

Tarrangower Cactus Control Group

Parks Victoria Kookaburra Award 2016

Last issue, we featured the Hawkweed Eradication Project following their Parks Victoria Kookaburra Award on International Volunteer Day in December 2016. In this issue, we are pleased to congratulate the Tarrangower Cactus Control Group who also received the Parks Victoria Kookaburra Award 2016 in the 'conserving special places' category. The volunteers in the Tarrangower Cactus Control Group have been very active in their efforts to control the invasive wheel cactus (*Opuntia robusta*) in the Maldon Historic Reserve and Nuggetty Ranges near Maldon in central Victoria.

A local newspaper article in 1963 stated that all shire inspectors and landholders had been directed to 'carry out remedial measures immediately' to control wheel cactus. However, invasion by wheel cactus continued to increase, prompting three local Landcare groups to form the Tarrangower Cactus Control Group in 2005.





Through trial and error, group members have developed an effective method of control using an injection tool kit to apply herbicide directly into the cactus lobes. Volunteers meet regularly for Community Field Days from April through November on public and private land, and have made an enormous contribution to wheel cactus control in the region.

Continued effort and vigilance is extremely important to the group because wheel cactus seed can remain viable in the soil for at least 20 years. It is vital to prevent new seeds from being produced by firstly destroying all existing fruiting plants and then destroying all new plants before they begin fruiting.

As part of this effort, the group has secured funding from the Norman Wettenhall Foundation to map the distribution of wheel cactus plants within Victoria. If you know the whereabouts of any wheel cactus plants, you can help map existing infestations by emailing the location to Max, at info@cactuswarriors.org.

Opuntia spp. (except Opuntia ficus-indica) are Weeds of National Significance. (Photo at left) Cactus Warriors Ian Grenda, Sue Davidson, Frances Wade and Tony Kane receiving the Tarrangower Cactus Control Group Parks Victoria Kookaburra Award 2016. Photo credits: Lee Mead.

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WSV Membership Rates 2016–17

Pay for 1, 3 or 5 years

Concession* \$20

Ordinary \$60

Corporate \$140

* Students and Pensioners

WSV is not registered to collect GST

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COVER PHOTO: Opuntia robusta (courtesy Rob Richardson)	

Joining the Weed Society of Victoria

The benefits of membership to WSV include:

- Weedscene: 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.

Want to receive Weedscene as a PDF? Contact the Secretary.

Society Sponsorship

Annual Sponsorship \$300

- Logo displayed on 'Weedscene' four issues per year
- Logo and sponsor name on the Society's website
- One promotional article in 'Weedscene' per year (subject to ed. control)
- One free membership per year (optional)

Advertising rates

One sixth page 56 mm wide x 128 mm high \$50
 Quarter page 180 mm wide x 64 mm high \$75
 Half page 180 mm wide x 128 mm high \$150
 Whole page 180 mm wide x 257 mm high \$300

Design R.G. & F.J. Richardson, PO Box 42, Meredith Vic 3333

www.weedinfo.com.au

Printing Maroondah Printing, 42 New Street, Ringwood Vic 3134

Printed on 100% recycled paper

Invasive Plants PhD Research Projects

This is the eighth in our series on invasive plants research projects being undertaken by PhD candidates in Victoria.

Improved
Methods for
Biological
Control Decision
Making

WSV President **Greg Lefoe** is combining work and study through his PhD candidature at the University of Melbourne's School of BioSciences. Greg has the support of his employer Agriculture Victoria and excellent facilities at the AgriBio Centre, as well as a strong network of local, interstate and international collaborators, and a talented PhD academic advisory team comprising Supervisors Dr Cindy Hauser, Dr Libby Rumpff, Prof. Mark Burgman (recently moved to the UK), advisory committee chair Prof. Roger Cousens, and Agriculture Victoria Supervisor Dr Raelene Kwong.

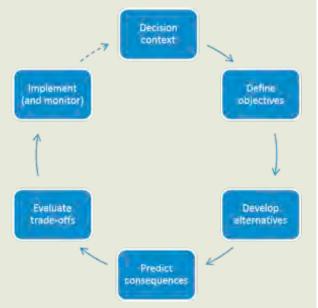
Greg's current research into the biological control of two Weeds of National Significance, silverleaf nightshade *Solanum elaeagnifolium* and gorse *Ulex europaeus*, are the focus of his PhD. As readers of Weedscene know, classical biological control is the introduction of host-specific natural enemies (called biological control agents) from a weed's native range.

