given to further taxonomic studies.

Further information:

Dr Peter Michael pwjemichael@hotmail.com



Chemical Updates from Dow AgroSciences A long-time sponsor of the Weed Society of NSW



Better weed control with Stinger from Dow AgroSciences

Stinger™ Herbicide is the solution to large blackberry infestations. If you're planning a serious war on woody weeds then Stinger Herbicide provides your economical, first strike.

Using Stinger there's **less to re-treat** and **better secondary weed control**.

Stinger applied by high volume handgun at 20 g/100 L water for blackberry or 30 g/100 L water for gorse gave good regrowth suppression two seasons after application, when compared to the label rate of metsulfuron^{1,2}.

Trials were conducted from Northern NSW to Victoria to determine the brownout and efficacy of Stinger applied by high volume method. Nine blackberry and two gorse trials demonstrated that Stinger gave better brownout and final control than label rates of metsulfuron. These results are shown in Tables 1 and 2 below.

Table 1. Average brownout and control of blackberry by Stinger at 20 g/100 L.

Treatment	Brownout	Control
Stinger 20 g/100 L	68%	86%
Metsulfuron 10 g/100 L	50%	79%

Table 2. Average brownout and control of gorse by Stinger at 30 g/100 L.

Treatment	Brownout	Control
Stinger 30 g/100 L	100%	95%
Metsulfuron 15 g/100 L	83%	88%

Stinger Herbicide provides:

- Superior control of secondary weeds
- Retention of grasses
- Faster brownout
- Less to re-treat

Strategy for Large Blackberry Infestations

When faced with wall-to-wall blackberry, Stinger Herbicide is an effective, economical knockdown treatment.

First Strike. Year 1

Knockdown with Stinger. Stinger Herbicide is the new solution that delivers cost-effective knockdown of large-scale blackberry infestations.

Second Strike. Years 2-3

Follow up with Grazon™ Extra. It's vital to follow up previously treated areas with Grazon Extra to control regrowth so you don't waste the money you have initially invested.

Clean Up. Years 4-5

Clean-up seedlings with Grazon Extra. Clean up and spot spray with Grazon Extra. Continue to check paddocks and ensure no seedlings become established.

References

¹ Wells, G.S. and Love, C.O. (2014). Stinger Herbicide – new option for hard-to-kill weeds in pasture. Proc. 5th Biennial Conference, Geelong Victoria

² Wells, G.S., Love, C.O., Elias, N.V, Plater, C.L. & Annetts, R.A. (2013). Aminopyralid + metsulfuron-methyl for cost-effective control of hard to kill pasture weeds. Proc. 22nd International Grassland Congress, Sydney, New South Wales



Blackberry *Rubus fruticosus*



Chemical updates

Introducing the “Woody Weed apps”

For weed control at your finger tips Dow AgroSciences has released two apps: one for smart phones and one for tablets.

Woody Weed app



This app for tablets has all the latest products and weed information to ensure you can stay up to date with the latest in woody weed control. It contains categorised and easily accessible information on:

- Basic weed biology
- Optimal time of treatment for each weed
- The range of herbicide control options available
- Best practice “how to” application videos.
- Relevant Herbicide labels and safety data sheets

There is also a useful section on treatment options: what technique to use, what to avoid and why.

Rate Finder app



For iPhone and Android smart phones this app allows you to match any Dow AgroSciences Woody Weed herbicide to the weed(s) it controls, and shows you the application rate at which it should be applied.

The Apps don’t require any cellular or internet connection, so you can find the right product for the right weed at any time and any place, in just a few seconds.

The apps can be found in the App Store or in Google Play.

Further information:

www.woodyweedspecialists.com.au or call Toll free 1800 700 096

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Blackberry (tall dark green clumps) & *Rubus leucostachys* (short spreading green clumps). Image: John Hosking.



Blackberry infestation. Image: John Hosking.



Gorse readily infests creek banks. Image: Sandy Leighton.



Gorse flower and spines. Image: Sandy Leighton.



