



Newsletter of the Weed Society of Victoria Inc.

volume 20 issue 2 2009

Weedscene

Weed Warriors: a weed science education and biological control program by Dr Lily Salvatore

The Weed Warriors program aims to empower students, the land managers of tomorrow, with the knowledge and tools required to be pro-active in the management of weeds, estimated to cost the Australian community \$4 billion per year.

The Victorian Government has recently provided substantial funds of \$1.4 million for the continuation of the Weed Warriors program in Victoria through the Future Farming Strategy launched last year. Through the strategy, a range of activities has been organised across Victoria to support the program along with the development of a decision support system (a process to determine the next weed species targeted for biocontrol activity) and the distribution of biocontrol agents in the community. Department of Primary Industries (DPI) Victorian Weed Warriors Co-ordinator, Dr Lily Salvatore said, 'The Future Farming Strategy delivers new support for rural communities to assist them in making decisions about their future and adjusting to change.'

DPI Section Leader Invertebrate Sciences, Raelene Kwong, has been conducting research in the area of biological control for the past 15 years and will be managing the new decision support system which determines the next targets for biological control via a structured process. Dr Salvatore will manage the Weed Warriors program and will be responsible for setting

up monitoring programs and agent database tracking systems. The resource materials for the program will also be upgraded.

An evaluation of the Weed Warriors program is being undertaken. Evolving Ways has been identified as the successful contractor to conduct the evaluation. Julie Hind and Judith Woodland, experienced evaluation consultants from Evolving Ways will conduct interviews, workshops, surveys and teleconferences to inform recommendations about the future direction of the Weed Warriors program. Questions that will be asked include:

- What kind of Weed Warriors model does the Natural Resource Management (NRM) Community want?
- What does biocontrol mean to the NRM community?
- How could the Weed Warriors program be improved?

The evaluation will be completed by June 2009.

Weed Warriors has been running an education program associated with Weeds of National Significance, gorse (*Ulex europaeus*) and bridal creeper (*Asparagus asparagoides*). Presentations are given to schools about one of the weeds and they are provided with an insectary and plants onto which they introduce the biological control



Jennie Carruthers, DPI Weed Warriors Officer working with a class from a local school at the Wimmera Children's Festival in October 2008

WSV Directory

Correspondence and enquiries

Weed Society of Victoria Inc.
PO Box 987 Frankston Vic 3199
Telephone (03) 9576 2949
ACNA0011723W ABN 15 496 325 152

Web Site www.wsvic.org.au

Secretary

Ros Shepherd
PO Box 987 Frankston Vic 3199
Telephone/Fax (03) 9576 2949
Email secwssv@surf.net.au

Publications Officer and

Weedscene Editor

Lisa Minchin
9 Hunter Street, Castlemaine Vic 3450
Mobile 0437 233193
Email editor@wsvic.org.au

President and CAWS Rep

Michael Hansford
Michael.Hansford@dpi.vic.gov.au

Vice President and CAWS Rep

Matthew Stephenson
M.Stephenson@basscoast.vic.gov.au

Treasurer

Jackie Steel
Jackie.Steel@dpi.vic.gov.au

Committee Members

John Burley
John.R.Burley@dpi.vic.gov.au

Ian Faithfull
Ian.Faithfull@dpi.vic.gov.au

David McLaren
David.McLaren@dpi.vic.gov.au

James O'Brien
James.O'Brien@landmark.com.au

Co-opted Members

Chris Knight
cknight@lmsonline.com.au

Norm Stone
norm.stone@bayercropscience.com

Greg Wells
WELLS1@dow.com

Country Representative

Les Mitchell
Les.Mitchell@agrisearch.com.au



WSV Membership Rates 2009

Concession*	\$20.00
Ordinary	\$50.00
Corporate	\$120.00

* *Students and Pensioners*

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Copy deadline for next issue: Friday 3 July 2009

Joining the Weed Society of Victoria

The benefits of membership to WSV include:

- Weedscene: quarterly newsletter packed full of information
- eWeedscene: regular electronic bulletin on weed news and events
- Discounts to WSV seminars, workshops, conferences and other events
- Opportunities to network with others.

To apply for membership, download and print the membership application form from the WSV website, www.wsvic.org.au, complete the details and mail to the WSV Secretary.

Weedscene Newsletter of the Weed Society of Victoria Inc.

Contributions to Weedscene are welcomed. Please contact the editor for further information.

Readers are free to circulate and reproduce Weedscene material with acknowledgment of the author and source.

The views expressed in Weedscene are those of the contributors and are not necessarily shared by the WSV Executive Committee.

Advertising rates

■ One sixth page	56 mm wide × 128 mm high	\$90.00
■ Quarter page	180 mm wide × 64 mm high	\$135.00
■ Half page	180 mm wide × 128 mm high	\$275.00
■ Whole page	180 mm wide × 257 mm high	\$450.00

Editor Lisa Minchin, editor@wsvic.org.au, mobile 0437 233193

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agent – leaf hopper (*Zygina* sp., family Cicadellidae) in the case of bridal creeper (*Asparagus asparagoides*) or spider mite (*Tetranychus lintearius* Dufour, sub-class Acari, family Tetranychidae) for gorse (*Ulex europaeus*). The students breed the biocontrol agents in the classroom for 4–6 weeks and then release them. In this way students contribute to the containment of the weed species in their local area. In 2008 more than twenty schools participated in the Weed Warriors program.

