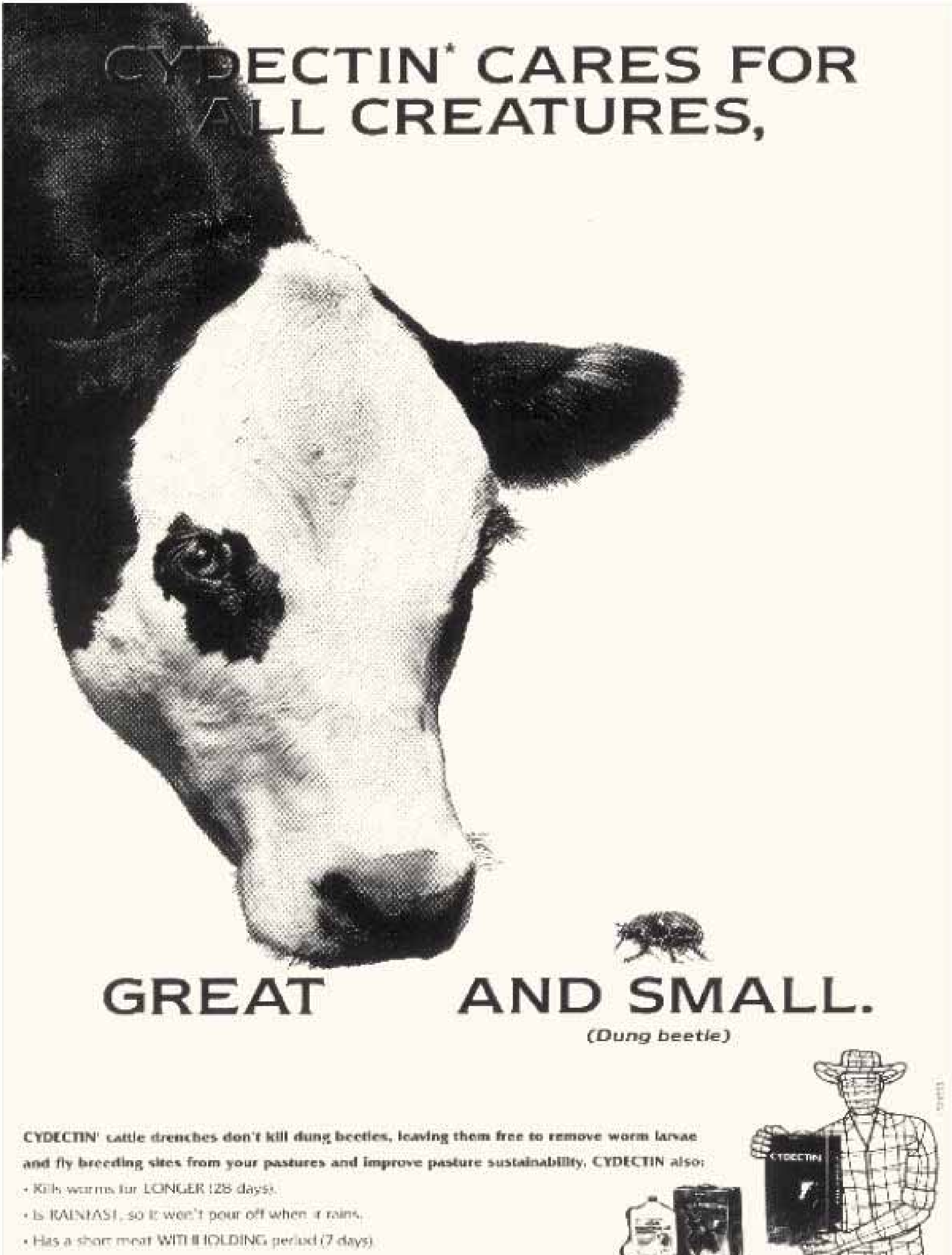
victorian Landcare

Issue 10 Summer 1998

Project Platypus water quality monitoring

Landcare goes for gold

Wishing our readers a Merry Christmas and a Prosperous New Year.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(Dung beetle)
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Hay bales at Buffalo in South Gippsland by Paul Crock

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From the editors

As another summer rolls in, the seasonal warnings of bushfires and water quality begin to ring in our ears.

Over the last few editions, we have been quietly evolving the content of the magazine to reflect seasonal issues and develop a more strategic approach to content in line with reader surveys and the types of stories you have been requesting.

The response to this has been fantastic and in this edition we have tried to deliver good punchy stories on a number of seasonal themes including bushfires, water quality and woody weeds.

We will maintain a balance of group news and information of general landcare interest, however we will be running more letters and feedback that we receive from you about stories and your opinions or ideas.

By now most groups who were successful in the 1997/98 NHT funding round should have their money and be ready to implement their projects.

With the enormous increase in funding for on-ground works, we have a timely reminder of some of the other obstacles groups face in doing their jobs, but also offer the solutions to these problems.

We welcome your feedback on our new approach and look forward to receiving your input to future editions.

Paul Crock
Sally Gibson
Phil Roberts
Jo Safstrom

Inside this edition we take a closer look at the Rio Tinto Project Platypus water quality and salinity monitoring programs.

Letters

Phylloxera in the Yarra Valley

Dr John Middleton from Mount Mary Vineyard in Coldstream wrote to us about the article on grape growing in the last issue. Dr Middleton pointed out that the grapevine louse, Phylloxera vastatrix, did not infect vines in the Yarra Valley in the late 1800s - we wrongly stated that it did.

According to Dr Middleton Phylloxera was first discovered in Geelong in the late 1870s and has since been found in the Rutherglen, Millawa, Barnawatha, Nagambie and Seymour regions. He states that grapes have been brought into the Yarra Valley from these phylloxerated areas for winemaking and it is a miracle that no outbreak has occurred.

Dr Middleton writes, "those of us who lived in this beautiful valley before the recent vineyard boom are aware of the history of Phylloxera and we carry the fear, that with the recent phenomenal increase in vineyard plantings, the disease is not unwittingly and heedlessly introduced".

Thank you Dr Middleton for your interesting letter.

Floods in East Gippsland

Dear Ed,

In response to the floods in East Gippsland, our local CFA brigade and Landcare group called for volunteers to assist fellow Landcare groups in the flood-affected areas.

A group of 11 keen landcarers set off from Toolern Vale Fire Station with a mission to assist wherever possible.

Jobs which we undertook involved clearing fence lines on many properties, clearing debris from paddocks and burning off.

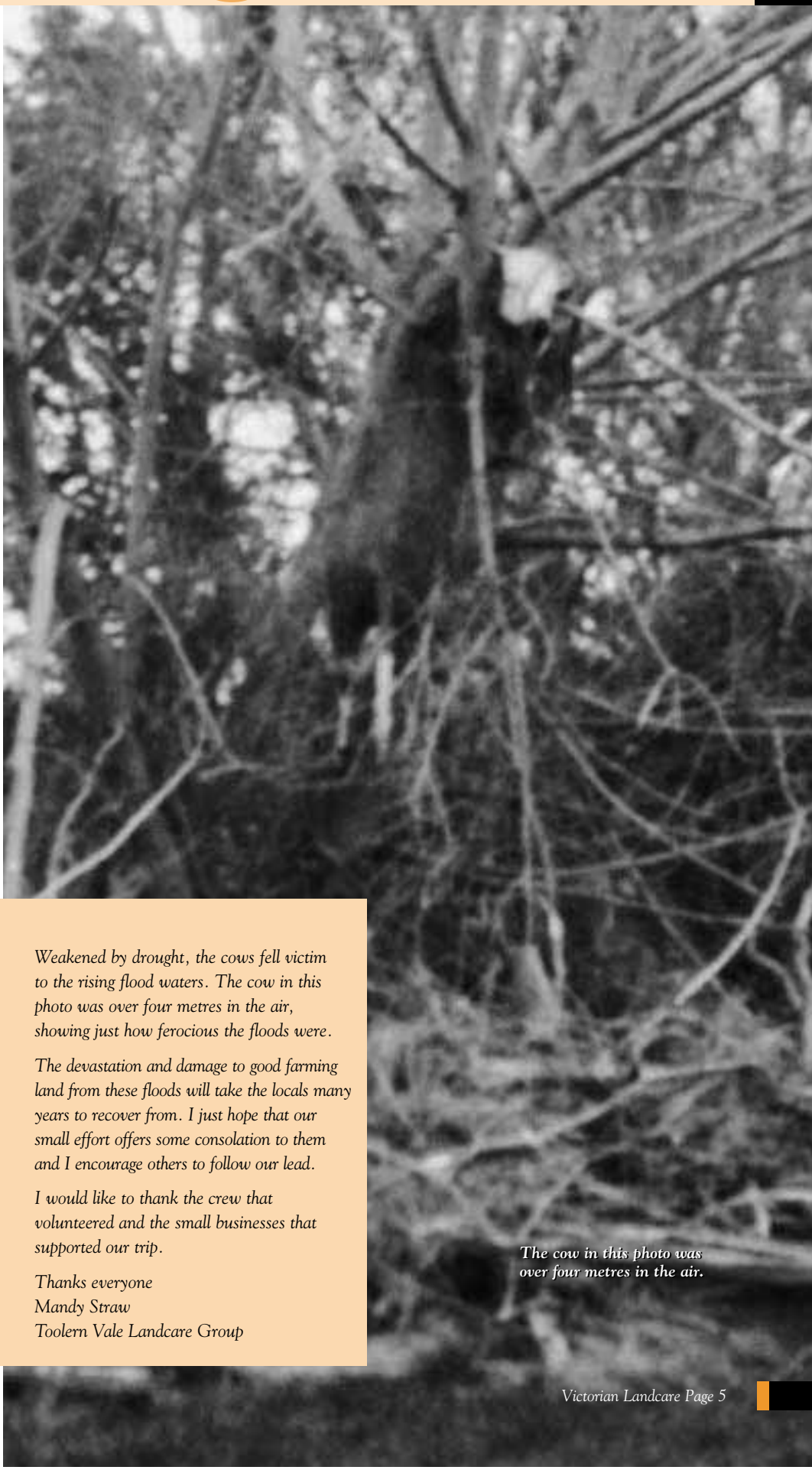
One of the most enduring scenes of the devastation was a herd of 30 cows buried in the debris on one property.

