

A Good Weed

The Newsletter of the Weed Society of New South Wales Inc.

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#40 November 2006

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A Good Weed is Published by the Weed Society of New South Wales Inc., PO Box 438, Wahroonga, NSW, 2076. Website: www.nswweedsoc.org.au

Secretary: Alan Murphy. Material for the Newsletter should be sent to the Editor at the above address.



Top to bottom: Asthma weed, Pampas grass, Rhizomatous bamboo, and Green Cestrum.
www.sydneyweeds.org.au



**THE WEED SOCIETY
OF NEW SOUTH WALES INC.**

Office Bearers for 2005/06

President	Warwick Felton [Tamworth]
IPP	Bob Trounce [Orange]
Vice President	Stephen Johnson [Orange]
Secretary	Alan Murphy [Umina]
Treasurer	Jim Swain [Sydney]
Public Officer	Mike Barrett [Sydney]
Publicity Officer	John Cameron [Sydney]
Newsletter Editor	Mike Hood [Sydney]
Assistant NE	Lawrie Greenup [Sydney]
CAWS Delegates	Rex Stanton [Wagga Wagga] Stephen Johnson [Orange]
Committee	Peter Harper [Ingleburn], Peter Dowling [Orange], Rex Stanton [Wagga], Bertie Hennecke [Richmond], Jim Dellow [Orange], Alec McLennan [Sydney], Luc Streit [Sydney].

Committee meeting dates have been set as follows:

June 16, 2006	Castle Hill Council	October 20, 2006	Forestry, West Pennant Hills
August 18, 2006	Katoomba	December 15, 2006	Castle Hill Council

All members are welcome at meetings; check with the Secretary for the final date, time and place as changes can be made to these arrangements.

Aims of the Weed Society of NSW

The Society was formed in 1966, the first weed society in Australia. It is affiliated with similar societies in Queensland, Victoria, South Australia, Western Australia, Tasmania and New Zealand under the umbrella organisation The Council of Australasian Weeds Societies [CAWS]

The aims of the society are:-

- o To promote a wider interest in weeds and their management
- o To provide opportunities for those interested in weeds and their management to exchange information and ideas based on research and practice.
- o To encourage the investigation of all aspects of weeds and weed management
- o To co-operate with other organisations engaged in related activities in Australia and overseas
- o To encourage the study of weed science and the dissemination of its findings
- o To produce and publish such material as may be considered desirable

Membership is open to all and costs \$30 per annum. For an application form contact the Secretary at PO Box 438 Wahroonga, NSW, 2076 or www.nswweedsoc.org.au

Next Function

Annual General Meeting and Dinner

Pennant Hills Golf Club, Copeland Road, Beecroft, Sydney

Thursday 23 November 2006

- 1400** Meet at car park adjacent to the practice nets
1400-1600 Informal walk, talk and inspection around the golf course
Weeds in urban bush and turf. Lead by Richard Kirkby,
Course Superintendant of PHGC. Richard is a very
experienced Superintendant and will present an interesting
and informed session.
1630-1730 Annual General Meeting and election of office bearers for
2006/07 [in the Vickers Room]
1800-2100 Annual dinner [6 for 6.30 start]

Cost of dinner \$50 per head – includes 3-course meal, tea/coffee and
wine with meal. No charge for the field walk. Pay on the night.

**PLEASE CONFIRM FOR THE DINNER BY FRIDAY 17
NOVEMBER 2006. PLEASE ADVISE IF ATTENDING THE FIELD
WALK AS WELL. IF ATTENDING THE FIELD WALK ONLY IT
WOULD BE HELPFUL IF YOU COULD ADVISE BY 22
NOVEMBER**

ADVISE – Mike Barrett Fax/phone 9980 1662 or the Secretary

Nominations for the Committee 2006/07

As always, we need new blood on the committee. You don't need to live in Sydney as we now use telephone hook-ups for meetings allowing attendance no matter where you live or work. If you are not attending the AGM in person nominations can be sent to the Secretary. Nominations should confirm that the nominee is prepared to stand for election.

Weed Society Review

Over the past couple of years, the Executive has been concerned about declining financial membership and the apparent increasing age of membership. Having just celebrated the 40th year since the Weed Society was launched, it seemed an appropriate time to review the role and future

direction of the Society. The rapid changes in the commercial and environmental landscape require a review of the Society to ensure relevance to its membership.

A disappointing response to a questionnaire prepared by Michael Micheltore appeared in *A Good Weed* #37, and prompted a further effort by the Executive to obtain this information from the membership, this time by email. A modified questionnaire was prepared by Peter Dowling and Stephen Johnson and sent to members in May. The response by members was improved, but still disappointing. A report collating the replies was presented to the Executive in August 2006. A summary of the Review was prepared by Warwick Felton, President of the Society, for the Executive Meeting held on 20th October 2006, and appears below.

- Unless the Society attracts more members from environmental groups, local government, CMA's, and from participants in the CRC, membership numbers will continue to decline.
- Members were most enthusiastic about the Newsletter which was seen as the main avenue of contact for the majority of members. The Newsletter provides a broad range of activities, interests and networking opportunities that promoted an interest in weeds and their management within the state.
- The Newsletter needs to attract articles from more members to add diversity and interest.
- Some respondents to the survey believe greater emphasis in Society activities is required on environmental issues.
- There was a request that more should be done for primary and secondary education as the current focus is at tertiary levels.
- The suggestion that the Society should undertake a specialist technical publication is not a feasible proposition. This requirement can be met in part by expanding the subject matter in the Newsletter.
- The website appears to have limited appeal which probably is a function of less effort being put into it than the Newsletter. Currently being addressed.
- In general Weed Societies have limited interaction with the Weeds CRC. Steps have been taken to address this situation but CAWS should undertake a more active role in enhancing links with the CRC, and in promoting the member Societies.

Have You Paid Your Subs Yet? Most members have but there are still a few who have not.

- The subs are necessary to :
- Confirm your membership
- Help fund the Society
- Allow the holding of seminars
- Finance the newsletter
- Pay the overhead costs that the Society has to meet if it is to function.

\$30 is not a large amount, less after you claim a tax deduction and nothing if you can claim it from your employer.



Lunch break at the Poisonous Plants Seminar

Coming Events

- **16th Australian Weeds Conference.** Cairns, north Queensland. 19-22 May 2008. www.16awc.com.au/
- **9th International Conference on the Ecology and Management of Alien Plant Invasions.** Hyatt Regency Hotel, Perth, WA. 17-21 September 2007. Organised by the Weeds Society of WA [WSWA]. www.congresswest.com.au/emapi9/.
- **5th International Weed Science Society Conference.** Vancouver, Canada, 2008.
- **9th Symposium of the Weed Society of Queensland.** June 3-6 2007. Gold Coast, Queensland. www.wsq.org.au
- **41st Weed Society of Victoria AGM and Seminar – Over the garden fence and far away...** communities actions on weeds – 19 April 2007.
- **Weed Society of Victoria Third Biennial Weed Conference – Earth, fire, water and wind, their effects on weeds.** 3-4 October 2007, All Seasons International Hotel, Bendigo.
- **14th Symposium European Weed Research Society, Hamar, Norway.** 18-21 June 2007. www.EWRS-Symposium2007.com

Some Useful Weeds Websites (Source www.nationalparks.nsw.gov.au/npws)

The [Water Weeds of NSW](#) website gives photos and information on the legal status of aquatic weeds. The [CRC Weed Management](#) website lists what not to plant for your chosen region and links to information on those plants and, where available, native plant alternatives.

Northern NSW

The [North Coast Weeds Advisory Committee](#) website provides weed resources from Nambucca Shire to the Queensland border

The [North West Weeds](#) website offers weed information for Barraba, Bingara, Inverell and Yallaroi shires

The [Far North Coast Weeds](#) website lists 187 weeds and gives information about the Bushland Friendly Nursery Scheme

The [Queensland Environmental Weeds Management Group](#) website has strategies, weeds lists, newsletters, weed information sheets and assorted information useful to weedbusters in Northern NSW.

Central NSW

The [Sydney Regional Weeds Committees](#) website contains information on noxious and environmental weeds, community involvement, and regional weed strategies

The [Bushland Weeds of the Sydney Region](#) website contains commonly cultivated plants that invade native bushland, listed by common and scientific names

The [Parramatta City Noxious Weed Information](#) website has simple explanations of noxious weed regulations

The [Warringah Council's Weed Control](#) website has common weeds in the northern Sydney area

The [Weeds of Blue Mountains Bushland](#) website shows how weeds spread, and has good photos, descriptions, native alternatives and control information. The [Weeds of the Olympic Catchment](#) website gives good, clear photos and descriptions.