Weed Warriors is a successful program with students and teachers always enthusiastic about the opportunity to participate in weed reduction activities. Its success is directly related to the support of key advocates who come from a variety of areas such as councils, catchment management authorities, Parks Victoria as well as school principals and teachers. Two key advocates have engaged a large number of schools: Sue Longmore, Coastal Coordinator, Bellarine Catchment Network and Nicole Wood, from Warrnambool City Council. It is not just primary and secondary schools which are involved. This year Holmesglen TAFE adult and vocational horticultural students participated in the Weed Warriors program during Term 1. The students were pleased to have the opportunity for the hands-on experience of releasing the spidermite biocontrol agent.

For the past six years Weed Warriors has operated as a national program. It is hoped through collaboration with agencies from New South Wales, Tasmania, South Australia and Victoria the range of targeted weed species the Victorian Weed Warrior programs works on may be expanded. A submission developed by Raelene Kwong for ‘The community re-distribution of biocontrol agents in South-East Australia’ has been submitted to Caring for our Country. In this submission weed species such as bridal creeper, blackberry, salvinia, cape and English broom, boneseed and bitou bush are to be targeted for distribution of their specific biological control agents.

For more information, please visit www.weedwarriors.net.au or call 03 9217 4434.



Gorse with spider mite (*Tetranychus lintearius* Dufour) ready for release (Photo: Megan McCarthy, DPI Frankston)



Holmesglen TAFE students preparing to release gorse spider mite on a public roadside near the TAFE in Mt Waverley

Hume City Council wins prestigious National Landcare Award

Hume City Council, on the northern fringe of Melbourne, won the Leighton Holdings Local Government Landcare Government Partnerships Award on Thursday 23 October 2008. The reward recognised the significant effort made by Hume in caring for the land and creating an environmentally sustainable community.

Long time Landcare supporter and acting legend Jack Thompson said “Hume City is one of the fastest-growing municipalities in Victoria. More than two thirds of the land has been zoned rural ‘Green Wedge’, but rapidly expanding urban and residential zones are putting increased pressure on this land.”

Hume City has suffered long-term drought, weeds are a problem, native vegetation is fragmented and knowledge about local flora and fauna is limited. Waterways are affected by urban and rural stormwater pollution and increased sediment runoff from earthworks from new developments.

To manage its wealth of natural resources and the challenges this involves, Hume City Council has developed a Sustainability Framework and a number of strategies including those which direct sustainable land management and natural heritage management.

Council works closely with its rural landholders and offers incentives to assist them in managing their properties sustainably, and to protect Hume’s diverse local rural, agricultural and biodiversity assets. These incentives include:

- Two rate rebate schemes which offer a financial incentive for landholders to implement sustainable land management practices and take action on Hume’s priority pest plants, pest animals and erosion.

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1. The Rural Areas Plant Donation Scheme which provides 18,000 free native plants annually to landholders who undertake revegetation work to protect remnant vegetation or restore riparian zones.

2. The Biodiversity Stewardship Scheme 2008 which assisted landholders in managing and protecting remnant native vegetation on their properties.

A strong focus is also placed on environmental awareness, education and training opportunities. RE-Source, Hume's Rural Environment Newsletter and EcoTracks, Hume's Environment Newsletter, are distributed quarterly to the community. Field days on specific topics or land uses, specialised training and property visits build landholder skills to manage their properties sustainably. Community planting days for Friends, Landcare, school and multicultural groups also create increased environmental awareness and revegetated areas of land.

Landholders, community groups and Council staff work tirelessly to improve Hume's environment. On-ground works programs and partnerships with landholders, other Councils, State Government and environment authorities continue to be developed. Caring for the land is only possible through community partnerships and Council will continue to work with residents to strive towards Landcare ideals.

The 2009 Victorian Landcare Awards are now open. Individuals, groups and community networks that deserve to be recognised for their work in tackling environmental issues from the grass roots should be nominated. Nominations close 5 pm on Wednesday 1 July 2009. Please visit the web site www.dse.vic.gov.au/landcareawards for more information.

WSV News

Fourth Victorian Conference: Plants behaving badly: in agriculture and the environment

The fourth Victorian weeds conference will be held this year in Geelong at the Mercure Hotel on 7–8 October 2009. The conference theme 'Plants behaving badly: in agriculture and the environment' will include presentations from two keynote speakers. John Thorp from John Thorp Australia, who will speak on 'Where are we going with weeds?' Geoff Carr from Ecology Australia will give a presentation which provides a new look at environmental weeds in Victoria.

We will also be fortunate to have Peter Espie from the University of Otago in New Zealand presenting on ecological principles and *Hieracium* invasion in Australia. Peter is an expert in *Hieracium* spp. and has recently visited the alpine area of New South Wales and Victoria to provide advice about the potential for its eradication.

For further details about the conference see www.wsvic.org.au.

Email address

Do we have your email address? Be sure to include your email address on the WSV membership renewal form and let Ros Shepherd, Secretary, know of any changes. We email you details of events and other information relevant to the Society's activities.