Weakened by drought, the cows fell victim to the rising flood waters. The cow in this photo was over four metres in the air, showing just how ferocious the floods were.

The devastation and damage to good farming land from these floods will take the locals many years to recover from. I just hope that our small effort offers some consolation to them and I encourage others to follow our lead.

I would like to thank the crew that volunteered and the small businesses that supported our trip.

Thanks everyone
Mandy Straw
Toolern Vale Landcare Group



The cow in this photo was over four metres in the air.

Energy boost for tree projects

A partnership between the State Government's Tree Victoria Program and the Australian Trust for Conservation Volunteers (ATCV) is providing a real boost for Landcare groups across Victoria.

With funding from the Tree Victoria Program, the ATCV has been co-ordinating teams of volunteers to help Landcare groups with their vegetation projects.

Over the last year ATCV volunteers worked for 2400 days over 30 project weeks. They planted over 138,000 tube stock, erected five kilometres of fencing, cleared seven hectares of weeds and collected many kilograms of native seed.

State Manager of ATCV, Ian Smith, said the projects are about helping groups achieve their local aims.

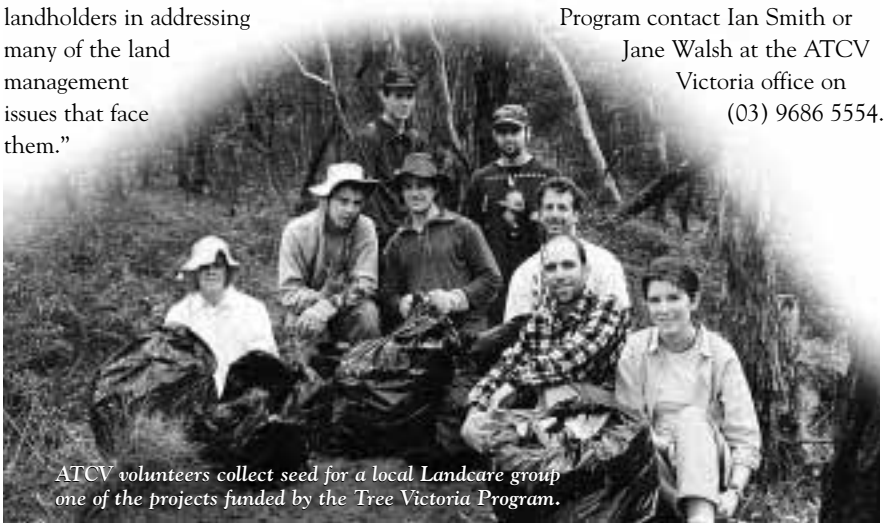
"One of our projects this year was helping to tackle a serious salinity problem that was affecting the cropping and grazing capability of the land in Victoria's north-east. Nine of our volunteers travelled to Everton to work with Royce Sample, Co-ordinator of the Burgoigee Creek and Hodgson and Horshoe Creeks Landcare Groups."

"Royce is a regular partner in the ATCV Tree Victoria Program and under his supervision the volunteers worked alongside local landholders to plant 4500 saltbush. The saltbush should work to lower the watertable and increase the productivity of the land."

Ian Smith said volunteers recruited by the ATCV come from everywhere. "We recruit both internationally and from the suburbs. There are many people in the urban community who want to help rural landholders in addressing many of the land management issues that face them."

The ATCV manages teams of volunteers Australia-wide, with over 1000 volunteers in the field each day. The Trust also organises for international visitors to Australia to work on the land and experience the unique culture of our rural communities. It's a two-way deal - environmental volunteering projects can also be set-up for Australians travelling overseas.

For more information on the ATCV Tree Victoria Landcare Assistance Program contact Ian Smith or Jane Walsh at the ATCV Victoria office on (03) 9686 5554.



ATCV volunteers collect seed for a local Landcare group one of the projects funded by the Tree Victoria Program.

NHT: ROUND AGAIN

The next round of funding under the Natural Heritage Trust is in full swing.

Applications opened on 26 August and close on 26 February 1999.

Chairman of the State Assessment Panel and the Victorian Catchment Management Council, Jeremy Gaylard, said that this is again a great opportunity for Victorians to participate in the NHT process to deliver significant, targeted on-ground works, with strong community ownership, in Landcare and natural resource and environmental management.

"This is the second last round of funding available under the current NHT program," Jeremy said.

"It is vital that we ensure that the outcomes of the NHT initiative send a strong message to governments of all persuasions of the benefits of work in Landcare and natural resource and environmental management."

"It is also vital that, at all costs, we protect the bi-partisan approach to natural resource management. It is only by everyone working together that we can achieve the outcomes necessary to protect our natural resources and environment," he said.

Jeremy offered *Landcare Magazine* readers his tips for ensuring applications have the best chance of success.

Jeremy's top 10 tips for winning NHT applications

- LINK your application in Victoria to the Regional Catchment Strategies of the relevant Catchment Management Authority.
- FOCUS your application on regional priorities.
- ENSURE your application is well thought-out and delivers significant on-ground works.
- ATTACK the cause of the problem you are trying to rectify - not the symptoms.
- READ all the documentation attached to the form for NHT applications, including the regional documentation, carefully to make sure your project is eligible.
- ENSURE your application includes a way to measure your achievements.
- ENSURE your application has strong community ownership.
- INCLUDE all the information required under the NHT process.
- MAKE your application clear and succinct, easy to read and understand.
- GET your application in on time.

Applications should be posted to the NHT Co-ordinator, PO Box 2500, Bendigo Delivery Centre, Vic. 3554.

National Dryland Salinity Program enters a new phase

Research Results

By Jo Curkpatrick,
NDSP Communications Co-ordinator.

National Dryland Salinity Program phase two will also focus on work which looks at tackling how best to rehabilitate or use land that has been affected by salinity

The National Dryland Salinity Program is about to enter a new five-year phase. In 1993 the National Dryland Salinity Program (NDSP) was formed to bring a coordinated approach to finding the techniques and approaches essential for tackling dryland salinity.

NDSP concentrated its activities in five focus catchments, including the Loddon-Campaspe Catchment in Victoria. This approach meant the research dollar wouldn't be spread too thinly and that researchers were able to collaborate across state boundaries.

When the first phase of the NDSP finished at the end of June 1998 a great deal of progress had been made.

In Victoria we have much improved methods for assessing the size and extent of the problem using remote sensing and satellite technology.

We know a lot more about why the problem occurs and have management strategies for dealing with it. Landholders have access to information about the use of perennial pastures, farm forestry and a range of other management tools.

We also know a lot more about the costs of salinity management and, importantly, the costs of doing nothing.

The next step is making it happen, getting things going on the ground and improving the adoption of the lessons learned in phase one.