It is generally considered to be a safe and cost-effective method of control for widespread weeds. However, biological control decisions are inherently complex because they can involve many stakeholders, address multiple objectives, and are almost always characterised by uncertainty.

To aid decision makers, Greg will apply Structured Decision Making and Adaptive Management approaches to pre- and post-introduction case studies. Structured Decision Making, and its sub-set Adaptive Management, provide a framework and set of tools that 1) aid learning, collaboration and informed decision making, and 2) address uncertainty facing decision-makers, in a way that is explicit, transparent and defensible.

The case studies comprise 1) a risk analysis for a leaf beetle proposed for control of silverleaf nightshade, and 2) optimal release strategies for the gorse soft shoot moth in Australia.

Figure right: The steps in a Structured Decision Making Framework. (Adapted from Gregory, R., Failing, L., Harstone, M., Long, G., McDaniels, T. and Ohlson, D. (2012). *Structured Decision Making. A practical guide to environmental management choices.* Wiley-Blackwell, Chichester, UK).





Left: Greg Lefoe erecting a tent to temporarily contain gorse soft shoot moths in Baynton, Victoria. Adaptive management may be a suitable framework to compare release strategies such as this, and to update knowledge when data is available (Photo courtesy of Pip Elston).

This research is funded by Agriculture Victoria, Meat and Livestock Australia, Primary Industries and Regions South Australia, the South Australian Grains Industry Trust, and the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit Programme.

Dates for your Diary

July 2017

2017 Island Invasives Conference – Scaling Up to Meet the Challenge Dundee, Scotland, UK 10–14 July 2017 www.islandinvasives2017.com/



IBC 2017 – XIX International Botanical Congress Shenzhen, China 23–29 July 2017 www.ibc2017.cn/

August 2017

102nd Ecological Society of America Annual Meeting – *Linking Biodiversity, Material Cycling and Ecosystem Services in a Changing World* Portland, Oregon USA 6–11 August 2017 www.esa.org/portland/#.WJgfYlN97IU



New Zealand Plant Protection Society Symposium – Opening the Eyes and Minds to Border Biosecurity: facilitating the pragmatic uptake of biosecurity knowledge Tauranga, New Zealand 7 August 2017 http://nzpps.org/index.php New Zealand Plant Protection Society Conference Tauranga, New Zealand 8–10 August 2017 www.nzpps.org/conference.php

12th International Association for Ecology Congress – *Ecology and Civilization in a Changing World* Beijing, China 21–25 August 2017 www.intecol2017.org/dct/page/1

September 2017

26th Asian-Pacific Weed Science Society Conference – *Weed Science for People, Agriculture and Nature* Kyoto, Japan 19–22 September 2017 www.c-linkage.co.jp/apwss2017/



October 2017

World Habitat Day – first Monday in October www.un.org/en/events/habitatday/



19th NSW Weeds Conference 2017

Experience the Highs – working

smarter together

Armidale, New South Wales
16–19 October 2017

http://conferencecompany.com.au/
weedsconference/



XVI Congress of the Spanish Society of Weed Science Pamplona, Spain 25–27 October 2017 www.unavarra.es/congresosemh2017

January 2018

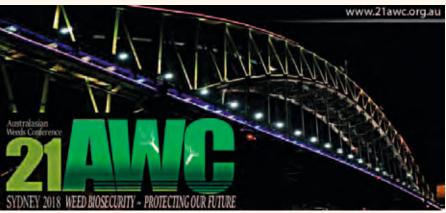
4th ANdinA International Workshop – Species Range Extensions and Local Adaptation
San Carlos de Bariloche, Argentina
29 January – 2 February 2018
www.andina4argentina.weebly.com

August 2018

103rd Ecological Society of America Annual Meeting New Orleans, Louisiana, USA 5–10 August 2018

September 2018

21st Australasian Weeds Conference Sydney, NSW. September 2018 www.21awc.org.au/



WSV News



President's Report

The Weed Society of Victoria's Annual General Meeting is fast approaching. This year the AGM will be held at the AgriBio Centre, on La Trobe University's Melbourne campus. AgriBio is a joint venture between La Trobe University and the Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR). The centre hosts scientists and students engaged in a wide range of research aimed at improving agricultural productivity and sustainability. If you've ever wondered where Keith Turnbull Research Institute (KTRI) scientists were relocated to, it's AgriBio.