Letter from the Editor

This year Victorians have been confronted by a scale of tragedy not previously known in many people's lifetimes. With 78 communities across Victoria impacted by the February fires many stories of courage and resilience have emerged. We can also take heart at the support freely offered locally and from elsewhere. As people rebuild their lives and communities reform we will also learn more about what the fires have meant for biodiversity. The Invasive Species Council has, following the fires, raised concerns about the donations of bales of (often low quality) hay which facilitate

the spread of weeds. Information about the impact and management of weeds in the areas affected by the fires is something we hope to bring to you in future editions of Weedscape.

Awards are an important means of acknowledging achievements, some of which have been attained in the face of adversity. The East Alpine Unit of Parks Victoria is no stranger to fire and has received a Parks Victoria award for outstanding achievements by a team for their response to a complex range of issues in the Alps including grazing, fire-fighting, fire-rehabilitation, weed and pest management and visitor services. Each year the Weed Society of Victoria provides prizes of books to tertiary students for plant collections of a high standard as part of their course. Michael Hansford's 2008 President's Report identifies the students who received awards. This edition of Weedscape also includes an article about the 2008 Local Government Landcare Government Partnerships Award received by Hume City Council for caring for the land and creating an environmentally sustainable community. Nominations for the 2009 Victorian Landcare Awards are now open and further details about this are in the Hume City Council article on pages 3 and 4. You may like to think about nominating an individual, a group or a community network for an award.

Lisa Minchin, Editor



This time of year is the time to renew your membership of the Weed Society of Victoria. You also have the option of considering whether to take up or renew your membership of the International Weed Science Society (IWSS).

The IWSS was formed in 1975, by individuals from Europe, North America, South America, and the Asian-Pacific



area, to deal with global weed science issues. The IWSS is a worldwide scientific organization, open to all who are interested in weeds and their control. The formation of IWSS was promoted actively by the six existing regional weed science societies. The purpose of IWSS is to supplement and complement their vital role. Additionally, IWSS provides benefits and functions of a weed science society not currently existing at a national or regional level. The IWSS publishes a newsletter that is sent to members twice a year and holds the International Weed Control Congress every four years. The Society has held five highly successful International Weed Control Congresses, in Australia (1992), Denmark (1996), Brazil (2000), South Africa (2004) and Vancouver, Canada (2008).

The objectives of the Society, as cited in its constitution include:

- Encourage, promote, and assist development of global weed science and weed control technology;
- Promote and assist international communications between individuals and organizations;
- Promote and assist development of special symposia on topics of international interest;
- Encourage and assist education and training in weed science and technology;
- Provide a calendar of important weed science events;
- Maintain liaison with relevant national and international organizations;
- Stimulate research, extension, and regulatory programs to answer changing weed problems;
- Encourage and assist in development of weed science societies;
- Provide an international forum to deal with global weed problems by organizing congresses, and collaborating in organizing meetings and courses; publishing and participating in publishing newsletters, proceedings, and monographs.

For further information see the new website address of the IWSS: <http://www.iwss.info/default.asp>.

President's Report 2008–09

Presented at the Annual General Meeting of the Weed Society of Victoria 16 April 2009

During the past year, Executive Committee meetings were held at Bayer CropScience, East Hawthorn. We would like to thank the company and WSV committee member Norm Stone for the use of their facilities.

The work of the Executive Committee in 2008-09 included organising our events, awarding of student prizes and the production of Weedscape, the Society's quarterly newsletter, and eWeedscape, the monthly e news bulletin. Thanks to editor Lisa Minchin and to Rob and Fiona Richardson for newsletter production.

The Society held a Weed Buster Week activity on Tuesday 2 September 2008. This was a Merri Creek Weed Walk, hosted by Merri Creek Management Committee, Melbourne Water, Hume City Council and Darebin City Council who each provided speakers and lead different sections of the walk to talk about weed management and restoration efforts along the creek. Twenty three people attended the event.

The Executive Committee undertook forward planning and organisation for the Fourth Victorian Weeds Conference to be

held in Geelong in October 2009, *Plants behaving badly in agriculture and the environment*, and commenced planning for the 2012 Australasian Weeds Conference, to be held in Victoria. They also organised the 2009 AGM seminar, *Modelling the potential distribution of weeds*.

The WSV, as a member of Council of Australasian Weed Societies (CAWS), participated in the teleconferences and meetings of CAWS held during the year.

Student prizes were awarded to Jennifer Lyon – Associate Diploma in Environmental Horticulture (Burnley), Angela Mazur – Associate Degree in Agriculture (Dookie), Brenton Cunning – Bachelor of Agriculture (Dookie), Brodie Burns – Bachelor of Agriculture (Dookie), Fiona Watt – Diploma of Agriculture (Glenormiston), Anne Dempster – Diploma of Conservation & Land Management (Longerenong), and Kim Cross – Advanced Diploma in Agriculture (Longerenong).

I would like to thank the Executive Committee for their work over the past year.
Michael Hansford, President

Treasurer's Report 2008–09

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Presented at the Annual General Meeting of the Weed Society of Victoria 16 April 2009. Accounting period 9/04/08 to 9/04/09.

The current balance of \$72,683.98 represents a net loss to the Society of \$4,272.37 for the accounting period.