Phase two of NDSP will have a new emphasis on communication and extension. While research will continue to fill in the knowledge gaps that still exist in using and rehabilitating salinised land and water resources, there will be more effort on providing the information needed to help individuals and groups make the right decision about what to do.

The new program will invest more than $20 million into projects across the nation. Assisting in funding the program are the Land and Water Resources R&D Corporation, the Grains and Rural Industries R&D Corporations, CSIRO, the Murray Darling Basin Commission, the National Heritage Trust and state agencies.

According to LWRRDC Program Manager of NDSP, Richard Price, the focus of this part of the program will be on the management of recharge and salinisation processes to reduce the costs of salinity to the environment, to primary producers and to regional communities.

"We will also look at projects that recognise the importance of the economic and policy environment in determining how quickly land and water resource managers change the way they do things to address salinity and its impacts.

"We are aiming to fund work which will provide understanding and tools to help catchment groups, landholders and resource managers choose the best balance between competing resource-use interests to minimise costs and impacts," Richard said.

Phase two will also focus on work which looks at tackling how best to rehabilitate or use land that has been affected by salinity and will cover areas like saltland agronomy, aquaculture and the conservation of biodiversity.

"We are already seeing a move to new enterprises in some areas where land is salinised beyond repair," he said.

A further area of activity will be to develop a better understanding of the processes going on in the landscape in areas affected by, or at risk from, high watertables and salinity.

"We must have a good scientific knowledge of what's going on in the landscape to underpin investment in the management of dryland salinity," Richard said.

Who can be involved?

Phase two will encourage new participants and new investment relating to managing high watertables and salinity. This means those outside the focus catchments used in phase one will be encouraged to become involved in the program.

A Management Plan outlining the NDSP's objectives and strategies has been produced and copies can be obtained from Victorian NDSP Communications Co-ordinator, Jo Curkpatrick, on (03) 9329 7380, or email: jocurk@enternet.com.au

DIY Research

Producers are managing their own research and development projects using the innovative Producer Initiated Research and Development (PIRD) scheme. The scheme is funded by Meat and Livestock Australia and The Woolmark Company. Funds of up to $10,000 have been made available for each of the 49 self-managed projects put forward by wool and meat producer groups for 1998.

The PIRD program gives producers the assistance they need to solve issues relevant to them. It recognises that producers in Australia operate in a great diversity of climates, soil types and other conditions and that usually the best results of an on-farm project are achieved when the producer is in the driver's seat.

Successful applicants this year are researching a diverse range of on-farm opportunities for improving wool and meat production. A project in Gippsland at Woodside, run by the Woodside Landcare Group, aims to determine the reason for poor clover performance in the district. The information gained will be used to help increase pasture production, and therefore increase wool production.

The PIRD philosophy centres around group interaction and participation in research and development. Producer groups initiate project ideas, make decisions and conduct research on-farm in their local environment. In this way farmers have access to practical and relevant project outcomes, as well as increased control over how their research and development levies are used.

For more information about the PIRD program contact Gerald Martin on (08) 8556 2900.

Landfest '98 - *The Living Land*

Where do you get environmental displays, landcare demonstrations, live music, dance, environmental theatre groups, roving performers, the Great Landcare Trail Race, nestbox building, a children's animal nursery, home-cooked produce and great local wines?

At Landfest of course. March is Landcare Month and Creswick Landcare Centre's Landfest has established itself as the premier event.

The theme for Landfest '99 is The Living Land. It will explore people and their impact on landscapes by looking at changes in landuse history.

The Creswick district has a rich and varied history. The diverse nature of its landscapes has led to a wide range of land uses, some which have led inadvertently to land degradation.

Koori history, European settlement, goldmining, forestry, agriculture and the advent of the Landcare movement and alternative farming practices have influenced changes in the land and the people who live there.

Landfest '99 will honour historic landcarer, John La Gerche. La Gerche dedicated his life to revegetating landscapes devastated by gold mining. He planted a range of native and exotic trees for revegetation purposes and many of his early plantings can still be seen in Creswick today. It's a pity he won't be around to see the opening of the John La Gerche Historic Forest Walking Trail.

Landfest organisers are keen to encourage wider participation from Landcare groups across the State. Landfest provides a great opportunity for Landcare groups to promote their activities, encourage new members and learn from the experience of other groups.

Landfest '99 is on Sunday 21 March 1999. For further information contact Creswick Landcare Centre on (03) 5345 2200.

Great harmony- one of Australia's top bands, Tiddas, performing at last year's Landfest.

New approach to gorse control

By Cam Nicholson,
Woady Yaloak Project Manager.

Research Results

Trials in the Rokewood district south of Ballarat may soon provide new strategies for the permanent control of gorse.

Using a novel approach, farmers will be working out the most cost-effective ways of removing the established bushes and then germinating as much of the seed in the soil as possible.

A range of options will be trialled to determine which techniques are best to control the new seedlings.

Weed facilitator with the Alcoa Woady Yaloak project, Tim Archer, said it was difficult to expect farmers to keep interest in gorse control when it was an ongoing battle.

"We need to find new strategies to gorse control that provide lasting results after only a few years work if we expect people to participate," Tim said.

The search for alternatives was aided by Bob Richardson, a former scientist at the Keith Turnbull Research Institute in Frankston.

Bob outlined the biology of the gorse plant in a presentation to farmers in the Woady Yaloak catchment last month.

"Gorse seed can remain viable in the soil for more than 30 years," he said.

"It is common for a small amount of this seed to germinate each year, with the rest waiting to strike in future years."

"Even if you stop seeding today, there is potentially 30 years of germinable seed in the soil," Bob said.

However the new seedling is a weak spot in the lifecycle of the gorse plant according to Bob.

"New seedling are very fragile which makes them easy to kill, either by herbicide, cultivation, trampling or competitive pastures.

"Lasting control could be achieved if you can encourage the dormant seed to germinate, kill these new seedlings and then establish competitive pastures or ground cover.

"In effect you are trying to get 30 years' germination in a year or two so you reduce the seed bank as much as possible.

"Any plants that do establish on treated areas must be removed before they set seed or all the good work will be undone."

Tim Archer (left) and Woady Yaloak farmers inspect the regrowth of new seedlings after burning and removal of old gorse bushes.

New approach

Armed with this information, farmers in the Woady Yaloak catchment have started work on new ways of destroying the seed bank.

It is a two-staged approach according to Tim Archer.

"First we are trying to kill some of the seed when we remove the existing bushes, so there is less seed to germinate.

"Then we aim to break the dormancy of the remaining seed, so we get a huge germination of new plants in the next year or two."

Several trials are about to commence, funded through the Alcoa sponsorship of the Woady Yaloak project.

They will involve fire to kill some of the seed and to break dormancy along with a range of cultivation and soil treatments to encourage germination.

Germinating seedlings will then be controlled using a range of techniques.

lt will take several years before the success of the trials are known but the changes in the seed bank will be monitored with the help of the University of Ballarat.

Student projects will also investigate the triggers to breaking seed dormancy, which can be incorporated into future control strategies.

For more information contact Cam Nicholson on (03) 5258 3860.

Blackberry rust - does it work?

Research Results

By Franz Mahr, KTRI.

Blackberry in Australia is a very complex weed to manage. Unlike most weeds, it is not made up of just one species, there are at least nine and maybe as many as 12 species spread across the country.

Blackberry is also found across a very broad range of climatic conditions. This makes it difficult to find a single biological control agent which will attack all types of blackberry across it's entire climatic range.

A biological control program for blackberry started in 1978. The blackberry rust *(Phragmidium violaceum)*, was the first agent chosen for release into Australia but pressure from Tasmania's honey industry halted its release.

In 1984, an illegal strain of the rust was reported at Foster in Victoria. As this strain was shown to be less damaging than the strains KTRI had stored in quarantine, approval was granted for the more aggressive strains of the rust to be released.

The release took place over the summers of 1991/92 and within three years the rust had spread across all of south-eastern Australia.

Before releasing other agents, or different strains of the rust, it is important to understand what has happened to blackberry and the rust over the last 14 years.

Impact assessment studies have revealed the yearly levels of rust at sites where rust epidemics always occur. This year detailed studies of weather patterns will be assessed to determine if there is a relationship between rust epidemics and the weather. Using this research we hope to predict where the rust will have an impact on a year-by-year basis and uncover why it is being successful or unsuccessful across south-eastern Australia.

Impact assessment studies of different rust strains were conducted at Callignee in the Strzelecki Ranges and at Foster in central Gippsland.