Society Travel Assistance Grant Report

Terry Inkson

Noxious and Environmental Weed Co-ordinator

Great Lakes Council

With the assistance of a "Society Travel Grant" from the Weed Society of NSW, I was able to fund my full registration to the 18th Biennial NSW Weeds Conference in Cooma. This is my sixth attendance to NSW weed conferences and the second in which I have presented. I am very grateful the Society sees fit to offer grants such as this because in these dire economic times, funds received through the "Society Travel Grant" greatly assisted me build a case to my employer for my attendance at this function.

Over all I thought it was a good conference and very much enjoyed my trip to Cooma. I'm not sure of the official numbers but it was well attended with nearly 300 delegates at this conference. There were components at Cooma that I have not seen at any other conferences which included the seating arrangements in the main auditorium and the day long Trade Display that was open to the general public.

There were many excellent presentations conducted over the three day event and of those that I attended I thought some highlights were Andy Sheppard from the CSIRO with his talk on 100 years of continually successful weed biological control in Australia; Jane Frances from NSW Department of Primary Industries (NSW DPI) with her talk on the NSW Invasive Species Plan 2015-2022; Elouise Peach from Office of Environment and Heritage, National Parks and Wildlife Service (OEH NPWS) Staring down the oxeye daisy; Mark Hamilton from Hawkweed Eradication from NSW: Could this be 'the first'?; Josh Biddle from New England Weeds Authority with his talk on the practical application of state of the art unmanned aerial vehicles and imaging technology to on-farm property management of invasive weeds and pests; Sandie Jones from NSW Environment Protection Agency (NSW EPA) with her talk on pesticide regulation-weed related perspectives on use, storage and disposal in South-eastern NSW and last but not least, my own talk on Cabomba control for the protection of the Ramsar listed Myall Lakes (come on, did you really think I wasn't going to mention that!).

A very entertaining and informative interactive

demonstration was conducted between Hillary Cherry from NSW OEH NPWS with the Hawkweed Eradication Detector Dogs "Sally" and "Connor". These working dogs have been trained and engaged in "Olfactory Surveillance" to detect orange hawk weed. This is a fantastic concept being put to use serving its most appropriate target (outside of drug enforcement) "weeds of limited distribution & the detection of new and emerging species". In my opinion it makes great sense to use this type of resource in this particular situation because it is increasing the odds of finding those last hidden plants. There is currently two dogs at work for OEH NPWS, Conner an English Springer Spaniel and the "new kid on the block" Sally, a young black Cocker Spaniel.

Other highlights at the conference included a social dinner at one of three superb local establishments that allowed for weeds professionals to network in a relaxed atmosphere, the formal presentations ceremony with celebrity guest speaker the one and only "Ooh Ahh" Glenn McGrath, and on day 2 a choice of three field trips.

The field trip I chose was "The Lakes plus a little bit of local trout", where participants got to travel to beautiful Lake Jindabyne where we saw the Jindabyne Surge Tank, Lake Eucumbene where we managed to view the Eucumbene Cove Dam Wall and marvel at the vastness of the inland lake which is 9½ times the size of Sydney Harbour and then onto the Eucumbene Trout Farm where we enjoyed a tasting plate of smoked Trout nibbles, and a first for me with alpacca "Long Necked Lamb" skewers, this then followed by fresh BBQ'd Trout with chips and salad tossed in a locally produced honey mustard and poppy seed dressing, gee it was tough, but in this job you learn to take the good with the bad.

An interesting thing I observed while travelling the region, which I thought was quite different to "our style" of weed management on the coast was a far greater focus on widespread agricultural



weeds such as serrated tussock and African love grass and a lesser approach to new and emerging weeds of limited distribution garden escape plants such as hawthorn, the brooms etc (that is of course apart from the most excellent orange hawkweed eradication program at Kosciuszko National Park).

Oh and by the way, after seeing the orange hawkweed presentation and detector dog demonstration it inspired me to help, so I am hoping to spend some time volunteering to assist with the Hawkweed eradication program over the duration of the project, so if anyone else is interested I'm sure Hillary Cherry and the National Parks team would welcome your offer to assist.



Devastating - Eucalyptus dieback in Ribbon Gums within the Granite rock outcrops near Cooma. The Monaro dieback zone covers an area around 2000 km², with both rural agricultural lands and natural reserves being equally affected. Image: Terry Inkson.