Southern NSW

The [South Coast Weeds](#) website covers Bega, Eurobadalla, Illawarra and Shoalhaven shires

'[Are your garden plants going bush?](#)' is a great colour brochure from the ACT

Pesticides in National Parks

The National Parks and Wildlife Service [NPWS] gave notice of exhibition of draft pesticide use notification plan in newspapers in July 2006 and called for comment. The NSW Pesticides Regulation 1995 requires public authorities such as the NPWS to prepare a Pesticide Use

Notification Plan that outlines how they will notify the community of pesticide applications made to public places.

The NPWS has prepared a draft plan. The plan describes:-

- what public places are covered by the plan
- who regularly uses these public places and an estimate of the level of use
- how and when NPWS will provide the community with information about its pesticide applications in public places
- how the community can access this plan and get more information

The plan covers all lands acquired or reserved under the NPWS Act 1974.

The plan can be viewed on www.nationalparks.nsw.gov.au

Editors Comment: The deadline for comments will have passed by the time you read this but this article is inserted for information purposes.

The Lord of the Weeds Competition Results

*Susanna Greig, Educational Officer, CRC for Australian Weed Management, University of New England, Armidale NSW 2351 Tel: (02) 6773 2809 Email: susanna.greig@une.edu.au
www.weeds.crc.org.au*

The 'Lord of the Weeds' is a national secondary schools competition developed and organised by the Cooperative Research Centre for Australian Weed Management (CRAWM). Students involved in the competition study a local weedy area, and then prepare a report that introduces the weedy area, identifies the weeds, describes the problems caused by the weeds, recommends the most suitable management strategy and argues the merits of their suggestions.

In 2006, 146 school groups from across the nation entered the competition, the greatest number in the competition's three year history. The quality of reports submitted this year was excellent and through this competition, many students have completed very worthwhile projects. In 2006, the Lord of the Weeds competition offered additional prizes due to the financial support offered by the following societies: SA and NSW Weebusters, Weed Society of Western Australia, Weed Society of New South Wales, Tasmanian Weed Society, Weed Society of Victoria, Weed Management Society of South Australia, Weed Society of Queensland and the Council of Australasian Weed Societies. The winning schools in 2006 were as follows:

School	Description of prize
Tintern Girls Grammar	CRAWM jnr sec 1 st
Narara Valley High School	CRAWM jnr sec 2 nd
James Sheahan Catholic High School	CRAWM jnr sec 3 rd
Manley Selective Campus	CRAWM snr sec 1 st
Frensham	CRAWM snr sec 2 nd
Narara Valley High School	CRAWM snr sec 3 rd
James Sheahan Catholic High School	CRAWM snr sec 3 rd
Finley High School	New South Wales Weed Society
Mazenod College	Victorian Weed Society
Cleave Area School	Weed busters South Australia
Gawler High School	South Australian Weed Management Society of

Burnie High School	Tasmanian Weed Society
Mater Dei College	Weed Society of Western Australia
Leeming Senior High School	Weed Society of Western Australia
Southport High School	Weed Society of Queensland
St Josephs High School	Council of Australasian Weed Societies

Please be sure to view these winning reports from our website www.weeds.crc.org.au/for_schools/index.html by following the links to 'Lord of the Weeds'.

Greater awareness of weeds in the wider community should be more achievable if we start with the younger generation in schools today. Through this competition, weeds are becoming part of the curriculum in many schools across the nation.

In 2006, the Weed Society of NSW offered \$200 as prize money to a school in NSW. [Editors Note : If you feel support for this project should be extended please contact a member of the committee and put your point of view.]

Weed Society of Victoria celebrates 40 years

From Weedscape September 2006

The Weed Society of Victoria celebrated its 40th birthday recently with a dinner at the Melbourne zoo. The tables were appropriately decorated with numerous weedy flowers and weedy vegetation, with the vases being *Cynara scolymus*. The meal started with *Asparagus officinalis* and ended with a serving of *Rubus fruticosus* with a few other appropriate plants being consumed in between.

The celebration was attended by past presidents of the society including Harry Combellack, Ian Anderson, Rosemary Henderson, Daniel Joubert [current president], Kelly Raymond, Wendy Bedggood, Rob Richardson, Ros Shepherd, Chris Knight and Kate Blood.

Congratulations Victoria, from the NSW Society.

All states ban the sale of willows

From Weedscape September 2006

Most willows are now banned from sale or distribution in all Australian states and territories. Victoria, Western Australia and the Northern Territory recently joined the other five states in declaring willows as noxious weeds. It is not illegal to sell, propagate or knowingly distribute most willows anywhere in Australia and the control of certain willows is required in some areas. For a summary of the current legislative status of willows go to www.weeds.org.au/WoNS/Willows and click on "Declaration status of willows in Australia".

Promotional Card/Bookmark

Your society has published a promotional card or bookmark to help publicise our aims and activities. A copy is enclosed in this edition of A Good Weed. Please use it to promote the Society. Multiple copies are available from the Secretary. Amongst other possible uses it makes a good book mark.

New Members

Welcome to the following new members:-

Vinod Chejara Ph.D. School of Rural Science and Agriculture, University of New England, Armidale, New South Wales

Stuart Willows, Principal, NSW Department of Education and Training, Dorrroughby, New South Wales

Alex Zander, Technical Officer, Charles Sturt University, Wagga Wagga, NSW.

Kerry Brougham, Weed Management Officer, NSW National Parks and Wildlife Service, Hurstville, NSW.

Report on Seminar "Poisonous and Allergenic Plants – Where are they?"

Lawrie Greenup, Chair, Seminar Organising Committee

Interesting topic, top speakers, great presentations, professional chairs, good venue – unfortunately numbers weren't that good. However, the people who attended shared my views about the seminar's high standard and came away feeling the seminar was well worth while. This was reflected in the survey of attendees.

The concept for the seminar was to use poisonous and allergenic plants as the example to look at which plants were permitted into Australia, how were they assessed and, if necessary, restricted, and what is the existing legislation at both the federal and state levels. The seminar also looked at the main species causing problems, their availability to the public, a local government case study with *Parietaria* and, finally, the actual cases of poisoning. Rachel McFadyen and John Virtue, with top class presentations, set the scene as the two

Alan Watterson, Teacher/Botanist, NSW Department of Education and Training, Dorrroughby Environmental Education Centre, Mullumbimby, NSW.

Kathryn Adams, Senior Project Biologist, Agrisearch Services Pty. Ltd., Orange, NSW.

Neil Adams, Project Biologist, Agrisearch Services Pty. Ltd., Orange, NSW.

Kim Hignell, Vegetation Control Officer, Lake Macquarie City Council.

keynote speakers; Ros Shepherd gave an overview of the plants involved; Sue Stevens, the local government *Parietaria* case study and, Andreas Glanzig looked sale, availability and potential problems with certain plants. Risk assessment at the federal and state level, as well as the NSW Noxious Weeds Act, were covered by Belinda Riddle, Biosecurity Australia and Stephen Johnson, NSW DPI. The day concluded with a summary of the 'real' situation by Genevieve Adamo, Poisons Information Centre.

The Society would like to take the opportunity to thank the speakers for their excellent presentations and meeting all the deadlines regarding their abstracts and PowerPoint presentations. Thanks, also, to the 'helpers' and sponsors who made the day flow so smoothly: - Warwick Felton, Mike Hood and Jim Swain for chairing the sessions; Warwick and Mike Barrett for the welcome and summation respectively; Stephen Johnson and Bob Trounce for editing and producing the seminar proceedings; Jim and Alan Murphy for manning the registration desk; Erica MacKay for ensuring the PowerPoint presentations went without a hitch; the

sponsors - Bayer Crop Science, Chemcert New South Wales, Dow Agrochemicals, drumMUSTER, FarmCare Training and NSW Department of Primary Industries and, finally, the organising committee - Mike Barrett, Bertie Hennecke and Luc Streit.

Most papers from the Seminar will be published in this newsletter over the next few editions. Several appear in this edition.

**September Sydney Seminar - Weeds -
Woe to Go IV - Survey Results**

Programme	4.7
Theme	4.6
Keynote addresses	4.5
Morning presentations	4.4
Afternoon presentations	4.3
Proceedings	4.4
Venue	4.5
Lunch and teas	3.8
Value	4.7

SCALE Poor 1 Average 3 Very Good 5
Mean of 13 returns

Mike Barrett
09/10/06

Report on the 15th Australian Weeds Conference 'Managing Weeds in a Changing Climate' 24 – 28 September 2006.