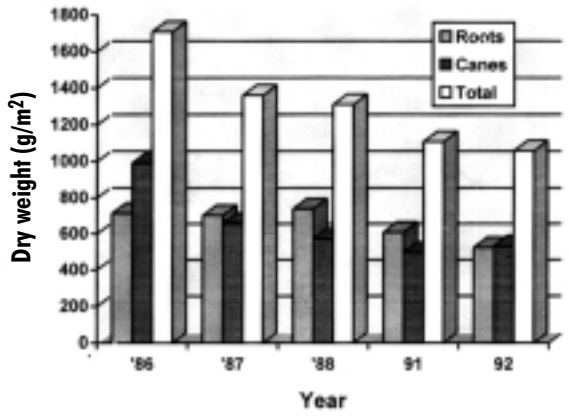
The Callignee study site is located on vacant, ungrazed land and the Foster site is in a gully on farmland grazed with sheep.

These studies have produced solid evidence about the impact of the blackberry rust on blackberry in areas where yearly epidemics occur. Daughter plant production has been severely affected by the introduction of the rust. Daughter plant production is the major form of spread and reproduction by an established blackberry patch, allowing the patch to grow by up to three metres a year. At Callignee daughter plant production has been reduced by 95 per cent. Total dry weight of canes and roots has also shown significant reductions.

When more is known about what the rust is doing out in the field, it may be possible to introduce new strains of rust; ones more suitable to lower rainfall areas. Another possibility on the blackberry biological control front is the introduction of the blackberry sawfly, but further studies are still needed.

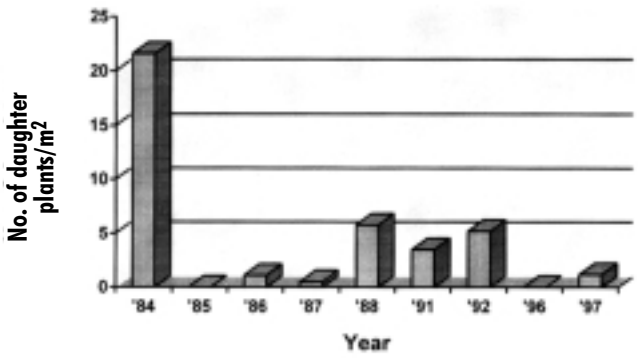
Effect of *P. violaceum* on *R. ulmifolious*

average dry weight m^{-2} at Foster



Effect of *P. violaceum* on *R. ulmifolious*

average number of daughter plants m^{-2} at Callignee



Powlett Weekend Builds on Success

For many Melbourne people the first week in November is synonymous with the Melbourne Cup, horse racing and champagne, but for members of Landcare groups in the Powlett catchment the weekend following The Cup is traditionally scheduled for a mass of Landcare activity.

This year the weekend of November 7 and 8 saw over 20,000 local trees and shrubs established throughout the catchment by over 300 volunteers including locals, Melbourne residents, BHP staff as well as Green Corps and ATCV Volunteers. Some participants helped collect indigenous seed for next years planting whilst others got involved in a weekend water quality snap shot conducted by Waterwatch.

Apart from the mountain work done, the weekend also had a very strong social element with volunteers being entertained on Saturday night by a local band and a celebration BBQ at Clive Hollins' property at the mouth of the Powlett on Sunday.

Now in its third year and known locally as the Powlett Project it involves all Landcare and Coast Action groups within the Powlett catchment working together to tackle major land and water degradation problems.

The project has brought together local groups throughout the area who have been working together on a wide range of environmental problems.

The Powlett Project is supported by BHP, Edison Mission Energy and the Natural Heritage Trust who provide funding for work to be achieved on the ground, usually in the form of native trees. This funding is at least matched by local landholders who usually prepare sites for work by fencing them off and then maintaining the areas, reducing weed infestations and keeping stock out.

Addition in-kind and technical support comes from Landcare Australia, The Victorian Landcare Foundation, Greening Australia, the Australian Trust for Conservation Volunteers, the Department of Natural Resources and Environment and Waterwatch. Local contributors include Bass Coast and South Gippsland Shire, South Gippsland Region Water Authority and the West Gippsland Catchment Management Authority.

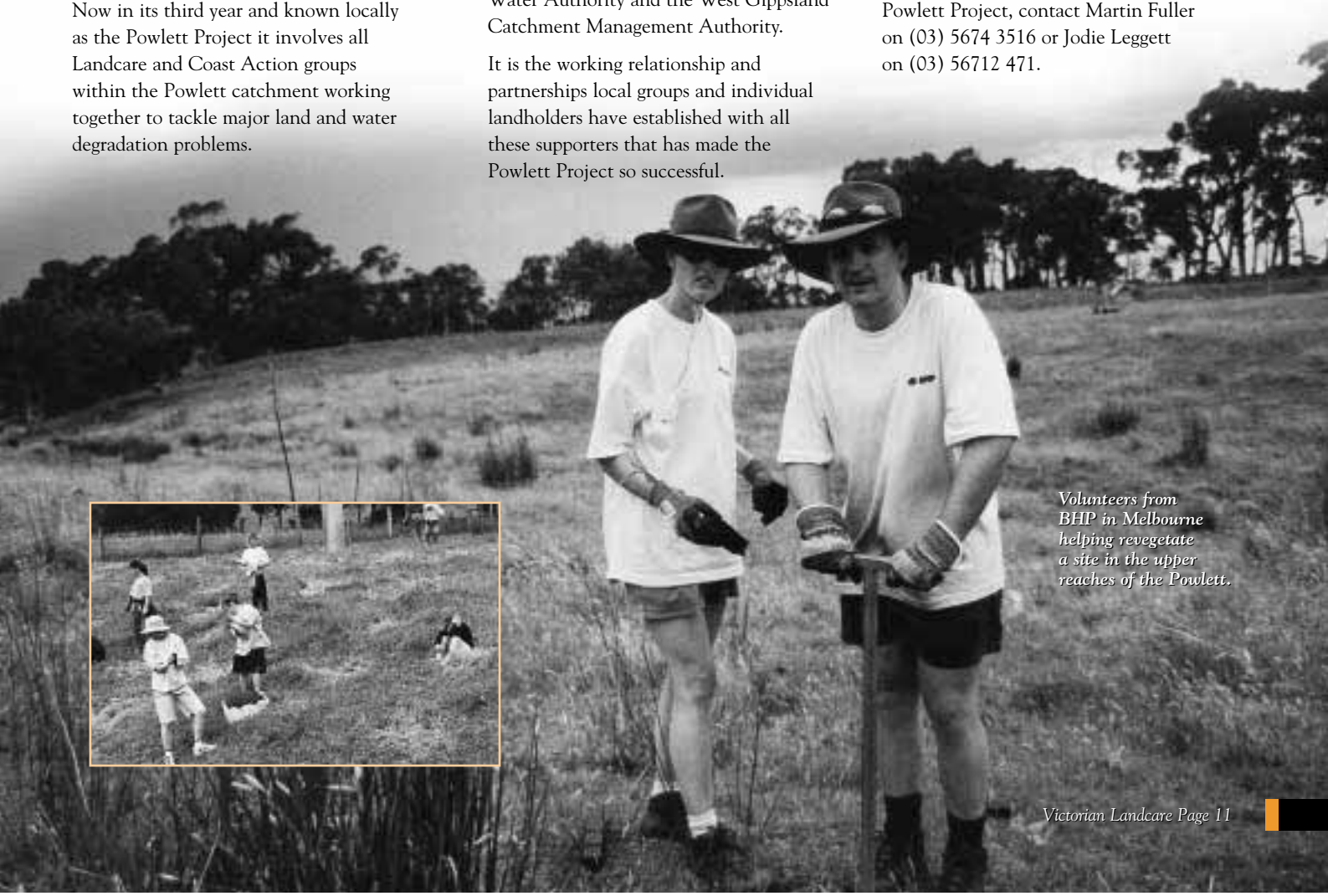
It is the working relationship and partnerships local groups and individual landholders have established with all these supporters that has made the Powlett Project so successful.

Since its inception in 1996 the Powlett Project has attracted over 1,000 volunteers from all walks of life to help local landholders fence out environmentally sensitive areas and establish over 200,000 native trees and shrubs. Efforts by locals and city-based volunteers are helping enhance, restore and protect the natural resource base of the Powlett catchment.

Tree planting is a very important aspect of the Powlett Project as it helps provide habitat for native animals such as the Giant Gippsland Earthworm, reduce soil loss from landslips, tunnel erosion and stream banks. It also helps to improve water quality in the catchment's creeks and reservoirs.

Many farmers who have been involved in the project admit that it also helps make their farms look better and contributes to increased farm productivity.