Of particular interest to WSV members is AgriBio's research into the integrated management of aquatic weeds, and the biological control of several Weeds of National Significance. The AGM will be preceded by a tour of the biological control research laboratory, and the new aquatic weed research facility.

In addition, the WSV will host a community volunteer forum featuring the efforts of volunteers and community-based groups engaged in weed management. An aim of the forum is to highlight areas where the WSV can support on ground efforts, and promote collaboration between the many different agencies and individuals who contribute to weed management. Given the location, the forum could also highlight ways in which scientists and on-ground weed managers currently collaborate, or how they could work together more effectively.

Please find the proxy and nomination form overleaf. This and other AGM documents will be posted on the WSV website (www.wsvic.org.au/) and hardcopies will be available during the AGM.

Further details will be forwarded separately, but be sure to put the following date into your diary:

What: Weed Society of Victoria Inc. Community Volunteer Forum and Annual

General Meeting

When: From 3 pm, Wednesday 26 July 2017

Where: AgriBio, Centre for AgriBiosciences, La Trobe University, 5 Ring Road,

Bundoora, Victoria 3083





Weed Society of Victoria Inc.

PO Box 122 La Trobe University Bundoora Vic 3083 0437 861 449 secretary@wsvic.org.au www.wsvic.org.au

2017 Annual General Meeting

PROXY FORM

I,	(name of financial member wishing to vote)						
appoint	point(name of member attending meeting to whom						
proxy is delegated)							
as my proxy to represent me at the 2017 Annual General Meeting of the Weed Society of Victoria (Inc.) on 26/07/2017 and vote on any motion as they see fit.							
Signed:			Date:/	/ 201	17		
NOMINATION FORM							
Name of Nominee :		Name of Nominator :					
Address:			Signature:		Date:		
					//2017		
Phone:			Name of Secon				
Email:			Signature:		Date:		
					//2017		
Nomination for the position of (please tick):							
President	☐ Secretary	☐ Pub	licity Officer		General Committee		
☐ Vice President	☐ Treasurer	☐ Nev	vsletter Editor				
Nominations can only be	e made by financial me	embers.					

Please note: you can nominate yourself and ask a financial member to second your nomination.

CAWS report



16 March 2017 By Ingrid Krockenberger

President, Rachel Melland, reported that there has been increasing federal-level inclusion of non-government groups in environmental biosecurity. Representing CAWS, she has participated in a working group developing terms of reference for the Environmental Biosecurity Stakeholder Forum. With a view to further inclusion at federal level, CAWS will be sending a letter of introduction to the Invasive Plant and Animal Committee (IPAC) which implements the Intergovernmental Agreement on Biosecurity (IGAB).

CAWS has provided endorsement of the substantial submission by the Invasive Species Council to the Intergovernmental Agreement on Biosecurity (IGAB) review, making some suggestions for the final draft. Rachel Melland wrote a submission to the National Environmental Biosecurity Response Agreement (NEBRA) review on behalf of CAWS.

[For more information on IPAC, IGAB and NEBRA, please see the article 'National Biosecurity Framework - Invasive Plants and Animals' in the next issue of Weedscene.]

CAWS subscription to Survey Monkey has been renewed. Use by member societies is free – we can contact Hilary Cherry, Michael Widderick or Kerry Harrington for password information.

The Tasmanian Weed Society reported that they continue to struggle due to lack of numbers and other issues. Sue Hinton has been valiantly keeping the society alive, but is now organising to hand over to others.

A selection committee was formed to assess the three applications for the 2017 CAWS travel awards (compared to 11 applications last year which was an Australasian Weed Conference year). As there was little income from the conference, it was suggested that only one award of \$1500 can be justified. The final decision will be made and ratified via email by 1 May.

Slight changes to honorarium payments to the secretary and treasurer were decided upon, so that payments will be made at the end of each annual term; there is to be a set increase in payment each year to allow for CPI increase, and; the ratio of payments to secretary and treasurer will be 2:1, respectively.