Web site hosting and maintenance during the period was \$146.50 compared to \$698.50 for 2007/08, reflecting a substantial decrease.

The format of Weedscape has been revised and the cost has now increased on a per issue basis compared to previous periods. However, a reduction in the number of issues per year kept the overall costs similar.

Total term deposit funds are \$63,193.17

compared to \$57,700.43 at the end of the 07/08 period.

The IWSS (International Weed Science Society) fees are increasing to \$US30. From this year members will be charged \$35 as a result.

Propose the following actions:

- Statements supplied on a two monthly basis to be requested for the Cheque Account to simplify matters.
- Close Savings Account and transfer funds to Cheque Account to avoid further bank costs.

Daniel Joubert, Treasurer



Policy news

Weeds are an important consideration in a number of state and federal policy development and review activities currently underway.

VCEC Inquiry – Environment Regulation

Over the past few decades an extensive and complex body of environmental regulations has been developed in Victoria. There are at least 43 acts of state parliament which regulate uses of the natural environment. A number of State Government departments and agencies administer this legislation, and Victoria's 79 local councils also play an important role. The Victorian Government has, in recognition of the importance of efficient and effective regulation to the environment and the economy, directed the Victorian Competition and Efficiency Commission (VCEC) to inquire into and report on Victorian environmental regulation. The VCEC has released a draft report for the Inquiry into Environmental Regulation - *a Sustainable Future for Victoria: Getting Environmental Regulation Right. Overview and Recommendations*. The report states: 'Well framed environmental regulation contributes to wellbeing by reducing human health risks due to air and water pollution, by limiting overuse of natural resources such as water, forests and fisheries to prevent the breakdown of vital ecosystems, and by tackling risks to the long-term productivity of land posed by weeds, animal pests, erosion and salinity.'

Overlap or duplication of responsibilities in a number of areas, including in the management of native vegetation, water, waterways, catchments, roadside weeds, regional weeds, the marine environment, resource efficiency, climate change and pollution are illustrated in the report including:

A lack of clarity over regulatory roles relating to weeds and waterways.

According to Colac Otway Shire, conflicting interpretations of the Catchment

and Land Protection Act have raised questions over the responsibility for managing regionally controlled weeds.

The Municipal Association of Victoria (MAV) argued that the management of roadside weeds is not sufficiently clear. Some councils maintain that the Catchment and Land Protection Act requires that landholders prevent the spread of certain weeds on the sides of undeclared roads adjoining their property. However, the Land Act gives the Crown ownership of all vegetation on roadsides, suggesting that the responsibility for management of roadside vegetation rests with crown land managers. The MAV argued that the contradictory approaches have led to confusion about responsibility for managing weeds and litter on roadsides in regional areas and undermined the effectiveness of efforts to combat weeds. Apart from landholders, the government bodies with responsibility for managing roadside vegetation may include VicRoads, DSE, DPI, and councils (depending on the road type and the type of weed). As an interim measure, the Victorian Government announced that it would provide financial grants to assist councils in undertaking weed and pest control on roadsides.

The Commission welcomes further input into the inquiry with submissions that comment on any of the issues and options covered, including comment on options for simplifying and improving Victoria's environmental legislation and the corresponding organisational framework. Submissions are required by 15 May 2009 and presentation of the final report to Government is scheduled for 23 July 2009. For further details see www.vcec.vic.gov.au.

VEAC Remnant Vegetation Investigation

The Victorian Environmental Assessment Council (VEAC) is undertaking an investigation into remnant vegetation on Crown and public authority land outside largely-intact landscapes across Victoria

to identify opportunities for ecological linkages. The purposes of the investigation are to:

- (a) identify and evaluate the condition, values, resources and uses of these areas of remnant native vegetation and associated fauna outside largely-intact landscapes;
- (b) assess these areas for their connectivity and contribution to sustainable landscapes in relation to climate change;
- (c) report on the contribution of these areas of remnant native vegetation to biodiversity conservation, recreation activities, community uses, commercial opportunities, services and utilities in the context of improving connectivity with largely-intact landscapes and freehold land; and
- (d) report on opportunities for management to achieve improved ecological connectivity.

The Council will prepare a discussion paper during 2009 and a final report by March 2010. The closing date for written submissions is 4 May 2009. For further information, visit: <http://www.veac.vic.gov.au/remnatveg.htm>

Roadside native vegetation guidelines

The *Managing Native Vegetation on Roadsides: A guide for implementing agreements under the public road exemption* is now on the DSE website. The purpose of the guidelines is to assist Local Councils to determine if works involving the removal of native vegetation are exempt under the *Planning and Environment Act 1987 (Victorian)*. Clause 52.17 of the Victoria Planning Provisions (VPP) lists exemptions from the requirement for a permit in relation to native vegetation. The guidelines provide additional information to guide Council staff in relation to the Agreement with DSE for maintenance and safety works that activates the Public Roads exemption where it applies. The guidelines detail the types of activities which are covered by the exemption, including the details related to weed management activities, the notification requirements, data collection, reporting and auditing processes. The



document can be found at: www.dse.vic.gov.au/nativevegetation.