For more information about the Powlett Project, contact Martin Fuller on (03) 5674 3516 or Jodie Leggett on (03) 56712 471.



Volunteers from BHP in Melbourne helping revegetate a site in the upper reaches of the Powlett.

In brief

Warrambeen Open Day

The inaugural Warrambeen Landcare Education Centre Open Day will be held on Sunday, 6 December 1998. The day will feature local and regional food and wine, Landcare group displays, sheep dog demonstrations, tours of Warrambeen's famous native grasslands and shearing shed, music and much much more. For more information contact Trish Taylor at Warrambeen on (03) 5281 3329.

Taking Landcare to the mother country

Rob Youl reports that Michael Macklin of Britain's Tropical Agriculture Association will run a field day in Devon in June 1999. Visiting Australia in the 1980s he saw Landcare projects and wants to apply our ideas to Britain. Any Landcarers visiting the UK then and willing to speak at the field day, should contact Rob Youl on (03) 9662 9987. Michael will look after you well.

"Maybe we'll soon see Pomcare, Clancare, Llancare or Britcare!," Rob said.

Landcare Magazine deadlines

Many people are not aware of the lead times for this magazine. As one edition is born the next is conceived! We need your material in as soon as possible after you receive this edition - December for Autumn, Autumn for Winter, etc. We welcome your contributions - contact Paul Crock at the VFF on (03) 9207 5562 or Jo Safstrom at NRE on (03) 9412 4382.

International Landcare Conference & Exhibition, Changing Landscapes, Shaping Futures, 2-5 March 2000. Ph. 9690 6744, Email:wscn@bigpond.com Website: http://www.nre.vic.gov.au/conf/landcare2000/

Take care when burning off

By Fay Valcanis, NRE's Fire Education Co-ordinator.

As the weather warms up and conditions become ideal for burning rubbish that has been building up over winter, or even undertaking fuel reduction burning, NRE urges landowners to err on the side of caution.

Gary Morgan, NRE's Chief Fire Officer, advises landowners that each year one in every six bushfires in Victoria is caused by escapes from burn-offs. This amounts to approximately 100, on average, each year.

While still encouraging landowners to undertake burning activities, it is recommended that landowners not burn on days when it is warm and windy. It is these weather conditions that can catch you unawares. Wind can suddenly pick up burning embers and carry them to adjoining bushland where a fire can start.

"The ideal situation for landowners planning to burn-off is to start early to reduce fire hazards. Burning heavy fuels in autumn, slashing grass several times rather than waiting for it to cure are simple measures which can prevent trouble later," Mr Morgan advised.

The key to burning-off is to heap materials to be burned well away from forest or park boundaries and only light up when temperatures are low and the wind strength is minimal.

Do you need a permit?

A permit to burn is required if restrictions are in force. These can be obtained from your Municipal Fire Prevention Officer. If, however, your property boundary is within 1.5 kilometres of a park, forest or public land in either Gippsland, north-east or far south-west Victoria, a NRE permit may only be required. Check with your local NRE office before burning.

Preparing your site before burning

When preparing to burn, clear at least three metres around the target area to reduce the chance of the fire spreading. Keep sufficient water on hand to put out any fires which may escape. Supervise the fire at all times until it is out. Most burn-offs escape from private land when the fire is left unattended.

Notify your neighbours

Notify your neighbours at least two hours before your begin burning-off. This not only avoids confusion that may occur from smoke as a result of your burning, but is common courtesy. Remember, if NRE is your neighbour, it too should be notified before you commence burning.

What is the weather forecast?

It only takes a gentle breeze to blow embers into bushland and start a major fire. Weather can be misleading and it does not have to be hot for the bush to burn. If it is a dry, windy day the potential for a bushfire is enormous, especially if the fire is left unattended.

Most importantly, be prepared. Accidents do occur. Have fire-fighting equipment and a good water supply nearby for emergencies which may occur.

For more information on burning-off on private property contact your local NRE office.

For updates on the bushfire situation over the fire season or general information on fire management, visit NRE's fire website at: **http://www.nre.vic.gov.au/fires**

Ironing out blue green algae

Research Results

Scott Brain - Advisor, Sustainable Agriculture, NRE Leongatha

Over recent seasons blooms of blue green algae have caused management problems for an increasing number of farmers. With very few safe and practical solutions for blue green algae control, a preliminary investigation into blue green algae and farm dams has been carried out.

Beginning in September 1995, with initial funding by the State Government's Sustainable Agriculture Strategy, the following organisations have been involved: Department of Natural Resources and Environment; State Chemistry Laboritories; Water Ecoscience; Envirogen and Aluminates P/L.

The investigation, carried out in South Gippsland, involved monitoring and treating farm dams that have been consistently affected by blue green algae during recent seasons. This resulted in the development of a potential treatment that could be used to complement improved nutrient management practices to control and prevent blue green algae.

Hydroxylated Ferric Sulfate (PFS^{tm}) was used in this investigation in an attempt to capture reactive phosphate and take it to the bottom of the dam, restricting the algae's access to its main nutrient.

PFS^{tm} is an iron-based product that is new in Australia, manufactured only in Gippsland by Aluminates Chemical Industries P/L. PFS^{tm} is used for water treatment purposes by water authorities, paper mills and in the food processing industry.

Through the investigation, PFS^{tm} was applied to dams at Fish Creek, Poowong, Arawata and Korumburra with control dams monitored at Bena. The dams treated with PFS^{tm} had their reactive phosphorus levels and algal cell counts significantly reduced within the first three weeks of treatment. Continued monitoring over the subsequent months indicated that the cell counts, reactive phosphate levels and reactive iron levels continued to decrease. If this effect is due to a chemical reaction between the iron in PFS^{tm} and the phosphate in the dam, then PFS^{tm} may be effective in reducing the effects of an algal bloom.

Preliminary research also suggests that levels of iron in stock water would have to be significantly higher than the residuals that were recorded if there was to be an impact on animal health. Concerns about the effects of iron residuals will affect the way in which the treatment is conducted.

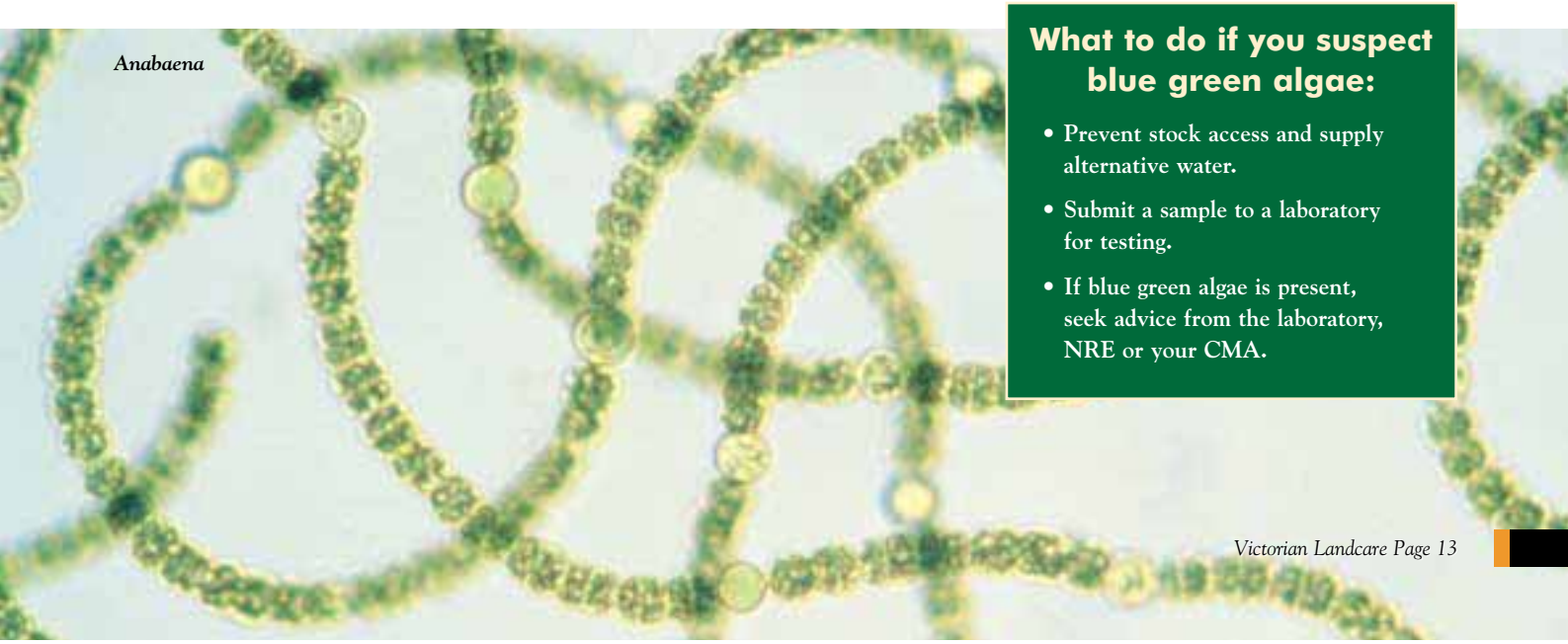
More control would be required if iron residuals are deemed to be harmful to livestock or farm operations.