*Report by Dr Stephen Johnson, NSW DPI, Orange and
Dr Rex Stanton, NSW DPI, Wagga Wagga*

The 15th Australian Weeds Conference held recently in Adelaide was another highly successful conference co-convened by the Weed Management Society of South Australia and the Council of Australasian Weed Societies. There were over 450 attendees, predominantly drawn from Australia and New Zealand but also visiting from Europe, North America, Africa and throughout Asia.

The conference focussed on the management of weeds in a changing climate. A symposium on climate change and what this might mean for weeds was a key part of the conference. Other symposia and plenary orations focussed on Crop weed management, Riparian vegetation and Invasive alien species. These presentations were delivered by well recognised international weed scientists.

Concurrent paper presentations focussed on a number of areas including: National Initiatives (e.g. Weeds of National Significance), Animal dispersal of weeds, Social and policy change for better weed management, Biology and ecology of crop weeds, Environmental weeds and Impacts, Crop weed management, Herbicide resistance, Biological Control, Weed Eradication, Regional weed management, Aquatic and riparian Weeds, Pastures and forestry, Weeds and Mining, Economics, Weed Risk Assessment, Community Participation, and New chemicals.

A total of 256 papers and poster/papers were presented at the conference. These papers are contained in a 904 page proceedings. Further copies of the Proceedings are available from the publishers R.G and F. J. Richardson.

R.G. and F.J. Richardson were one of twelve trade displays present at the congress. The text recently supported by CAWS, 'Weeds of the South East' by Richardson, Richardson & Shepherd, was available for purchase and attracted a number of sales.

Four field trips were held on Wednesday 27th and these visited various agricultural and environmental sites. A novel 'active' weed management field trip even allowed delegates to get their hands dirty and help local efforts to remove weeds, while three field trips also sampled some South Australian wines along the way.

Grassland Society of NSW Conference –Waging War on Weeds

Haydon Lloyd Davies

The Grassland Society of NSW held their 21st Annual Conference in July, with the theme of “Waging War on Weeds - Battle Plans and Winning Strategies”, at Joyes Hall, Charles Sturt University in Wagga Wagga. The conference was officially opened by Prof. Deirdre Lemerle, the Director of the E H Graham Centre for Agricultural Innovation. During the conference, society President Mick Duncan conferred life membership on Warren MacDonald and Haydn Lloyd Davies.

The estimated economic cost of weeds to pasture-based livestock systems is \$2,404 million dollars. Integrated Weed Management (IWM), including grazing management as well as herbicides and fertilisers, could improve economic returns by 70% over a 20 year period. A pro-active approach to weed management in permanent pastures is far more productive than simply reacting to weeds with herbicides.

New and existing weeds in the southern grazing lands of New South Wales can be summarised in four categories of weeds: 1) Difficult to control weeds with limited distribution eg Chilean needle grass, Coolatai grass, Blue Heliotrope and Silver Leaf Nightshade; 2) Trees or shrubs with relatively small infestation - eg Gorse and Scotch Broom; 3) Weeds already widely distributed but expanding –Serrated tussock, St. John’s Wort, African lovegrass and blackberry and 4) Weeds present and with potential to have a negative impact - eg – Nassella species, Stipa and Knapweeds.

Some weeds can be used advantageously as fodder. Stephen Hunt of ‘Pine view’, Coolatai, rather than attempt eradication

found ways to utilise Coolatai grass. The Coolatai grass is grazed heavily in spring, summer and autumn, with the cattle offered supplements containing urea, ammonium sulphate and copper sulphate in open troughs.

Serrated tussock costs between \$15,000 and \$20,000 in control and lost production. Due to herbicide resistance starting to be detected, land managers should NOT rely solely on herbicide type to control serrated tussock. The Nicholls’ of “Yellangallo, Gunning strategy to manage serrated tussock is to use Fluprofonate for initial control, followed by a crop of triticale then a cocksfoot/phalaris/ subterranean clover pasture. By endeavouring to keep the pasture level above 800 kg/ha D.M., the carrying capacity of their pastures has increased from 2-3 DSEs per ha to 7, even in drought.

Biological control can reduce weeds to minor components, but they will not eradicate a weed species. Max Cowie of “Koornong” Tarcutta, controlled 225 hectares of Paterson’s curse using the Paterson’s curse flea beetle. Since ceasing spraying as their primary control technique, they have noticed an increase in the return of beneficial insects and worm activity.

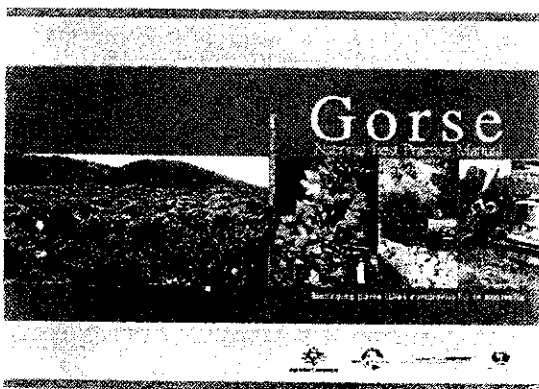
Silage and haymaking can be used to manage weeds in pastures, with the techniques selectively used to manipulate pasture composition through to the timing of the operation. The growth stage of the pasture weeds at the time of cutting will determine the impact cutting has on future pasture composition. It was suggested that a maximum of 25-30% broadleaf weeds should be included in the silage or hay to maintain fodder quality.

Christopher and Margot Wright, “Yerra Binda”, Wollomombi, Armidale found that planned grazing played an important role in controlling weeds. Since changing their grazing management twelve years ago to

short grazing periods with high stock density and a long recovery period, they have not used any herbicides and have found no need to drench for internal parasites. The only weed which worries them is a woody weed - blackberry.

Presenters generally indicated that fighting weeds in pastures was a greater challenge than dealing with weeds in crops. Land managers should aim at having a minimum of 1.5 tonnes per hectare of pasture, ideally with 60% of perennial grasses in the herbage mass, to effectively compete with weeds. The key to weed control is to not over utilise pastures, but to maintain them in a competitive, productive state.

Gorse National Best Practice Manual - a new resource for land managers



Jonah Gouldthorpe
Project Officer (National Gorse Best Practice Manual) Weeds of National Significance program (03) 6233 3154. Land Conservation Branch, DPIW, 13 St Johns Avenue, New Town TAS 7008

The Gorse National Best Practice Manual was launched by Senator Eric Abetz, Minister for Fisheries, Forestry and Conservation at Sutton, on 16th October.

The manual is the most recent in a series of management guides produced for Weeds of National Significance. DPI NSW has

contributed to the manual through its representation on the National Gorse Taskforce. Funding was provided by the Australian Government's Defeating the Weed Menace program, including employment of Project Officer Jonah Gouldthorpe and production and distribution of the manual.

The Gorse national best practice manual has taken 12 months to complete and synthesises information and experience from weed officers, scientists, contractors and land managers across Australia and New Zealand. The text has full references for readers who want to seek more detail. Officers who extend weed management information to the public will find the following sections of the manual extremely useful:

- Washdown guidelines for preventing spread
- Control methods – how to make a variety of techniques work
- Control costs – \$/ha breakdown on control methods
- Cost comparison of herbicides registered for gorse control
- Decision support tool with programs for pasture, native bush and riparian zones
- 13 “real life” case studies featuring gorse control programs from commercial grazing properties and conservation areas
- Bureau of Rural Science's new A field manual for surveying and mapping nationally significant weeds as a CD insert in the back of the manual.

The manual is available in electronic format from www.weeds.org.au/WoNS/gorse, or hard copy from the National Gorse Coordinator, Department of Primary Industries and Water, Tasmania. Phone 1300 368 550 for a free copy.

CAWS Medal Award

WSWA Newsletter August 2006

John Pierce from the Department of Agriculture and Food WA was recently awarded the CAWS Medal for an outstanding contribution to weed management in Australia.

John is a University of Western Australia graduate and has a M.Sc. from the University of Sydney. He began working with the Department of Agriculture in the late 1960's as an adviser researching noxious plants. In the early 80's he worked as a research officer with the Dryland Agriculture project in Iraq, and as project manager for the Jeffara Plains cereal project in Libya.

Following these overseas assignments, John returned to WA to continue research on declared plants and other weeds in agricultural, industrial and conservation systems. He is currently involved in a State project training landholders and natural resource management officers with a focus on skills, knowledge and networks of weed action groups in the South-West region of WA.