Draft National Biodiversity Strategy

The Natural Resource Management Ministerial Council, on behalf of the Commonwealth and all state and territory governments, is inviting public comment on the *Draft Australia's Biodiversity Conservation Strategy 2010–2020*. The Consultation Draft of the strategy was released on 23 March for public comment. The draft establishes six priorities for change:

- Building ecosystem resilience
- Mainstreaming biodiversity
- Knowledge for all
- Getting results
- Involving indigenous peoples
- Measuring success.

The draft strategy is an important national policy document that will guide how governments, the community, industry and scientists manage and protect Australia's plants, animals and ecosystems over the next ten years. This is particularly critical in the face of threats to the environment from climate change, habitat loss and fragmentation and invasive species. The public consultation will run from 23 March to 29 May 2009. To participate in the consultation process, the draft strategy can be accessed and feedback provided via <http://www.environment.gov.au/biodiversity/strategy/review.html>

Submissions close 29 May 2009. Visit: <http://www.environment.gov.au/about/media/dept-mr/pubs/dp23mar09.pdf>

EPBC Act review – update

The Australian Government is currently undertaking the first review of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) since its commencement in 2000. The independent review will assess the operation of the EPBC Act and the extent to which the objectives have been achieved. An interim report highlighting key issues identified through the public consultation process will be released in mid 2009. To receive news and updates on the review, visit <http://www.environment.gov.au/epbc/review/>

Treasurer's Report

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STATEMENT OF INCOME

2007/08	INCOME	2008/09
\$		\$
3,615.00	Subscriptions Ordinary	3,600.00
2,085.00	Subscriptions Corporate	2,215.00
60.00	Subscriptions Student	40.00
46,379.00	Events	10,475.00
155.00	Proceedings Sales	209.85
485.00	IWSS Subscriptions	300.00
249.80	Misc. – Book Sales	20.00
5.13	Bank Interest Savings Account 5000610	3.29
1,432.66	Term Deposit 50061577	4,611.93
1,018.01	Term Deposit 50178386	880.83
<u>55,484.60</u>		<u>22,355.90</u>

STATEMENT OF EXPENDITURE

2007/08	EXPENDITURE	2008/09
\$		\$
26,636.07	Events	8,614.63
6,060.00	Weedscene Printing and Postage	6,348.27
4,830.00	Secretarial Fees	6,389.67
959.96	Telstra/Telephone	663.63
351.95	Postage: General	199.47
1,090.00	Public Liability Premium	1,050.00
426.95	IWSS Subscriptions	452.87
691.59	Weed Prizes	262.83
599.84	Printing – Stationery etc.	1,149.70
574.00	Computer Service	
698.50	Web Hosting and Maintenance etc.	146.50
198.00	CAWS Subscription	165.00
33.00	Advertising	
188.87	Book Sales	200.87
72.97	Auditors Hon.	70.00
97.93	Misc.	262.54
	Document Lodging Fee	37.60
<u>43,509.63</u>		<u>26,013.58</u>

Bank Fees

1,660.55	Merchant Fees	507.19
24.20	Gross Fee Rebate	12.50
12.50	Statement	5.00
	Merchant Adj.	55.00
	Account service fee savings 5000610	35.00
<u>45,206.88</u>		<u>26,628.27</u>
10,277.72	NET INCOME (LOSS)	-4,272.37

Roles & Responsibilities

Weeds and Catchment Management Authorities, where do they fit in?

What is the role of Catchment Management Authorities (CMAs) in relation to the management of weeds in the state of Victoria? With the wide variety of agencies that have some role to play it must be very confusing and frustrating to the wider community. This is especially the case when they are seeking action or an answer to their particular issue or need. Being constantly referred from agency to agency can make them pretty hot under the collar, and you cannot blame them.

CMAs are relatively young organisations that were set up under the *Catchment and Land Protection Act 1994* (CaLP Act) and the *Water Act 1989* (Water Act) and officially came into being in 1997. CMAs were principally set up to replace the numerous river management trusts that existed across the state of Victoria and take responsibility for their operations. They also replaced many of the advisory groups that

also existed prior to that time, in particular the regional Land Protection Advisory Committees and the Catchment and Land Protection Boards that had the role to advise departmental managers and ministers on water and land care management.

The Water Act provides the basis for the statutory functions of CMAs whilst the CaLP Act provides the basis for their existence and strategic functions. Each CMA is required to produce a Regional Catchment Strategy (RCS) for their particular geographic region which provides the basis for the management of that particular region's natural resources. Any regional weed strategy or action plan that is developed by a CMA is primarily to deliver the targets for natural resource management outlined in that region's RCS.

CMAs have a statutory responsibility to develop and to implement effectively,

schemes for the use, protection and enhancement of designated land and waterways for which they are responsible within their region. This can include the management of weeds that impact on the values of these areas or weeds that have a legal requirement for management.

The strategic role of CMAs in relation to weeds also includes providing advice to ministers and the Victorian Catchment Management Council, this is the reason why CMAs have been charged with making the required recommendations under the review of noxious weeds in Victoria. Being the primary regional natural resource management body that engages with the community enables the CMAs to accurately represent the aspirations of those communities with regard to weed management.

So what are the guiding principles that CMAs use in both their statutory and strategic roles when managing weeds? As a manager of weeds, CMAs deal with the impacts of weeds on those areas of land and water that they are directly responsible for under the Water Act, where such weeds are causing impact on their use and values. CMAs also have responsibilities under the CaLP Act like any other land manager for the management of declared noxious weeds on any land that they are the responsible manager of. CMAs do not carry out any function with regard to enforcing the provisions of the CaLP Act relating to weeds, this in general is the role of the Department of Primary Industries (DPI).