Further discussions were had about fine-tuning of the CAWS Constitution wording, in order to comply with the Western Australian *Associations Incorporation Act 2015*. Mandatory changes can be voted on at a normal meeting but other changes need to be ratified at a Special or Annual General Meeting. So revisions can only be finalised by September 2017 at the earliest.

The next meeting will be held on 15 June 2017. Ingrid Krockenberger and Brett McGennisken are your CAWS delegates.



In the Media

CSIRO African Boxthorn Management Survey

A stakeholder survey is being conducted by CSIRO's weed biological control team on the impact and management of African Boxthorn (*Lycium ferrocissimum*) in natural ecosystems and agriculture in Australia. Follow this link to participate in the short survey: http://sgiz.mobi/s3/African-boxthorn-management-objectives-survey. Queries to Dr Kylie Ireland on (02) 6218 3445 or at kylie.ireland@csiro.au.

Support Sought for Red Fire Ant Statement of Concern

The Invasive Species Council (ISC) has recently issued an open letter to Australian governments regarding the need for full eradication of red fire ants in Australia. There is further information about the red fire ant invasion in parts of Australia, and an opportunity to demonstrate support for the ISC statement of concern, at: https://invasives.org.au/invasive-ants/eradication-of-red-fire-ants-from-australia-statement-of-concern/

Red fire ants are making news in Queensland: www.couriermail.com.au/questnews/southeast/warning-to-southside-suburbs-as-fire-ants-nests-found/news-story/bbbdbdfe6a0b3484582c4af6a2ca0030 www.qt.com.au/news/nine-more-fire-ant-nests-discovered-in-augustine-h/3182438/

Introduced Species Greater Threat than Habitat Loss

A report, authored by Tim Low, on the threat of feral animals and diseases has recently been published by the Invasive Species Council. Media release and link to the report: https://invasives.org.au/blog/feral-animals-diseases-greater-threat-habitat-loss/

New Safety Doubts about Roundup in Unsealed Documents

The New York Times published an article on a federal court-ordered release of Monsanto documents. The unsealed documents suggest that Monsanto had ghostwritten research which was later attributed to academics. It was also revealed that a senior official at the Environmental Protection Agency had worked to quash a government agency review of Roundup's main ingredient, glyphosate. The litigation was initiated by a group of people exposed to glyphosate and suffering non-Hodgkin's lymphoma, following the World Health Organisation (WHO) announcement that glyphosate is a probable carcinogen.

The article also notes that the science is not yet settled, with a number of agencies including the European Food Safety Agency disagreeing with the WHO's International Agency for Research on Cancer. www.nytimes.com/2017/03/14/business/monsanto-roundup-safety-lawsuit.html?smid

Glyphosate Judged Safe by EU Watchdog

The European Chemical Agency has judged glyphosate safe for public use, in contradiction with the World Health Organisation's International Agency for Research on Cancer. The decision is not without controversy for further reasons, as reported by The Guardian.

www.theguardian.com/environment/2017/mar/15/no-cancer-risk-to-using-glyphosate-weedkiller-says-euwatchdog?CMP=Share_AndroidApp_Copy_to_clipboard

Senegal Tea Plant Infestation

Melbourne Water has used social media to ask the public to be on the lookout for an aquatic weed. An infestation of Senegal tea plant (*Gymnocoronis spilanthoides*) was recently discovered in Macclesfield. There have been very few known outbreaks of this highly invasive species in Victoria. www.facebook.com/melbournewater/posts/10155183951038184

Five Additional Weeds on SA Declared Plant List

The South Australian Minister for Sustainability, Environment and Conservation has declared five additional introduced weed species, prohibiting them from sale to prevent further spread. The species are *Alisma lanceolatum* (alisma – an emergent aquatic), *Arundo donax* (giant reed), *Leptospermum laevigatum* (coastal tea-tree), *Myriophyllum aquaticam* (parrot feather – a submerged aquatic), and *Trachyandra divaricata* (dune onion weed). State Herbarium of South Australia news: http://know.ourplants.org/news/five-additional-weed-species-prohibited-from-sale-throughout-south-australia/