Forestry Pesticides Report

A report on the use of chemical pesticides by the plantation industry in Australia has just been published. The report was launched by the Minister, Senator Abetz, at the Australian Forest Growers Conference held in Launceston, Tasmania in late October 2006. A press release, summary and full reports are to be found at www.fwprdc.org.au

NEW from R.G. & F.J. Richardson

WEEDS OF THE SOUTH-EAST AN IDENTIFICATION GUIDE FOR AUSTRALIA

by F.J. Richardson, R.G. Richardson and R.C.H. Shepherd

The most comprehensive weed identification guide for the region with over 2000 plant species and more than 1600 superb photographs:

- includes weeds of agriculture, bushland, waterways, gardens, roadsides, wasteland and amenity areas, and many new and emerging problem species
- photographs include spectacular close-up shots of important features
- key features are described, with relevant measurements for easier identification
- comparisons with similar species and easily confused natives
- situations where the species are likely to be found
- occurrence by State using herbaria records

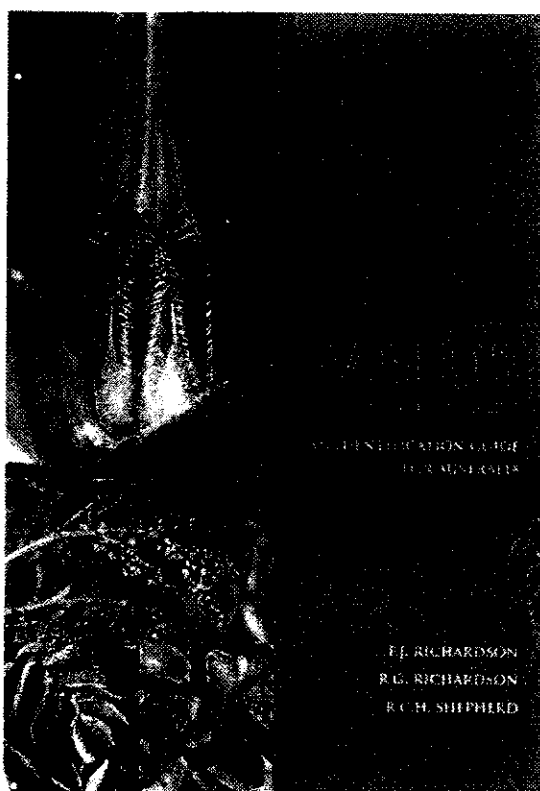
Written in easy-to-understand language and beautifully illustrated, this is a field guide for anyone interested in the identification of pest plants and the preservation of our native flora.

An essential tool for community and government organisations, park rangers, weed officers and advisers, agronomists, landholders, horticulturists, landscapers, amateur naturalists and gardeners.

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

438 pages, full colour, gatefold cover, ISBN 0958743932, Price \$69.95 + postage

Available from R.G. & F.J. Richardson, PO Box 42, Meredith, Victoria 3333
Tel/fax 03 5286 1533
Email richardson@weedinfo.com.au
Website www.weedinfo.com.au



Papers from the Olive Workshop - Orange

(1) Olive Identification and Biology

Mr Peter Cuneo, Botanic Gardens Trust, Mount Annan Botanic Garden, Mount Annan, NSW, 2567
and Dr Stephen Johnson, NSW Department of Primary Industries, Orange, NSW, 2800

Summary

This paper provides information on the identification and biology of olives (*Olea europaea*). The botany and identification of both subspecies is examined before briefly examining the climatic preferences and distribution of each in NSW. The focus of this paper is African olive, in particular, the biology and the environmental impacts of the species

Botanical overview of olives

The Olive (*Olea europaea*) is the cultivated or European olive first described by the

famous taxonomist Carl Linnaeus in 1753. Olive has been long cultivated throughout the Mediterranean region, with some records dating back to 3700 BC (Zohary 1995). The precise wild origin and history of cultivation from these times is not known. In recent times it has not been possible to find an exact match for the domesticated olive at a wild location in any country (Green and Wickens 1989). The species is of considerable economic and historical importance, with many cultivars of *Olea europaea* now grown commercially throughout the world. The *Olea europaea* complex extends from the Canary Islands and Madeira westwards across the Mediterranean and south-west Asia to the Sino-Himalayan region and south through eastern Africa to southern Africa (Green and Wickens 1989). *Olea* occur across a very wide geographic range with 33 species and nine subspecies now described (Green 2002), including one species *Olea paniculata* a rainforest tree which is native to eastern Australia.

In Australia, the *Olea* subspecies introduced into cultivation and now attracting interest as environmental weeds are:

- *Olea europaea* subsp *europaea* (European olive) and the numerous cultivars
- *Olea europaea* subsp *cuspidata* (African olive)

European olive (Figure 1)

Olea europaea subsp. *europaea*

Dense multi – trunked tree with dark green/silver underside foliage sheen.

Leaf characteristics

3-7 cm long

8-10 mm wide

Undersurface whitish – silver grey

Hooked leaf apex absent

Leaf margins slightly recurved

Fruit

Fruit – purple/black oval drupe 15-25 mm long x 6 mm diameter.

African olive (Figure 2)

Olea europaea subsp. *cuspidata*

Dense multi-trunked tree with dark green glossy foliage.

Leaf characteristics

6-10 cm long

10-25 mm wide

Undersurface pale green – yellowish brown

Leaf tip with hooked apex

Mid veins yellowish green

Fruit

Purple-black thinly fleshed drupe, round 6-7 mm diameter.

Distribution and climatic preferences

Whilst these two olives grouped botanically under *Olea europaea*, their natural distribution and climatic preference is quite distinct. The European olive originated from the Mediterranean basin and is adapted to the Mediterranean climate, so much so that climatologists consider olive cultivation as a reliable indicator of this environment (Zohary 1995). In Australia the region of Mediterranean climate, providing optimal conditions for the cultivation of European olive is most of southern Australia with a minimum of 500 mm rainfall and adequate night chilling in winter (Parsons and Cuthbertson 1992).

European olive

Although more in-depth information on the biology of European olive can be found in the papers by Crossman and others (this volume, pp. 1-2 and 11-19), this section examines what is known about the distribution of feral plants of the subspecies in NSW.

European olive is relatively common near some older orchards it has, as yet, only been recorded as occasionally naturalised outside these situations. Populations of the subspecies have been collected from Inverell (on the North West slopes) to Wagga Wagga (on the South West Plains) with records from Cowra, Grenfell and Camden. More collections are encouraged so that an

accurate picture of the current locations of feral populations can be gained.

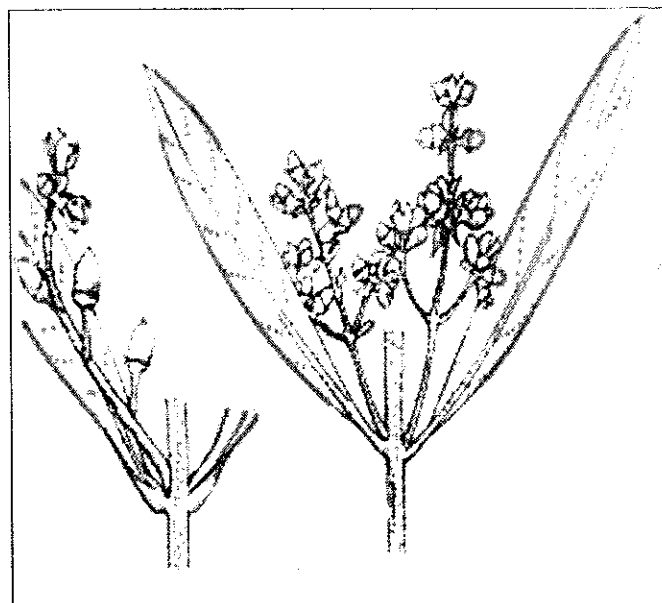


Figure 1. European olive (*Olea europaea* subsp. *europaea*), detail of leaf and buds. Source: Hardin (2006).

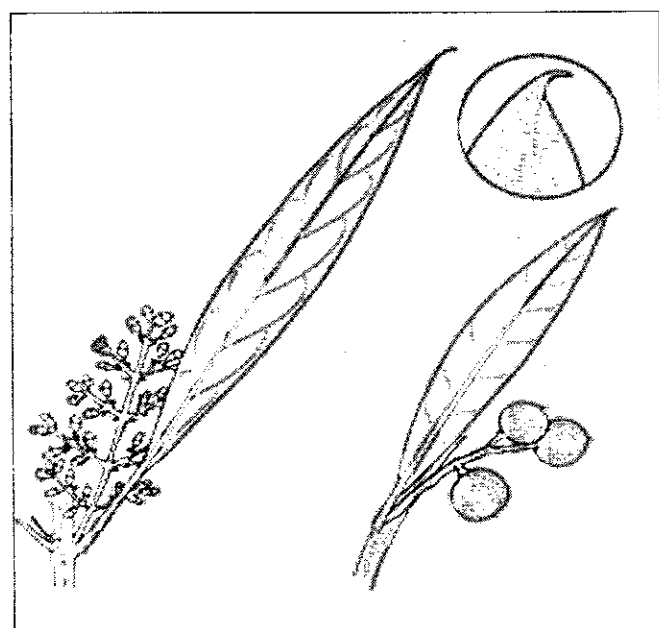


Figure 2. African olive (*Olea europaea* subsp. *cuspidata*), detail of leaf and fruit. Source: Hardin (2006).