As a strategic and priority setting body, CMAs guide organisations such as DPI in relation to where their activities should occur within that region. The principles of the Victorian Pest Management Framework guide this.

The first key principle is to prevent the introduction and establishment of new weed infestations into and across the region that have the potential to impact on the region's natural assets. This is reflected in those species that are classified as 'regionally prohibited' due to their limited occurrence and potential to cause impact.



CMAs often work with other partners to achieve outcomes (Photo: Corangamite CMA)

The second principle is to protect those natural assets that are valued by the community within that region and the wider community in general from the impact of weeds. CMA strategies provide the basis for identifying these assets through endorsed documents such as the particular region's Native Vegetation Plan, River Health Strategy, Soil Health Strategy, Salinity Action Plan, Wetlands Strategy, Coastal and Marine Strategy and others depending on the nature of the region. These specific documents identify the region's assets and those threats that will impact on the condition of these assets.

CMAs have a key role in ensuring that an appropriate level of engagement with the region's community occurs in making decisions about management of natural resources. The development of the RCS and other regional strategies and action plans are done in consultation with regional communities, partners and stakeholders. The level of consultation has been commensurate with the complexity of the particular strategy and level of interest of the affected community. CMAs have developed strategies and processes to ensure this occurs in both the shorter and longer term.

Each CMA has a Board that is made up of community members with experience and knowledge of one or more of the following: (a) land management; (b) water resources management and the water industry; (c) waterway management; (d) environment or natural resources management; (e) primary industry; (f) strategic or business planning; (g) financial management. The Board is seen to be representative of the community within the region and able to reflect the community's aspirations and concerns with regard to natural resource management. The Board members are appointed by the State Government of the day.

The evolution of an asset based approach to investment has to a large extent been led by CMAs in Victoria. Key principles that have been developed by the Department of Sustainability and Environment (DSE) are applied at the regional level when programs are being developed and funded. Identifying where assets occur in the landscape and valuing their attributes in relation to each

other enables prioritisation of the limited investment available to achieve the best possible outcomes. In recent times this asset based approach, in conjunction with the review of Victoria's noxious weeds, has not only led to a change in the species of weeds being dealt with, but in some instances where this may take place.

A large proportion of the funding provided by the Victorian and Australian governments for the management of a variety of natural resources is provided through the CMA regional model. Some of this investment may be utilised both directly and indirectly to manage the threat presented by weeds. The extent of these works is limited to the amount of funding available and therefore needs to be prioritised to ensure the highest level of benefit and return on any such investment.

So what is the role of Catchment Management Authorities (CMAs) in relation to the management of weeds in the state of Victoria? In summary, there are thousands of existing species of plants that can be classified as weeds in Victoria, all having varying levels of impact and all having varying levels of status under different policies and legislations. Weeds are generally the responsibility of the person that manages the location on which they occur, with some species requiring specific management action under legislation. CMAs not only directly manage weeds on land managed or owned by them, at locations where they occur as required under the Water Act and the CaLP Act, but also have wider strategic responsibilities on behalf of the community. These responsibilities include reflecting the views and priorities of the region's community, ensuring investment hits the ground in the right places and fostering integration of weed management into a myriad of natural resource management programs.

CMAs are currently developing, or about to commence developing the next iteration of weed and pest animal plans for their regions. It is envisaged that there will be much interest from within those regions as to the future direction for weed management outlined under these plans.

Leigh Dennis, Corangamite CMA

The role of the Victorian Catchment Management Council

The Victorian Catchment Management Council (VCMC) is the state's peak advisory body on catchment management. The Council is uniquely placed, independent of government agencies, Catchment Management Authorities and non-government organisations, to take a long term view and influence change in working towards its vision for catchment management:

'Victoria will have healthy rivers flowing through ecologically sustainable and productive catchments'.

VCMC takes a statewide view on land and water issues and priorities related to catchment management. It facilitates integrated and coordinated catchment management through Victoria's Catchment Management Framework.

Statutory Role

Under the Catchment and Land Protection Act 1994 (CaLP Act), the major statutory roles of the VCMC include:

- Advising the Minister for the Environment, and any other Minister as requested, on land and water management issues;
- Reporting annually on the operation of the CaLP Act; and
- Reporting every five years on the environmental condition and management of Victoria's land and water resources through the VCMC Catchment Condition Report. The last such report was published in October 2007.

Weeds Policy Committee

The Weeds Policy Sub-Committee (WPC) is one of the important functional committees of the VCMC.

There is opportunity for VCMC to have input into the new Victorian Biosecurity Framework, and the policies shaping invasive plant and animal management in Victoria. Climate change and national biosecurity issues will also impact on

policy and planning for weeds and pests. In particular, VCMC aims to ensure that there is regional and community involvement in the development of strategies, policies and plans that have impact at regional and local levels.

There is also a role for VCMC to promote community awareness and understanding of issues relating to catchment management in the area of weed and pest animal management.