After carrying out such work, PFS^{tm} has now received preliminary registration from the National Registrations Authority which permits up to 100 dams to be treated throughout Victoria during 1998.

Further work has now been proposed to continue and improve the investigation. This will help determine how long the treatment will last with respect to lowering and maintaining the level of reactive phosphorus and whether it is possible to use this treatment in order to prevent blue green algae blooms from occurring.

Other considerations that require investigation include the most convenient and effective methods of application, toxicity testing of treated water and how this treatment can be used to compliment the sustainable management of land and water resources.

For more information contact NRE Leongatha on (03) 5662 9900.



Anabaena

What to do if you suspect blue green algae:

- Prevent stock access and supply alternative water.
- Submit a sample to a laboratory for testing.
- If blue green algae is present, seek advice from the laboratory, NRE or your CMA.

Revised structure for Rio Tinto Project

Rio Tinto Project Platypus is a consortium of Landcare groups based in the Upper Wimmera catchment near Stawell in western Victoria. Its mission is 'to improve the land and water quality in the catchment, achieving enhanced biodiversity, a sustainable catchment and a sustainable catchment community'.

Initial support from Wimmera Mallee Water, NHT funding and landholder input allowed the groups to commence significant erosion control works to minimise silt and salt loads being delivered to the Wimmera River, better manage weeds and vermin and develop tree plantations and improved pastures.

Rio Tinto and Project Platypus

The initial concept and early activities of Project Platypus formed the basis of a partnership with Rio Tinto (formerly CRA).

As this partnership grew, the influence of Rio Tinto led to the incorporation of a Scientific Advisory Group. This group helped the Landcare groups form a credible, scientific approach to project management and ensured that appropriate monitoring was included in project planning and implementation phases.

The Project Platypus members are now beginning to really value this notion of monitoring and measuring in order to establish benchmarks. It gives them a way of evaluating approaches to their challenges and determining the degree of success of these potential solutions.

Building on this success, the stakeholders in Project Platypus, with help from Rio Tinto, have formulated a new corporate plan for the project.

The new plan documents the mission and priorities of Project Platypus and sets out its goals and objectives for the next five years.

The basic purpose and direction of Project Platypus remains, supported by a more professional, efficient and accountable structure utilising six strategic activity groups reporting to a management committee.

Vital within the new structure is the Performance Monitoring Group. This group is responsible for taking up the issues formerly addressed by the scientific advisory committee. It will ensure monitoring is continued with appropriate interpretation by experienced, well-qualified scientific personnel.

Water quality monitoring a priority

Rio Tinto Project Platypus is committed to a scientific approach to project planning and implementation.

The project has established a Performance Monitoring Group (PMG) to ensure that appropriate scope and standards are determined for base-line data requirements and ongoing monitoring.

Once these are established the PMG oversees the gathering of data and supports appropriate storage and distribution of information and ultimately co-ordinates interpretation and review of the data as required.

Gavin Ryan of Theiss Environmental Services discusses the working end of the water monitoring equipment being used on the Aston Scour.

Michael McMurtrie, Chairman, Rio Tinto Project Platypus, explains the erosion process at Aston Scour to John Roskam, Rio Tinto External Affairs Manager.

Platypus

Research Results

By Peter Hilbig, Project Manager, Project Platypus.

The project's data is gathered using a range of techniques. Strategically placed photo points allow for a chronological visual record to be developed, flora and fauna surveys provide data for monitoring biodiversity and scientifically-rigorous long-term monitoring of groundwater and surface water quality is establishing a benchmark for future planning and determination of degree of success.

Iron Pot Creek

A significant water quality monitoring project is in progress in the Mt Cole Creek, a tributary of the Wimmera River which has elevated salinity levels. This is affecting water quality in the Crowlands Dam, the water supply for Crowlands, a small town about 25 kilometres north-east of Ararat.

The monitoring project involves monthly testing of the levels and salinity in a network of observation bores, measuring the volume and quality of the water flowing into the Crowlands Dam and in the dam itself.

The information gathered is supporting an increased understanding of the hydrogeological characteristics of the sub-catchment feeding into the dam.

The Iron Pot Creek Project has been developed through close liaison and support from John Smart of Wimmera Industrial Minerals, a business unit of Rio Tinto.

John has provided geological expertise in the planning and drilling of the bores and continues to support the project through the PMG.

The testing is carried out by local land-holders Mark McKew and Graeme Price of the Crowlands Landcare Group and the data collected is forwarded to Project Platypus, Wimmera Mallee Water and the Agriculture Victoria Centre for Land Protection Research in Bendigo.

Aston Scour

Water monitoring is also playing an important role in a major refurbishment project at Aston Scour, a severely eroded series of gullies near Landsborough, about 30 kilometres east of Stawell.

In addition to the loss of significant quantities of farmland, these large gullies provide excellent rabbit harbour and annually contribute huge quantities of silt and nutrient to the river system.

Low levels of poor quality water in the summer and severe flooding during winter and spring present severe management problems to farmers and communities in the sub-catchment.

A badly degraded arm of the scour was selected to demonstrate major rehabilitation activities and has undergone four major changes:

- major gully battering to restore creek levels, eradicate rabbit warrens and establish desirable plant growing conditions;
- construction of flood retention dams to slow water flow and accumulate silt;
- significant fencing, pasture development and tree planting to protect the refurbished water course; and
- revised pasture management to allow vegetation enhancement on upper slopes.

To determine the effect of these significant and expensive strategies, three continuous monitoring stations have been set up along the scour, one placed below the works area, one in a similar adjoining gully with no upstream works and one after the confluence of the two gullies. This placement allows for effective comparison between the rehabilitated gully and the untreated one.

Each of the monitoring stations has a continuous electronic data logger in a locked steel box, connected to a series of probes at the monitoring point. Every 15 minutes, the data logger checks the probe's input and should any change of more than 10 per cent be recorded, the equipment switches over to a period of continuous monitoring.

Gavin Ryan of Theiss Environmental Services downloads the logged data to a computer and is able to produce a range of charts and plots for evaluation and interpretation.

Automatic rain gauges contribute information to two of the data loggers so that quantity and duration of rainfall can be related to flow rates, salinity and silt loads.

Commitment to monitoring

Project Platypus and its member Landcare groups are committed to performance monitoring in order to achieve its objective of establishing scientific credibility.

Advice and support from Rio Tinto has enabled the establishment of catchment-specific baseline data and emphasised the importance of monitoring the impact of on-ground works. This is now seen as vital for the successful implementation and development of all projects.

Box-ironbark - the past

Barry Traill *from Trust for Nature describes the biodiversity of Victoria's box-ironbark forests and woodlands and how landowners are working to conserve the special plants and animals found there.*

In 1836, Major Thomas Mitchell, Surveyor-General of New South Wales, set off south from the limits of European settlement in the southern tablelands of that colony. Within the year he had conducted an amazing journey through the Victorian Wimmera to the Glenelg River and then back through central Victoria to the north-east.

The Major eulogised the country he saw: "We traversed it over two directions meeting with no obstruction except the softness of the soil, land in returning over flowing plains and green hills fanned by the breezes of early spring, I named this region Australia Felix- the pleasant land".

Most of the country Mitchell traversed we now know as the temperate woodlands. Prior to white settlement the woodlands covered some 65 million hectares of eastern Australia. Within the broader range of woodlands there are many different types of vegetation.

In Victoria the shrubby ironbark and red box woodlands and forests dominated on the poorer shallow soils on the ridges. In the valleys were woodlands of grey, white and yellow box and red gums with often lush grassy understoreys.

Bearded orchid.