African olive

African olive is a dense-crowned small to medium tree (up to 15 metres) and is part of

the tropical wild olive group. The major area of natural distribution for African olive is eastern Africa, where it extends throughout the eastern African states from the southern tip of Africa to the north-east regions. African olive extends into the Middle East region with occurrences in Yemen and Saudi Arabia. A significant Asian centre of African olive distribution is northern India, Afghanistan, Pakistan and Kashmir. The most easterly natural distribution is China, particularly the drier parts of Yunan and Sichuan (Green 2002). African olive naturally occurs in a wide range of habitats from rocky hillsides to river banks, and grows in rainfall zones from ~100mm near the Red Sea to ~1200mm in the Ugandan highlands.



European Olive

African olive was introduced into cultivation in NSW as a hedging plant and rootstock during the mid-1800's and is closely linked to agricultural pioneers John and William Macarthur and the development of the famous Camden Park estate, near Camden NSW. A well-established nursery operated

at Camden Park during the mid-1800's, and catalogues at the time listed many species from Africa which had proven to be well adapted to Australian conditions. African olive was subsequently planted at properties throughout the Camden district, which now a major centre of African olive spread. African olive is still occasionally used as a rootstock for European olive, however the fruit has no commercial value and does not produce extractable oil. African olive is a protected species in its native Africa, due to over exploitation of its dense, hard and durable timber.

African olive thrives on the clay soils of the Cumberland Plain region west of Sydney, eventually forming a dense and continuous mid-canopy which excludes the regeneration of native species. African olive seed is spread along roadsides and into bushland areas via bird perch sites such as powerlines and large trees. African olive is an aggressive woody weed and is now established in the following regions which receive rainfall in the range 440mm to 1325mm:

Major infestations

- Camden – Campbelltown region, NSW
- Hunter Valley NSW, Lochinvar – Maitland Vale district
- Illawarra region, NSW
- Norfolk Island
- Hawaiian Islands of Maui and Kaua'i
- Raoul Island, New Zealand

Localised/scattered infestations

- Tamworth and Attunga State Forest
- Tocumwal
- Lismore
- Ulladulla/Shoalhaven region
- Inverell
- Wellington
- Cowra
- Tumut
- Adelaide Hills, SA

Key aspects of African olive biology and environmental impacts

African olive in its native range occurs across a wide range of habitats and has established as a long lived, persistent and adaptable woody weed in NSW. African olive produces flowers in mid-summer, followed by small green fruits which progressively turn purple-black as they ripen throughout the winter months. Flowers are mainly pollinated by wind and seed crop development is dependent on favourable late summer rain. Plants are capable of producing fruits at age five years, with mature trees capable of bearing >25,000 fruits. At an average size of 7mm, the sweet black fruits are smaller than European olive and readily consumed by a wide range of native and introduced bird species. The black fruits contain a woody endocarp which is voided by birds for distances of several kilometres. Through bird dispersal, African olive seed is highly mobile in the landscape and is able to invade Eucalypt woodlands as seedlings establish below large 'perch' trees. It is not known whether ingestion by birds increases germination of African olive seed, however ripe seed is dormant and germination from whole olive fruits does not usually occur until ~15 months. Once established in bushland areas around perch trees, African olive is able to progressively spread with mature fruiting plants establishing a dense 'carpet' of olive seedlings at the edges of the canopy. When African olive is not controlled it is able to develop (over 10 years+) a dense mid-canopy in woodland areas and will out compete native understorey species for light and moisture. Where African olive has been able to establish over the long term, pure olive stands develop which permanently exclude the regeneration of most native seedlings.

African olive and the future of feral olives in NSW

African olive is proven to be highly invasive and can no longer be regarded as a 'sleeper'

weed in NSW. African olive is highly adaptable and readily dispersed through the landscape, and is has impacted on native plant diversity in coastal regions of NSW. Dispersal of seed by birds remains the key issue with feral olives, and with the increasing popularity of European olive cultivation into coastal NSW it must be assumed that there is potential for hybridisation with existing populations of African olive. Hybridisation between European olive and African olive will most



African Olive

likely result in trees that produce smaller fruits capable of being spread by birds into bushland areas. Whilst it is possible to botanically distinguish between European and African olive, plants in the Camden region are observed to 'intergrade' between both subspecies. It would be very worthwhile conducting research into the genetic status of feral olives in NSW to better understand the origin and further spread potential. Weed risk assessment modelling and mapping for both European

olive (similar to that done for South Australia) and African olive in NSW is recommended in view of the expansion of the olive industry. The use of African olive as a rootstock needs to be carefully considered by the olive industry as there is potential for rootstocks to regenerate from failed or abandoned trees providing a weed seed source.

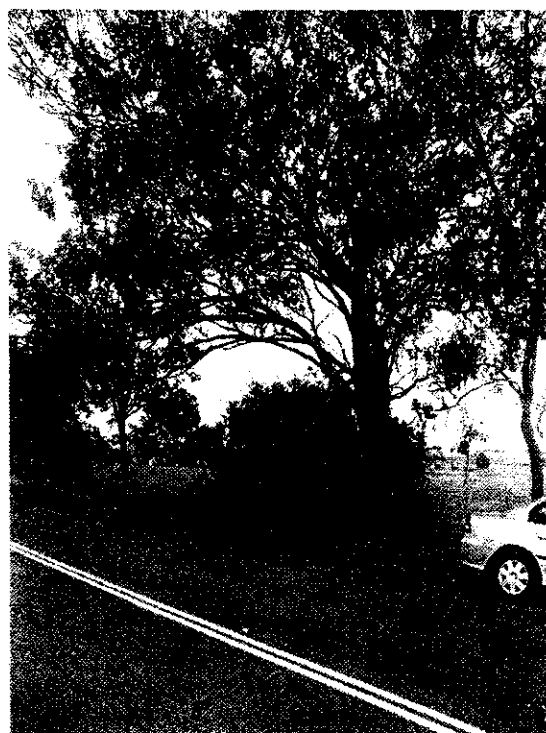
Any consideration of feral olives in NSW needs to take into account predicted climate change which is now a reality, and the fact that we have olive subspecies adapted to both sub-tropical and Mediterranean climates. NSW has experienced an average rainfall decline of 14.3mm/decade since 1950, with most climate models predicting an overall expansion of a Mediterranean climate. Modelling of future rainfall for coastal regions of NSW is more complex, however it is clear that changes will favour opportunistic exotic species such as olives that are readily dispersed in the landscape.

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Olives growing in the Tamworth district



Olives growing along roadside, Wagga

Poisonous & Allergenic Plants Seminar

Copies of the proceedings are now available from the Secretary for \$10 a copy.

**Papers from the Olive
Workshop - Orange
(2) Control of Olive, *Olea* spp.**

J. J. Dellow. NSW Department of Primary Industries, Orange Agricultural Institute, Forest Road, Orange 2800

ABSTRACT

Olea species can be controlled and selectively removed from eucalypt parkland by the application of a mixture of triclopyr and distillate in autumn as either a basal bark or cut stump treatment.

INTRODUCTION

There is increasing concern about the spread of *Olea* spp. into bushland and the unwelcome consequences of this spread on the native flora. There is a need to explore the selective control options of these incursions with herbicide applications. It would need to be demonstrated that the herbicides used and methods of application would have little effect on nearby vegetation. In trials conducted at "Camden Park" Camden in 1985, Dellow *et al.* (1987) showed that *Olea* spp. could be selectively controlled without damage to other desirable species growing in close proximity.

Conventional high volume herbicide application was seen as impractical and undesirable due to the risk of off-target damage. Consequently, alternative application methods were used.

The *Olea* spp. present in the trial site at "Camden Park" had a wide variation in both leaf form and colour, and in size and shape of the fruit. The National Herbarium, Sydney, identified two *Olea* spp. in the trial site. Both *O. europaea* and *O. europaea* ssp. *africana* were identified (Dellow *et al.* 1987).