As well as this statutory role WPC members advise VCMC on progress and reviews of the various government pest management frameworks and strategies. This is made possible by WPC member representation on a number of Departmental Pest Committees and working groups, including:

- Pest Management Coordinating Committee
- Good Neighbour Program Coordinating Committee
- Pest Plan Working Group
- Environmental Weeds Working Group
- Information Systems & Practices Review Steering Committee
- Noxious Weeds Review Steering Committee
- Invasive Plants and Animals Interim Governance Group

Under the CaLP Act, the Minister must obtain advice on any proposal for the declaration, or the revocation of a declaration, of an animal as an established pest animal or a plant as a noxious weed. The advice from the VCMC must include an assessment of the extent and the severity of impact of the animal or plant in Victoria.

One of the major strategic actions in the earlier Victorian Pest Management Framework was to review and revise the list of declared noxious weeds. After a review of institutional arrangements relating to statewide pest plant and animal management, this is now the responsibility of Biosecurity Victoria.

Review of Noxious Weeds

The review, which commenced in May 2004, is being conducted in three phases:

- Phase 1 – review of currently declared regionally prohibited and regionally controlled species (completed);
- Phase 2 – Review of CMA priority species (identified in Regional Weed Action Plans);
- Phase 3(a) – Review of the National alert weed list and Weeds of National Significance (WoNS); and
- Phase 3(b) – A review of new weeds nominated by the community.

VCMC is responsible for guiding the communication process at the statewide level and has fulfilled this obligation through its Stakeholders' Forum on an as needs basis.

Advice to Council

The WPC has provided advice to VCMC on pest issues for the Catchment Condition Report 2007 and for submissions to the Land and Biodiversity Green/White Papers.

Review of the Victorian Pest Management Framework (VPMF)

The Victorian Pest Management Framework concluded at the end of June 2007 and the WPC participated in the DSE evaluation of the framework. It also provided comments on the final report. The earlier assessments and reviews by VCMC of the VPMF strategic actions contributed to this evaluation and review.

Good Neighbour Program

The WPC also has a member on the State Good Neighbour Program (GNP) Committee, to represent the community. The GNP aims to protect private land from pest plants and animals by improving the management of adjoining public land and ensures that investment reflects catchment priorities on a CMA basis.

Tackling Weeds on Private Land Initiative

VCMC does particularly acknowledge the success of the Tackling Weeds on Private Land initiative which has seen a number of achievements. These successes were published in *Tackling Weeds on Private Land Summary of Achievements 2006–2007* released in February 2008.

Members of the Committee also attend events and conferences as required, including seminars by the WSV. The WPC also assists VCMC with its role under the *Flora and Fauna Guarantee Act 1988*, and to provide comment to the Minister on recommendations made by the Scientific Advisory Committee for listing of flora and fauna and draft Action Statements. Members of the Committee are Alex Arbuthnot (Chairman), Joanne Anderson, Rod Gowans, Collon Mullett and Neil Meyers (staff member).



Members of the Victorian Catchment Management Council: From left: Cheryl Batagol, Cullen Gunn, Joanne Anderson, Mick Murphy OAM (Chair), Christine Forster AM, Alex Arbuthnot AM, Rod Gowans PSM and Kevin Love (DSE Representative). Missing from the photo is Dr. Sarah Ewing and Collon Mullett (Photo: VCMC)

Research

Weed seed retention at harvest of the major cropping weed species of south-eastern Australia

The collection of weeds seeds at harvest is the last available option for crop producers to intercept the seed production of weeds that have escaped or survived earlier weed management tactics. As many farmers are now well aware the collection and destruction of these weed seeds prevents the replenishment of the seedbank, allowing the continuation of intensive cropping systems. Additionally, with the increasing reliance on herbicidal weed control there is an increased likelihood that weeds surviving to harvest are herbicide resistant, further emphasising the need to intercept the seeds of these plants. There are a number of systems/techniques available that intercept viable seeds at harvest. These include chaff carts, residue baling, windrow burning and chaff processing. However, the efficacy of each of these systems is dependant on the seed of the targeted weeds entering the header during the harvest operation.

The proportion of weed seeds retained in upright seed heads above the cutting height of a harvester at crop maturity establishes the potential efficiency of techniques that target these seeds during the harvest operation. Therefore, the efficacy of weed seed collection and destruction systems is totally dependant on seed retention at crop maturity of targeted weed species. Additionally, as the harvest period in any one area of the dryland cropping regions of south-eastern Australia typically stretches over a 1–2 month period, it is essential that the proportion of weed seed retention is determined over this period. Finally, variation in agro-ecological conditions across these cropping regions will most likely affect the proportion of weed seed retention both between and within weed species across these zones.

A project aimed at answering the weed seed retention questions was recently funded by the Australian Weeds Research Centre. The aim of this research is to determine the proportion of seed of the

four dominant weed species of Australian dry-land cropping systems, annual ryegrass (*Lolium rigidum*), wild radish (*Raphanus raphanistrum*), wild oats (*Avena fatua* and *Avena sterilis*) and brome grass (*Bromus diandrus*) that is retained in erect seed heads above harvesting height at crop maturity. The effect of environment on seed retention will be assessed at locations covering a diverse range of climatic conditions occurring across the southern and eastern Australian dry-land cropping regions. This work would complement a similar Grains Research Development Corporation supported study being conducted across the Western Australian wheat-belt over the 2008 harvest. The completion of both projects will provide seed retention data of the four major weed species as they occur across the entire Australian dry-land cropping region.