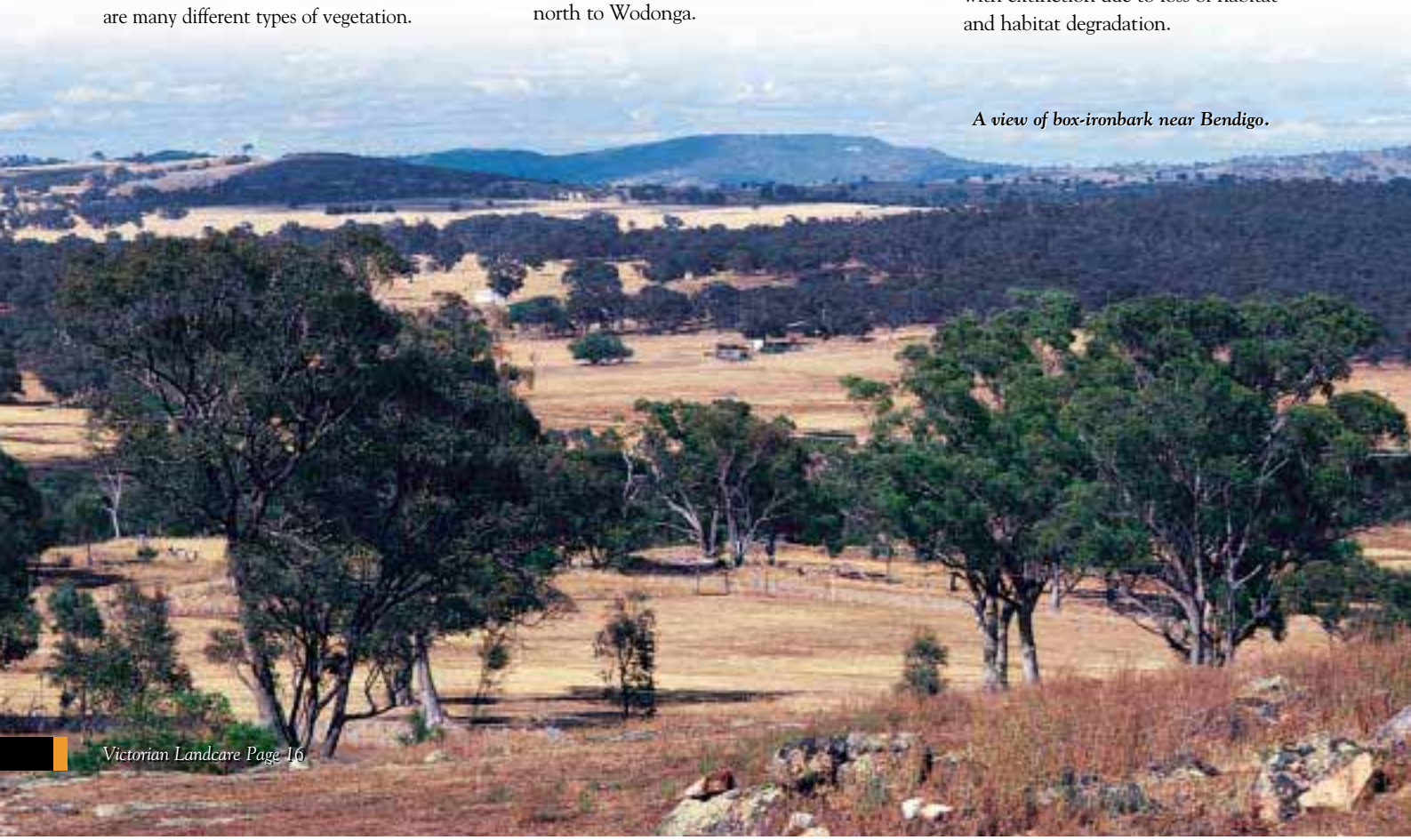
This 'box-ironbark country' covered more than a million hectares of Victoria, from Stawell in the west, to the Murray in the north, south to the wetter country of the Dividing Range and east and north to Wodonga.

All of this country was favoured by early settlers for the grass, the timber and the gold found in many parts. Agriculture focused on the more fertile plains and valleys. In Victoria more than 85 per cent of the woodlands have been cleared and all that remains has been degraded to some extent by mining, logging and grazing.

Plants and animals under threat

There are more species at immediate threat in box-ironbark forests than in the better known wetter forests of East Gippsland and Tasmania. This is because many species are only found in box-ironbark forests and woodlands.

Because of clearing, some plants and animals have declined greatly and are at risk of disappearing. The gorgeous black and gold regent honeyeater largely disappeared from western and central Victoria in the 1970s and 1980s. The nectar-feeding swift parrot flies over from Tasmania each winter to feed on flowering ironbarks and yellow gums. It is now threatened nationally with extinction due to loss of habitat and habitat degradation.



A view of box-ironbark near Bendigo.

and the future...

Landholders crucial

Much of remaining box-ironbark bushland is in private ownership. Private landholders are crucial in helping to protect the bushland and the threatened species and other native plants and animals.

One of the most important things any landowner can do is help retain and increase the number of big old trees on their land. Revegetation schemes often focus on getting trees in the ground. This is useful, but most important is to retain the bushland we already have, especially the large mature trees. These trees are now very rare in many areas but they are vital for many animal species.

Loss of mature trees has greatly reduced nectar yields. Research has shown that single large trees with big canopies produce more nectar than a number of smaller trees with an equivalent mass of foliage.

Hollow scarcity

The loss of older trees has serious consequences for animals using tree hollows. In eucalypt forests about a quarter of all resident birds and nearly all bats and tree-dwelling mammals need hollows. The loss of the big trees in box-ironbark forests has lead to local extinctions of many species such as powerful owls, sacred kingfishers and ringtailed possums which need large hollows in the canopy to nest in.

Trust for Nature assists private landholders with conservation through providing management advice, assisting with the placement of conservation covenants and through acquiring important areas of threatened land. We have a special program to encourage protection of box-ironbark bushland due to the high number of threatened species it contains. The Trust can be contacted on 1800 999 933.

Lands live with the birds at Whipstick

Much of the box-ironbark country is now being subdivided into smaller 'residential' blocks. In many cases these new owners are providing excellent management in rehabilitating country that was partly cleared but was unsuitable for agriculture.

At Neilborough in the Bendigo Whipstick region, Pam and John Land bought an area of grey box, yellow gum woodland and blue mallee in 1990 especially to protect it from encroaching development.

The Lands are very happy with their purchase, which has an extraordinary diversity of birds and native plants. Many of the birds found on their land such as the crested bellbird and swift parrot have declined throughout the box-ironbark region.

The Lands have allowed previously cleared areas to naturally regenerate and have placed a conservation covenant on the area to ensure it remains permanently protected.

John Land with wirrakee wattle on his Neilborough property.

Protecting the church and the farm too

Tom Read is a farmer at Barnadown near Bendigo where his family settled over 140 years ago. In 1987 Tom approached Trust for Nature to protect the site of the Barnadown Uniting Church west of Bendigo. This is a lovely area dotted with huge shady trees and native grasses, where children pick wildflowers each spring.

Following the success of placing a conservation covenant on the church site Tom decided to protect his farming property with a covenant. As well as over 32 hectares of box-ironbark woodland, Tom had planted many native trees and shrubs around his home which he also wanted to see retained and protected for the future.

Worth the effort- Tom Read's box-ironbark woodland at Barnadown.

To burn or not to burn: fig

By Tim Ealey, founding director of the Graduate School of Environmental Science, Monash University.

Fire has been a contentious subject all over the world for many years. Great efforts have been made in the past to keep fire out of the highly flammable areas such as dry sclerophyll forest in Australia, chaparal in the United States (the Save Smokey Bear program) and the dry bushland of Africa and Europe.

This has led to the extinction or rarity of many species of animals and plants. The North American heath hen has disappeared because fire is required to regenerate heathlands. The same problem occurred in Australia. The new holland mouse and the ground parrot depend on healthy heathland and became very rare when ecosystems senesced and melaleucas over-grew the heath.

Leadbeater's possum was considered extinct before the 1939 fires. The requirements of this animal are very complex. It requires old growth forest for nesting hollows but needs sap from three species of wattles which occur on fairly recently burnt forest.

Clearly, the wellbeing of animals depends on plants. We did a lot of research into burning at Monash University in the late sixties. There was good anecdotal information on which we could base experiments. For example, it was well known that railway easements were good places for some orchids. This was because they were burnt as frequently as possible. Foresters burnt some areas frequently and the result was loss of shrubs and development of grasses.

Fire seems to stimulate grasses such as poa grass. However, if poa is burnt at the end of a dry winter before a dry summer, it will die. So, using fire to manage ecosystems is not simple and the results are not always predictable because of seasonal differences.