Riverland Project Tackles Wheel Cactus Using Cochineal Bug

ABC Rural reported on the national Landcare funded Riverland project in South Australia, which has undertaken work to control a decades-long wheel cactus problem. The project uses cochineal bug as biological control, paired with mechanical and chemical control methods. Fourteen farms now have infested cacti. Access: www.abc.net.au/news/rural/2017-05-29/microscopic-bugs-help-control-wheel-cactus/8568530

Weekly Times Weed Watch

The Weekly Times has published a Weed Watch series: *How to deal with gorse*: www.weeklytimesnow.com.au/agribusiness/farm-magazine/weed-watch-how-to-deal-withgorse/news-story/00c80b93f77b6176d7202ec085c7c6d8 *How to manage serrated tussock*: www.weeklytimesnow.com.au/agribusiness/farm-magazine/weed-watch-how-to-manage-serrated-tussock/news-story/95cd2d1aab4e98b57bc 45aa8475dc16f

Bathurst burr control: www.weeklytimesnow.com.au/agribusiness/farm-magazine/bathurst-burr-put-in-extra-effort-to-rid-your-property-of-these-noxious-weeds/news-story/a3034f8b491119cd7a83938d1f071bf1

Increased Publicity for Hawkweed Detection Dog Program

Publicity for weed detection dogs has been booming, with reports in online news sites of The Sydney Morning Herald, The Canberra Times, the ABC... and, believe it or not, The Wall Street Journal!

www.smh.com.au/environment/search-and-destroy-drones-and-sniffer-dogs-used-in-war-on-weeds-20170215-gue2wt.html www.canberratimes.com.au/act-news/national-parks-cocker-spaniel-specialises-in-hawkweed-detection-20160312-gnhkzz.html

Link to ABC article and video: www.abc.net.au/news/2017-03-03/dogs-trialled-to-detect-hawkweed-in-alpine-national-parks/8229960

Link to WSJ article and video: www.wsj.com/articles/forget-drugs-these-dogs-sniff-out-a-different-kind-of-evil-weed-1437095686

Improving Rabbit Control

A media release from Landcare Australia promotes the efforts of the Victorian Rabbit Action Network (VRAN) which is funded by the Invasive Animals Cooperative Research Centre and Agriculture Victoria. The group encourages landowners, community groups and government agencies to collaborate on co-designed integrated rabbit control programs. One of the VRAN programs is a learning and mentoring network. Other VRAN initiatives include grants to support community-led learning and rabbit action, and a national rabbit conference to share community knowledge and the latest research. Media release: https://landcareaustralia.org.au/project/wild-rabbits-working-together-get-results/VRAN website: https://rabbitaction.com/

Journal of Ecology Virtual Issue: Invasive Species

The Journal of Ecology has published a special issue, featuring invasive species: www.journalofecology.org/view/0/virtualIssues/vi_invasive_species.html

Kew Launches Plants of the World Online

Royal Botanic Gardens Kew has launched Plants of the World Online (POWO), a global open and accessible online database resource. POWO uses Kew's vast botanical collections and floras, comprising the most diverse botanical and mycological collections in the world with over 95% of known flowering plant genera and more than 60% of known fungal genera. In addition, it will include a matching process between the International Plant Names Index and the World Checklist of Selected Plant Families which will be completed by 2020 – some plant families are currently under review. Media release: www.kew.org/blogs/kew-science/powo-puts-botanical-knowledge-online?platform=hootsuite&utm_

content=buffere452f&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer

Historical Specimens Destroyed in Australian Quarantine Blunder

ABC News reported on the accidental incineration of plant specimens dating from the mid 1800s, sent by the Museum of Natural History in Paris to the Queensland Herbarium in Brisbane. A delay in receiving the correct paperwork and further information resulted in the blunder by the biosecurity officers. A review of quarantine procedures has been undertaken. Access: http://mobile.abc.net.au/news/2017-05-08/irreplaceable-plant-specimens-destroyed-by-biosecurity-officers/8504944?pfmredir=sm.