The seed retention of annual ryegrass, wild radish, wild oats and brome grass will be determined at 20 sites across southern and eastern Australia over a four week period of the 2009 harvest commencing at wheat crop maturity. The sites will be established in collaboration with grower groups, crop producers and researchers located across these regions.

At each location, commencing at crop maturity and then on a weekly basis for four weeks, seed heads of each of the



Annual ryegrass seed heads in mature wheat crop (Photo: M. Walsh)

four species will be collected from plants present in wheat crops. To determine the seed collection potential for these species, the seed heads 10 cm above the soil surface (harvester cutting height) will be collected from within quadrat areas. To assess the amount of seed that could not be collected the seed and seed-heads below this height and present on the soil surface will also be gathered from within these same quadrat areas. To assess the impact of environmental conditions on weed seed retention, rainfall and temperature data will be collected from the nearest available sources.

When this project is completed in 2010 it is envisaged that there will be a clear understanding of the at harvest seed collection/destruction potential for the four major weeds of south-eastern Australian dryland cropping regions. With this knowledge we will be able to better focus our at harvest strategies aimed at targeting weed seeds.

Dr. Michael Walsh, Senior Research Fellow, University of Melbourne/Birchip Cropping Group Inc.



Header and chaff cart (Photo: M. Walsh)

News

Successful State Prohibited Weeds display at MIFGS 2009

The DPI Weed Alert team hosted a display at the Melbourne International Flower and Garden Show (MIFGS) at the Royal Exhibition Building and Carlton Gardens from 1–5 April 2009. With over 100,000 visitors each year, the international event provided an opportunity to increase



State Prohibited Weeds display at MIFGS 2009 (Photos: DPI)



awareness in the broader community regarding the serious threat new weeds pose to Victoria's agricultural, environmental and social values.

This year's DPI display featured live State prohibited weeds (SPWs), with a particular focus on Mexican feather grass (MFG) which was inadvertently sold by a number of large retail chain stores in 2008.

Of the 107,000 attendees to MIFGS 2009 over 4000 visited the DPI display allowing staff to raise awareness of the currently declared SPWs in Victoria, answer queries, help with ways to identify species including differentiating characteristics to look-alike plants, and the circumstances and details of the MFG incursion.

It was a highly successful event with 24 reports of SPWs recorded for Weed Alert staff to follow up. In addition to suspected infestations on private and public land, some reports were of SPWs seen available for sale.

Visitors to the site were given the opportunity to provide feedback and suggest ways to improve the display in the future by participating in a survey and going into the draw to win a copy of *Weeds of the South-East*. Over 116 entries were received.

Weed Alert staff also signed up individuals and groups, such as garden clubs, for Weed Spotter training, and educated people about the Weed Spotter program.

For more information please contact Michaela Walsh on 03 5366 0015 or visit the DPI website at www.dpi.vic.gov.au.

Michaela Walsh, DPI Bacchus Marsh

Orchard Sprayer

Chris Knight, member of the WSV Executive Committee, recently came across this orchard sprayer which was purchased at a clearing sale and is still in use on a farm in the Yarra Valley near Yarra Glen. The unit is of interest because of the age of the engine and the pump and the wooden, wine barrel-like storage tank. Engine enthusiasts will be interested to know that it started first time, and, according to Chris, sounded wonderful!

Book review

Managing wild radish and other brassicaceous weeds in Australian cropping systems

This publication brings together the latest research information on brassicaceous weeds, some of Australia's worst broadleaf crop weeds. Closely related to a wide range of cultivated vegetables (e.g. cauliflower, cabbage, broccoli), major brassicaceous weeds in Australia include wild radish (*Raphanus raphanistrum*), charlock (*Sinapis arvensis*), turnip weed (*Rapistrum rugosum*), wild turnip (*Brassica tournifortii*) and Indian hedge mustard (*Sisymbrium orientale*). The decision to write this book was prompted by the mounting cases of herbicide resistance in brassicaceous weeds and the problems lack of control options cause in broadleaf crops.

The book is the result of years of research by Dr Aik Cheam, Australia's leading authority on brassicaceous weed management. It discusses management tactics within an integrated weed management framework that focuses on the various parts of the weed lifecycle and keeps pressure on the weed seedbank.

What's inside? Background: Describes the origins, distribution and impacts of brassicaceous weeds in Australia's cropping systems.

Herbicide resistance: Presents the basics of herbicide resistance, crucial for managing brassicaceous weed populations that are resistant to one or more herbicide groups, or at risk of becoming resistant. **Agronomy:** Discusses agronomic practices used to maximise the benefits of the specific weed management tactic employed. **Tactics:** Provides detailed information on available weed management tactics (chemical and non-chemical) and trial results from across Australia. **Implementing IWM:** Describes the development of an integrated management plan for brassicaceous weeds and their practical implementation on farms in Western Australia and New South Wales.

You can request a free hard copy by email (acheam@agric.wa.gov.au) or download a free electronic copy from www.weedsrc.org.au/projects/project_2_2_3_3.html.

Adapted from the European Weed Research Organisation Newsletter 10/08