METHODS

The trial was located in a paddock with heavy infestations of olive, under mature narrowleaf ironbark (*Eucalyptus crebra*) stands. Various rates and types of

herbicides (Table 1) were applied as both a basal bark application and cut stump treatment in May 1985. Glyphosate (360 g/L) was applied at two application rates mixed with water while triclopyr (480 g/L) was applied at one rate mixed with distillate (Table 1). At time of application the olives varied from 3 to 25 cm in basal diameter and 1 to 7 m in height. The basal bark treatment was applied with a low pressure hand-held pneumatic sprayer to the base of the stems (from ground level to 30 cm). The cut stump treatment involved cutting the stumps close to the ground and immediately swabbing the cut stumps with the herbicide mixture. Soil moisture was excellent at time of treatment.

There were four replications for each treatment. Results were assessed 13 and 20 months after treatment and compared to untreated control plots.

Table 1. Effect of herbicide and method of application on control (% mortality) of *Olea* spp. 20 months after treatment (Dellow *et al.* 1987).

Herbicide	Treatment	Method	% kill
Glyphosate + water 1 : 2	1	Cut stump	13 c
	2	Basal bark	68 b
Glyphosate + water 1 : 10	3	Cut stump	0 c
	4	Basal bark	13 c
Garlon +distillate 1 : 10	5	Cut stump	100 a
	6	Basal bark	98 a
Control (untreated)	7	Cut stump	0 c
	8	Basal bark	0 c

LSD (P<0.05) 17.12

RESULTS AND DISCUSSION

The triclopyr (Garlon 480 g/L) and distillate mixture was outstanding in controlling olive

as either a cut stump or basal bark application treatment regardless of plant size. Glyphosate gave unsatisfactory results (Table 1). The basal bark treatment is simple to apply and is the most cost effective treatment. Although the cut stump treatment using triclopyr and distillate gave comparable results, it requires the stems to be cut and the disposal of the large amounts of plant material. This is a considerable disadvantage. In the untreated control plots, regrowth of the cut stump treated plots after 20 months was 1 to 2 m high.

In all treatments there was no observed effect on adjoining off-target species.

Using a mixture of triclopyr and distillate as a basal bark or cut stump treatment, olive can be selectively controlled in autumn.

(Triclopyr (600 g/L) and distillate mixture (1:15) is registered in New South Wales as a basal bark and cut stump application technique for olive control.)

REFERENCES

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Papers from the Olive Workshop (3) Positive olive plan on pole position

NSW DPI Press Release 23 August 2006
Resulting from the Olive Control Seminar held recently in Orange for which the NSW Weed Society was a co-organiser.

A POSITIVE plan has been set in motion for the environmental management of feral olives, those which grow in the wild, with the formation of a new working group.

NSW Department of Primary Industries weed ecologist, and working group chair, Stephen Johnson, said the group was the result of a forum held in Orange this month to address the issue in NSW before feral European olives become a problem in the State.

“The commercial olive industry is keen to work with us to address any concerns sooner rather than later,” Dr Johnson said.

“The first step forward is to complete a risk assessment, map the current situation and address any research gaps we may identify.”

President of the NSW Olive Council and working group member, Nelson Quinn, said wild olives have grown near the sites of some, but not all, old groves in NSW.

“Those plantings are now 100 to 150 years old. If we can work out what factors led to some olives escaping but not others we will be in a good position to manage new and existing plantings,” Mr Quinn said.

“The olive industry wants to grow responsibly with the least possible impact on the environment and there are lessons to be learned from South Australia (SA), Tasmania and Victoria where olive management plans are already in place.”

SA’s climate is ideal for olive growing and plants which have escaped orchards are viewed as weeds.

The Tasmanian climate ensures that feral olives are not a significant problem and in Victoria the central and Gippsland areas only are considered a major risk due to land use factors.

Existing research confirms that climate and land use are key factors in the distribution of wild olives, with grazing and cropping areas which do not have remnant native vegetation considered low-risk.

Another major area of research identified by the working group is the management of animals and birds, including foxes and starlings, which may spread olive seeds.

Supported by NSW DPI, the Weeds Society of NSW Inc and the NSW Olive Council on behalf of the Australian Olive Association Ltd, the working group also includes the SA-based Dr Neville Crossman from the Commonwealth Scientific and Research Organisation, Mount Annan Botanic Gardens' representative Peter Cuneo and Orange City Council councillor and Noxious Weeds Advisory Committee member, Reg Kidd.

It is estimated that more than 8000 hectares of European olive trees will be planted in NSW within the next four years.

Contact Dr Stephen Johnson (02) 6391 3146 or Mr Nelson Quinn 0428 231 591 for more information.



Steve Johnson, N. Quin and B. Worboys at the Olive Workshop in Orange

APVMA News on 2,4-D Controls

APVMA Website

On 3 October 2006, the APVMA announced the suspension of products containing highly volatile forms of the herbicide 2,4-D (2,4-D HVEs) from October 2006 to April 2007.

A Good Weed #40 November 2006

The APVMA also announced that permits may be issued in exceptional circumstances in the 2006/2007 season for use of these products. The issue of these permits, the APVMA stated, will be contingent on it being satisfied that risk to the environment and off-target crops in the specified circumstance is minimal.

In a media statement on 11 October 2006, the Hon Peter McGauran, Minister for Agriculture, Fisheries and Forestry, reinforced the point that permits will be issued for the use of high volatile forms of 2,4-D in those circumstances where it can be demonstrated that risks to the sensitive environment and crops are minimal.

To date, no permits to use high volatile forms of 2,4-D have been issued.

Further information on the 2,4-D suspension and information that the APVMA will require to consider whether a permit can be issued can be found at <http://www.apvma.gov.au/chemrev/2,4-D.shtml>.

The APVMA advises farmers that any use of these forms of 2,4-D without a permit during the suspension period is illegal.

Krismat – a new herbicide for sugarcane

Luc Streit, Syngenta

KRISMAT[®] is a new herbicide from Syngenta for the control of certain broadleaf weeds and the suppression of certain grasses, nutgrass and sour grass in Sugarcane. KRISMAT was approved by the APVMA on 20 October 2006. The product is a Wettable Granule formulation and contains 731.5 g/kg ametryn and 18.5 g/kg trifloxysulfuron sodium per kg. It can be used in both plant- and ratoon sugarcane.

Weeds controlled are: Bellvine (*Ipomea plebeia*), Blue top (billygoat weed), (*Ageratum houstonianum* and *A. conyzoides*), Calopo, (*Calapogonium mucunoides*), Giant pigweed, (*Trianthema portulacastrum*), Knob weed (*Hyptis capitata*), Red convolvulus, (*Ipomoea hederifolia*),

Red pigweed (*Portulaca oleracea*), Sensitive weed (*Mimosa pudica*), Volunteer peanuts, Wild rose (spiny spider flower), (*Cleome aculeata*). The product suppresses the following grasses: Nutgrass (*Cyperus* spp.), Barnyard grass (*Echinochloa* spp.), Summer grass (*Digitaria ciliaris*), Sour grass (*Paspalum conjugatum*), Townsville lucerne, (*Stylosanthes humilis*).

The rate is 1.5 to 2 kg/ha plus Agral® at 250 mL/100 L. KRISMAT can be applied post-emergent as a broadcast spray over-the-top of sugarcane up to the 6 leaf stage, or as a directed spray for older sugarcane or sugarcane varieties sensitive to ametryn. Spraying should occur when broadleaf weeds are at the 2 to 6 leaf stage and grasses are at the 3 leaf to early tillering stage.

The Withholding Period for harvesting, grazing and cutting for stock food is 4 weeks.

Crops other than sugarcane should not be planted within 24 months of an application of KRISMAT. The product is not registered for aerial application. Applications are limited to maximum 2 per year, irrigation must not occur within 48 hours after application, and must not be used in the final ratoon.

Bridal creeper and other asparagus species

NPWS Service Website

Bridal creeper (*Asparagus asparagoides*), and a number of closely related species [asparagus fern (*A. africanus*), ground asparagus (*A. densiflorus*) and climbing asparagus (*A. plumosus*)], are garden plants that have escaped to become major environmental weeds in all southern states. Bridal creeper has been listed as a Weed of National Significance by the Commonwealth Government and is considered to be the greatest weed threat to biodiversity in South Australia and Western Australia. It is of increasing concern in NSW where it has the potential for further spread and to increase in density.

Three biocontrol agents suitable for the control of bridal creeper, have been released to date: a leafhopper insect (*Zygina* sp.), a leaf beetle (*Crioceris* sp.) and a rust fungus (*Puccinia myrsiphylli*). Unfortunately, these agents are specific to *A. asparagoides* and have no impact on other weedy *Asparagus* species.