Old Hand English Springer Spaniel "Connor", a detector dog used in the search for orange hawkweed, suiting up for a demonstration of his prowess. Image: Terry Inkson.

Sponsorship Thank You

**Robert Stephens, Weeds Officer
The Council of The Bourke Shire**

Being new to the noxious weeds industry, I feel that it is important that I take every opportunity given to learn more about this industry. Being a successful recipient of a free admission offered by the NSW Weeds Society to the 18th NSW Weeds Conference held in Cooma recently, I had the opportunity to further my knowledge in this area.

The conference on a whole was very informative and provided great networking opportunities for me. I found all the speeches very educational and informative and presenters very knowledgeable. Some of the highlights for me being:

- James Litchfield's speech on celebrating 150 years of Merino and Angus breeding on the Monaro.
- Andy Sheppard's speech on 100 years of continually successful weed biological control in Australia.
- Michael Michelmore's speech on changing Noxious Weeds Act and NSW Biosecurity Act.
- Aisuo Wang's speech on invasive grass species via DNA barcoding.
- Meeting with fellow weeds officers to discuss topics about the Noxious Weeds industry.

Another highlight of the conference was the field trip that I went on to the Monaro Grasslands & Windfarm and the information of the Snowy River Project, given by the Local Lands Services member.

Finally, I would like to thank Bourke Shire Council and the NSW Weeds Society for assisting me in attending this very worthwhile conference. This was an essential learning opportunity in my new career as Weeds Officer for Bourke Shire Council.



Robert Stephens, Weeds Officer, The Council of The Bourke Shire, was a recipient of the Society's free conference registration. Image: ????



Awards of the Weed Society of New South Wales for 2016

(Details of all awards, including closing dates, at www.nswweedsoc.org.au)

Society Travel Assistance Grant

Limited travel funds are available to be allocated each year as a Travel Assistance Grant to assist eligible members with national and/or international travel. A maximum of **\$1000** is available per member for assistance in travel expenses, to be used at the discretion of the successful applicant for payments such as registrations, accommodation, fares and/or meals. Preference may be given to members who will be presenting at the event.

Applicants must be over the age of 18 years must have been a financial member for two consecutive years including the current financial year. Applications are required to be lodged in advance of travelling and funds must be used within 1 year of being approved.

Rarely will the grant meet all of the travel expenses so the applicants are expected to demonstrate that the balance of funding is available from other sources. Funding is NOT available for local travel within 250 kilometres of the applicant's usual workplace. **Applications must be received by 1 May each year.**

University Under-graduate Prize

An annual award to under-graduate students at universities who study a weed science subject and who have been recognised by the Faculty for excelling in this subject. The Society offers a \$250 prize plus 12 months free Society membership. The prize will only will be provided if the weeds course is sufficiently comprehensive to warrant support. **Nominations are made by the participating institutions.**

Medal for Excellence in Weed Management



The Society provides a Medal for Excellence periodically to recognise the sustained and influential contributions made by an individual to weed management in New South Wales.

The Awards Committee calls for nominations from Society members with a **closing date of 30 August each year.**



There will be expert presentations and field trips on a variety of topics including;

- Herbicide Resistance
- Weeds of National Significance
- Agricultural weeds
- Environmental weeds
- Biological control of weeds
- Modelling and new technologies to manage weeds
- Legislation, regulation and policy to manage weeds

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NOTE: change of postal address

Committee Meeting Dates

Committee meetings will be held in February, April, June, August, October & December 2016. Dates to be advised.



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

Let us know about local and regional news, 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.

Material should be sent to:
editor@nswweedsoc.org.au

Submission dates for material for 2016 are:

- #74 Autumn 2016 28 February 2016
- #75 Winter 2016 31 May 2016
- #76 Spring 2016 31 August 2016
- #77 Summer 2016/17 30 November 2016



The e-newsletter is a maximum of two pages and we welcome contributions of one or two brief paragraph from members, or even nonmembers, on something to do with weeds and of interest to Society members.

Send material to editor@nswweedsoc.org.au

Please include contact details so readers know where to obtain more information.

'A Good Weed' & 'Punnet Tray' are produced by The Weed Society of New South Wales Inc.

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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



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