Also reported on Sciencemag: www.sciencemag.org/news/2017/05/botanists-fear-research-slowdown-after-priceless-specimens-destroyed-australian-border

Unusual Source for Weed Story

Munsell of colour matching fame, including their soil colour charts, has published an article on invasive coastal tea tree at the Yanakie Isthmus, which connects Wilsons Promontory to the mainland. The article reports on Parks Victoria Yanakie Isthmus Coastal Grassy Woodlands Restoration Project. The project tackles the decline of coastal *Banksia* and associated vegetation due, in part, to invasion by pesky coastal tea tree (*Leptospermum laevigatum*). Munsell plant tissue colour charts will be used to standardise leaf colour assessment, presumably as an indicator of plant health. Article access: http://munsell.com/color-blog/coastal-banksia-invasive-tea-trees-wilsons-prom/

European Alpine Newt Eradicated in NZ

Good news story from NZ – the invasive European alpine newt has likely been eradicated. First detected in 2013 in farmland near Waihi, the amphibian posed a threat to New Zealand's rare native frogs. The successful intensive eradication program was run by the Department of Conservation. Access: https://m.newsie.co.nz/news/25951-invasive-newt-hunted-down.html

Goats on Eastlink

Eastlink management has employed a team of goats for weed control on landscaped areas adjoining the freeway. Article: http://us5.campaign-archive1.com/?u=34adf91a445288ce7e3 0080f4&id=66bad0151f

Potentially Invasive Animals Incursion Prevention and Response News

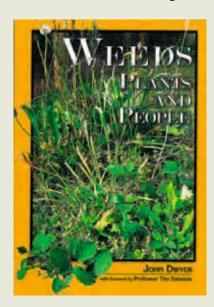
Public consultation was open on the Draft National Incursion Prevention and Response Strategy for Potentially Invasive Animals 2017–2022. The consultation period ended on 2 June 2017. Download draft strategy from: www.pestsmart. org.au/national-incursions-strategy-consultation/?utm_content=buffer8e073&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer

New Publications

For those interested in the historical relationships between people and weeds:

Weeds, Plants and People John Dwyer

Published: December 2016 Softcover ISBN: 978-178064386-1 Publisher: PenFolk Publishing



What is the perplexing category of plants that we call 'weeds'? Why do some people spend so much effort trying to eradicate plants in certain circumstances, while other people nurture those very same species for food, medicine, or simple enjoyment of their beauty? Could there be a better way for us to live alongside the many wild plants we encounter in our gardens, farms and landscapes, than to wage war on them?

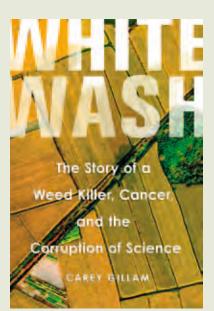
Weeds, Plants and People traces the fascinating history of many common plants that we now treat as weeds. From the thistles and thorns that appear in the Bible, to the seeds eaten by Stone Age people, and the grasses and flowers brought to Australia by European settlers, the story of the relationship between people and weeds is a complex and intriguing one.

Here it is told in a lively and engaging way for readers with or without botanical knowledge. Anybody interested in gardening, agriculture, the natural environment, medicinal herbs or cooking will glean a great deal from John Dwyer's account of some of the most ancient plants known to humankind.

For those interested in the controversy over glyphosate:

Whitewash: The Story of a Weed Killer, Cancer, and the Corruption of Science Carey Gillam

Published: October 2017 Hardcover ISBN: 978-161091832-9 Publisher: Island Press



It's the pesticide on our dinner plates, a chemical so pervasive it's in the air we breathe, our water, our soil, and even found increasingly in our own bodies. Known as Monsanto's Roundup by consumers, and as glyphosate by scientists, the world's most popular weed killer is used everywhere from backyard gardens to golf courses to millions of acres of farmland.

For decades it's been touted as safe enough to drink, but a growing body of evidence indicates just the opposite, with research tying the chemical to cancers and a host of other health threats.

In Whitewash, veteran journalist Carey Gillam uncovers one of the most controversial stories in the history of food and agriculture, exposing new evidence of corporate influence. Gillam introduces readers to farm families devastated by cancers which they believe are caused by the chemical, and to scientists whose reputations have been smeared for publishing research that contradicted business interests. Readers learn about the arm-twisting of regulators who signed off on the chemical, echoing company assurances of safety even as they permitted higher residues of the pesticide in food and skipped compliance tests. And, in startling detail, Gillam reveals secret industry communications that pull back the curtain on corporate efforts to manipulate public perception.

Whitewash is more than an exposé about the hazards of one chemical or even the influence of one company. It's a story of power, politics, and the deadly consequences of putting corporate interests ahead of public safety.