Major infestations of bridal creeper occur in a number of remnants of the endangered Cumberland Plain Woodland west of Sydney. Scheyville National Park near Windsor, protects a large area of the Woodland and scientists from CSIRO Entomology are using this as a site to monitor the establishment, spread and effectiveness of the rust on bridal creeper. The fungus attacks both the leaves and stems and when fully established, reduces plant reserves stored in the underground tubers which make bridal creeper so difficult to control. Since the release of the rust at Scheyville in 2000, the level of inoculum has increased gradually.

The rust has also been released in Eurobodalla and Towarri national parks and Wollie Creek Regional Park, while both the rust and the leafhopper have been released on Lord Howe Island, Nattai National Park, Nattai State Conservation Area and Western Sydney Regional Park just west of Parramatta. Further releases of both agents are planned for this coming year. The leaf beetle has recently been released in Cullendulla Creek Nature Reserve on the South Coast.

The NPWS is targeting bridal creeper and ground asparagus in several reserves on the South Coast: Eurobodalla, Cudmirrah and Clyde River national parks and Narrawallee and Cullendulla Creek nature reserves.

Bridal creeper control programs are also underway in Ben Boyd, Cattai, Cocoparra, Lane Cove, Sydney Harbour, Tomaree, Towarri and Wollemi national parks and Nattai and The Rock nature reserve. Near Temora, an infestation of bridal creeper on adjacent land poses a risk to Ingalba Nature Reserve.

In other areas ground asparagus is the predominant species: Barrenjoey Headland in Ku-ring-gai Chase National Park in Sydney; Tomaree National Park and Glenrock State Conservation Area in the Hunter area; and Yuraygir and Bundjalung national parks near Grafton. In some of these areas ground asparagus has developed into an impenetrable carpet smothering understorey species. In Booti Booti National Park near Forster, climbing asparagus is the *Asparagus* species causing concern.

Glyphosate sustainability working group

From the Weeds CRC

The national Glyphosate Sustainability Working Group is a collaborative initiative involving research, industry and extension representatives

with the purpose of promoting the sustainable use of the herbicide glyphosate in Australian agriculture.

Background

Glyphosate is one of the most valuable herbicides in Australian agricultural systems. The first glyphosate resistant weed population in Australia was confirmed in 1996. The need for an industry-wide initiative to promote a concerted approach to glyphosate resistance research and extension was determined at a national industry forum staged in 2003 by the Grains Research & Development Corporation. The National Glyphosate Sustainability Working Group was established as a result of this meeting and held its first meeting in October 2004.

Priority goals

1. Increase the sustainability of glyphosate usage through the development and delivery of clear and consistent information, based on industry consensus.
 2. Increase collaborations and consistency among the glyphosate research and extension activities of key research, extension and industry groups.
 3. Contribute to the development of research, development and extension initiatives aimed at improving the management of glyphosate.
- The GSWG gratefully acknowledges the financial support of the CRC for Australian Weed Management, CropLife Australia and GRDC.

Participants

Rick Llewellyn - Chair
David Moore (Monsanto/CropLife Australia)
Chad Sayer (Nufarm)
Jason Sabeeney (Syngenta)
Rex Stanton (Charles Sturt University)
Chris Preston (University of Adelaide)
Steve Powles (WAHRI, University of WA)
Steve Walker (Queensland Department of Primary Industries & Fisheries)
Abul Hashem (Department of Agriculture Western Australia)
Andrew Storrie (New South Wales Department of Primary Industries)
Mark Evans (CRT/Town and Country)
Therese McGillion (Weeds CRC)

Emma Leonard (GRDC Communications & AgriKnowHow)

Contact

Rick Llewellyn (Chair)
Phone: 08 8303 8502
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Papers from the September Seminar

[Poisonous and Allergenic Plants – [1] Plant poisoning in the real world

*Genevieve Adamo
NSW Poisons Information Centre*

The NSW Poisons Information Centre is a 24 hour emergency telephone service which provides assessment of and advice on poisonings of all types. We answer calls from NSW, ACT, Tasmania, and NT during business hours, and the whole of Australia after hours. The service has been operating for 40 years and is based at the new Children's Hospital at Westmead. Funding is provided by the NSW Dept of Health, via the Children's Hospital.

We provide advice on poisonings of all kinds including:

- drugs, both legal & illegal
- pesticides
- herbicides
- chemicals
- household items
- bites and stings
- plants

In 2005 we took over 108,000 calls. Approximately 70% of our calls are from members of the general public, and 30% from health professionals, i.e. doctors, pharmacists, triage nurses etc. Of total calls, 45% relate to poisonings of children, 51 % adults, and 4% are some enquiry regarding an animal. These figures have remained relatively stable over the last few years.

Of these 108,000 calls 1170, approx 1%, were with regard to a plant poisoning. In contrast to

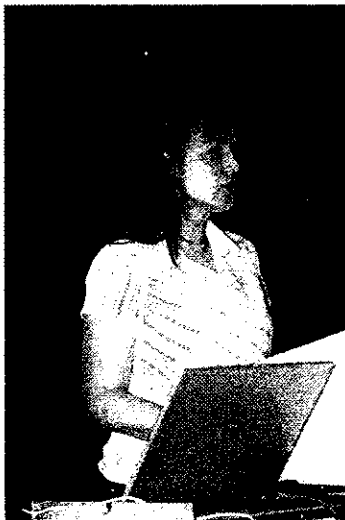
our general calls, the majority of calls about plants (68.2%) are regarding children.

Over 50% of calls regarding plants were about unidentified or non-toxic plants, leaving relatively few cases of confirmed poisonings with toxic plants. Those we are most concerned about are those causing serious or potentially life threatening symptoms.

- Angels Trumpet
- Castor oil Bean plant
- Deadly nightshade
- Foxglove
- Lantana
- Oleander, pink & yellow
- White cedar

Fortunately calls about these are rare.

Due to the generally bad taste of toxic plants, most are only small ingestions resulting in little if any toxicity. Occasionally we see the intentional ingestion of one of these toxic plants. This can be either for recreational use (anticholinergic plants, goldcap mushroom) or it may be suicidal (infusions of oleander).



Genevieve Adamo

The most common identified ingestions are oxalates (i.e. elephants ear, arum lily), usually small ingestions and easily relieved with milk, and capsaicin (chilli) which is nearly always an exposure in the kitchen.

Of all calls relating to plant poisonings less than 0.6% were in or referred to hospital, indicating

the low level of serious poisonings. This compares to 28% of all calls which are in or referred to hospital, and even if we just look at all ingestions by children, 16% are in or referred to hospital.

Poisons Information Centre

- 24hour emergency service
- Based at the Children's Hospital at Westmead
- Give advice on poisonings involving
 - Drugs
 - Pesticides
 - Herbicides
 - Chemicals
 - Household items
 - Bites & stings
 - plants
 -

In 2005 over 108,000 calls

- 70% from general public
- 30% from health professionals
- 45% about children
- 51% about adults
- 4% about animals
- 1170 calls about plants (1%)
- 68% of plant calls regard children
- Half plant calls unknown or non-toxic
- Plants of concern
 - Angels Trumpet
 - Castor Oil Bean plant
 - Deadly Nightshade
 - Foxglove
 - Lantana
 - Oleander Pink & Yellow
 - White Cedar

In the case of a serious poisoning, a patient will be referred to hospital, and if necessary a consultant toxicologist will be contacted. He or she can offer assessment and treatment advice over the phone to the treating doctor. These consultants are Emergency Medicine Specialists with post graduate training in toxicology. They must hold a staff specialist position in a major teaching hospital and run a toxicology service at that hospital.

Another group of plants about which we receive calls are palms containing thorns. The mechanical injuries caused by these thorns can lead to more serious complications if not

removed completely. As they are often quite long spines it is not uncommon for a portion of the spine to be left embedded in the skin which will cause an inflammatory reaction, This is a particular problem if the thorn enters near a joint (commonly in the hand), resulting in a synovitis of that joint. These must be removed surgically to prevent such complications.

Although not plants, mushrooms are also cause for concern for us at the Poisons Information Centre. There are a large number of inedible mushrooms which will cause gastrointestinal irritation, and a small number of much more toxic species. These may cause renal and hepatic damage and neurological symptoms. Of our 237 calls about mushroom ingestions last year 32 (13.5%) were in or required hospitalisation.

To us at the Poisons Information Centre plants pose a fairly small threat resulting in very few actual poisonings, yet the herbicides so commonly use to eradicate them is a far more real problem. Glyphosate is a very common and toxic herbicide, and although responsible for only 452 exposures last year, 6% of these required hospitalisation. Paraquat is extremely toxic, but strong safety requirements have minimised exposures, yet one third of these exposures require hospitalisation.

In summary, although we do have some very poisonous plant in Australia, their natural warning systems of bad taste and spikes etc., plus public awareness of their dangers has meant we do not see the serious poisonings of which these plants are capable.

References

- NSW Poisons Information Centre Annual Report 2005
- NSW Poisons Information Centre Toxic Plants and Fungi Poisonous to People in Queensland, QLD PIC and QLD Health and Environmental Protection Agency 2005

Papers from the September Seminar - Poisonous and Allergenic Plants – [2] Weeds that make you sick

Rachel McFadyen

Director

CRC for Australian Weed Management

Weeds can make us sick in three ways – if we eat them, if they get into our food chain, or through their pollen blowing around. The first problem is covered by Ros Shepherd: my talk deals with the other two.

The problem of poisonous plant chemicals in our food chain is not generally understood and the risks are not properly appreciated. Many poisonous weeds are avoided by cattle because of their bitter taste, but may be eaten in small amounts in hay or when other feed is scarce.

Important poisonous substances fall into several categories – cardiac glycosides in milkweeds and others, sesquiterpene lactones in parthenium and annual ragweed, and pyrrolizidine alkaloids (PAs) in many plants including *Senecio* species (fireweed, ragwort). These poisonous substances pass directly into milk and other products, including offal (liver especially) though not usually into muscle meat.

The risk to humans depends on how much finds its way into the human food chain. The issue is not usually acute poisoning, because humans rarely eat enough to make them immediately sick. Stock may die from acute poisoning but that takes them out of the human food chain: the problem is sub-lethal poisoning of stock where the poisons go into the food chain via milk or meat.

PAs are also present in honey where bees are using nectar from ragwort, Patterson's curse, or similar weedy plants. Grain is often contaminated with weed seeds especially heliotrope, which leads to PAs in eggs and chicken meat. Cardiac glycosides are not known to have any cumulative effects, but both sesquiterpene lactones and PAs, if taken in low

doses over a long period, are known to cause serious long-term liver and other problems.

As the effects may take years to develop, often neither the individual nor the treating doctor suspects that the cause may be poisonous alkaloids taken in through meat, milk, eggs or honey over a long period.

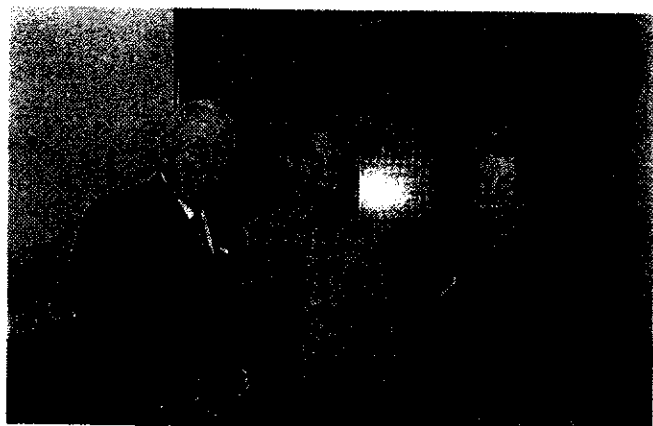
Furthermore, there is an assumption that, because of pre-sale bulking of milk and honey with unaffected supplies, no-one is likely to consume toxic amounts (ANZFA 2001). However farming and rural communities may use local honey, meat from local butchers and milk, chickens and eggs from their own animals. Unfortunately any unusually high level of chronic liver disease (including cancers) in rural areas is invariably blamed on pesticides and no effort is made to measure intake of these plant poisons. There is an urgent need to establish a system to monitor the levels of these chemicals in food, on a national and a regional level.

The issue of allergic hayfever and asthma caused by plant pollens is much better understood but is still under-reported. Doctors and sufferers are generally aware that grass pollens can be allergy triggers, but may not know that pollen from olives, privet, ragweed, amaranthus and other weeds is also a major cause of allergic hayfever.

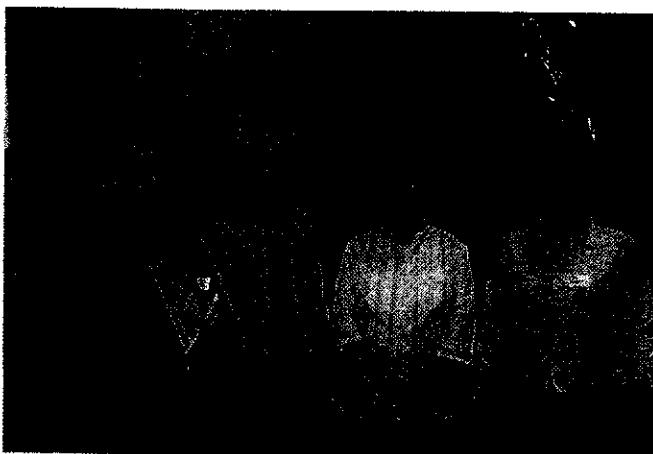
As a result, patients may not be tested for these substances, and the problem is never properly addressed. Cross-reactivity is also a major issue – people allergic to olive pollen will also react to privet (in the same plant family). Cross-reactivity within the daisy family (Asteraceae) is also common, and individuals sensitised by ragweed will also react to parthenium, Noogoora burr, commercial sunflower and ornamental species such as chrysanthemum.

As usual, everything depends on the dose – the bigger the pollen load, the greater the problem, and weeds can be so locally abundant that, during their flowering period, they are responsible for more than 50% of the pollen in the air (Agashe and Alfadil 1989). If this

repeats year after year, susceptible individuals become increasingly affected, resulting in situations such as in Orange, where 20% of the town's population were suffering hay fever for two to three months every year when the privet was in flower, or much of central Queensland where more than 10% of residents suffer from parthenium allergy (McFadyen 1995).



President Warwick Felton, Dr. John Virtue and Dr. Rachel McFadyen at the Poisonous Plants Seminar



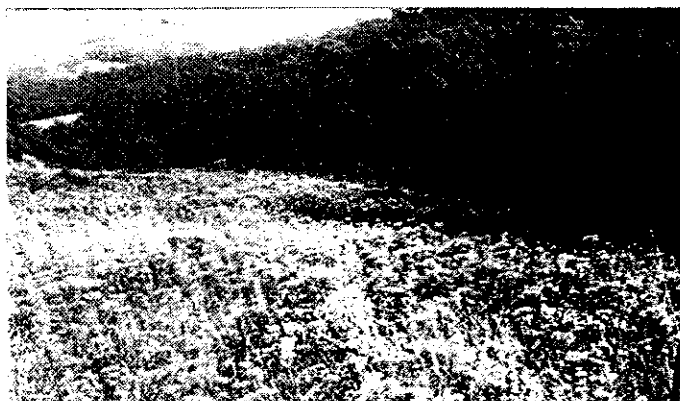
Session Chairman Mike Hood and speakers Andreas Glanzig, Ros Shepherd and Sue Stevens also at the Poisonous Plants Seminar

Hay fever and itchy eyes are often the first symptoms, but this may worsen to become asthma or allergic bronchitis, while a smaller proportion of sufferers develop skin conditions such as eczema or allergic contact dermatitis (Kloot and Burry 1983). This is a particularly common reaction to plants in the daisy family

or Asteraceae, and can be so serious that people have no option but to leave their jobs and move out of the district completely. In summary, certain weeds are directly linked to the local abundance of the particular weed (pollen, already causing significant human health problems, all odour, seeds). As weeds increase their abundance and range, these problems will also increase. As well as improved weed management, we also need increased monitoring of these health problems.

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Ragwort in Tasmania

Australian Institute of Agricultural Science & Technology

You, your partner and your friends are invited to attend a seminar and winetasting:

“Recycled water for us to drink – the Pros and Cons”

Followed by a tasting of wines from Orange

SPEAKERS INCLUDE:

Chris Davis, CEO of the Australian Water Association. Greg Leslie, Associate Professor, School of Chemical Science and Engineering, University of NSW

DETAILS

Date: Wednesday 15 November 2006 Where: Rydges – 9 Missenden Road, Camperdown NSW 2050 Time: 2.00pm – Seminar 5.30pm – Wine Tasting

Cost: \$40.00 per head (includes afternoon tea and canapés)

RSVP by Friday 10 November (including payment)

Reply to

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AIASST NSW DIVISION

15 November 2006 – Rydges, Camperdown, Sydney



A Good Weed

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