Strangely enough, loss of understorey occurs if there is no burning at all. All the plants which require fire to split their seeds before germination, such as wattles and pea plants, show little regeneration without fire. Indeed, there are fears that, with a vigorous CFA, some species may disappear altogether because of lack of fire. The seeds that insects and birds do not eat may, in time, simply rot away.

Fine fuel is leaf litter and twigs thinner than a finger. In some circumstances fine fuel builds up faster than it rots away, such as on north slopes. When the fuel layer reaches about 75mm thick, it can lead to a crown fire on a hot summer day. If there is a wind and/or there is a slope, less is required.

On Ash Wednesday, the litter load in Stony Gully at Upper Beaconsfield exceeded 400mm. With a strong wind, this fuel would have been tossed about and mixed with air like a blast furnace. The heat energy that came out of Stony Gully was estimated as being more than the Hiroshima atom bomb; because the expanding hot air could not easily escape there was terrific turbulence leading to terrifying, destructive fire balls. Clearly, to protect assets such as houses, forests and parks, fuel reduction is essential.

However, there is conflict between the objectives and methodologies of fuel reduction burning and ecological burning. Frequent fuel reduction burns will eliminate most of the understorey because species such as wattles and pea plants will be eliminated before they can become old enough to set seed.

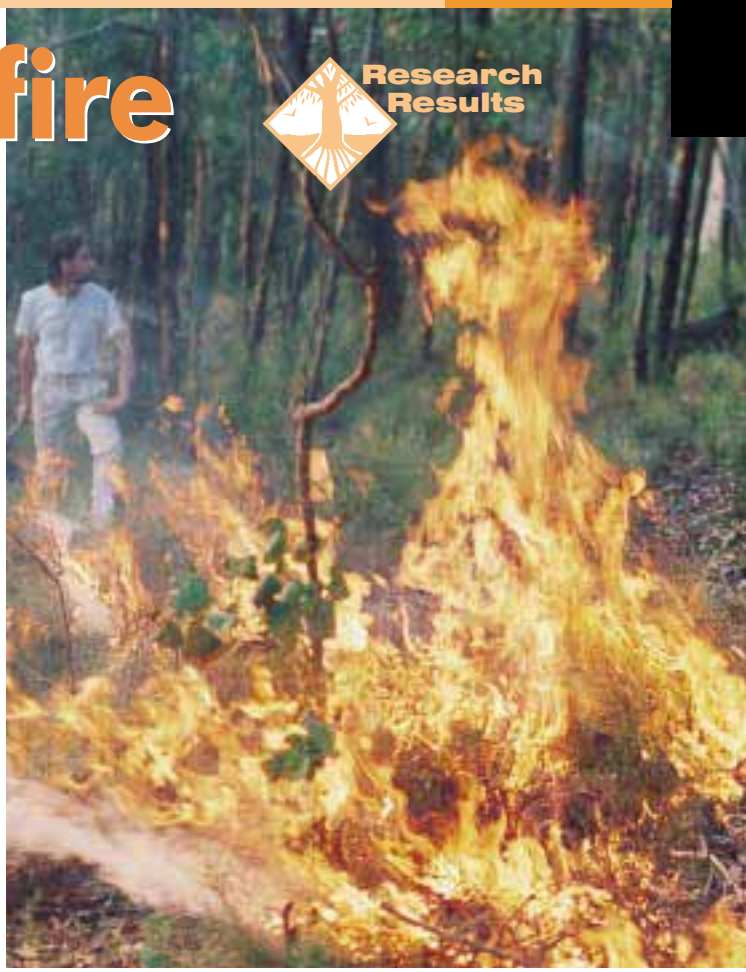
Although there will be a fuel reduction effect for the first few years after ecological burning, the very understorey that will be produced may in itself add to the fuel load. Low flame height, which would be appropriate for fuel reduction, will generally not be hot enough to germinate seeds while fire with higher flame height may be more difficult to control.

The Port Phillip and Westernport Regional Catchment Strategy recognises the problems associated with two forms of burning where it refers to Integrated Fire Management. Although policy and planning are considered adequate it states that "there is an inadequate level of planning and management of fire regimes to protect natural ecosystems in some areas.

This fire did not produce much seed germination because of low flame height but was useful for fuel reduction.

hting fire with fire

Research Results



The timing, frequency and intensity of controlled burns does not give sufficient consideration for ecological requirements."

Two actions are proposed:

- establish a process for incorporation of the RCS goals into regional and municipal fire prevention planning; and,
- review plans for all public land to ensure that fire regimes adequately address biodiversity considerations.

Landcare groups should also consider burning as a regeneration tool where appropriate. Simply planting common species between the trees may not produce a complete ecosystem. If there is enough fuel, burning part of the area to be regenerated, with flame height of about two metres before planting, may give surprising results.The Round the Bend Conservation Co-operative in Christmas Hills has had a program for many years. They have divided the land into 10 areas and try to burn part of one area each year, in co-operation with the local CFA. The main problem has been to coincide appropriate weather conditions with weekend work parties.

There has always been fire in the Australian bush; even before the Aboriginals arrived there were lightning fires. Fire must be controlled but it is also a valuable tool of regeneration.

Patrolling a control line during an ecological burn with adequate flame height for seed germination.

A few facts about gorse

Gorse or furze is a native of Europe and North Africa.

There are 30 species of gorse in the world, but only one believed to be in Australia.

Gorse was introduced to Tasmania more than 150 years ago as an ornamental plant and to form hedges.

It quickly spread and was recognised as a troublesome plant in early part of this century.

Gorse prefers an Atlantic-type climate, characterised by an even distribution of rainfall and mild summers. It prefers between 650mm and 900mm rainfall per year.

These climatic conditions occur in Tasmania, New Zealand and parts of Southern Australia, which helps explain the proliferation of the plant in these areas.

A prolific seed producer, with a mature bush producing up to 2000 seeds per square metre.

Despite annual attack by the gorse seed weevil, which is reported to reduce the seed load by 75 per cent, many viable seeds are still shed.

Work in New Zealand has identified up to 10,000 seeds per square metre under a mature plant. This is equivalent to 100 million seeds per hectare!

These seeds have a long life in the soil, with studies showing that up to 85 per cent of the seed remaining after 26 years was viable.

Despite the problems created by gorse, the plant does have some endearing features: Gorse is a pioneering plant, capable of growing in poor fertility soils. It is often found on roadsides and colonising mine tailings.

It is a legume and experiments have identified a mature stand of gorse can 'fix' up to 70kg of nitrogen per hectare per year, equivalent to a highly productive clover-based pasture.

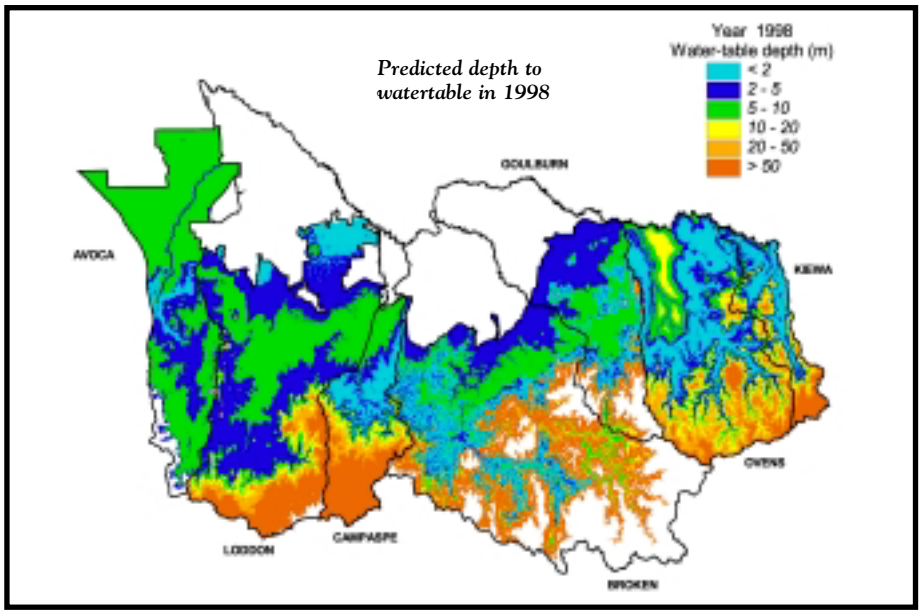
Overseas, gorse is considered an important component of heathland vegetation.

Back to the Future -

By Jo Curkpatrick NDSP Communications Co-ordinator.

If only we could predict the future, we could make decisions now that would be totally sure of making a difference later.

The Murray Darling Basin Commission, as a partner in the National Dryland Salinity Program, is undertaking a major study that



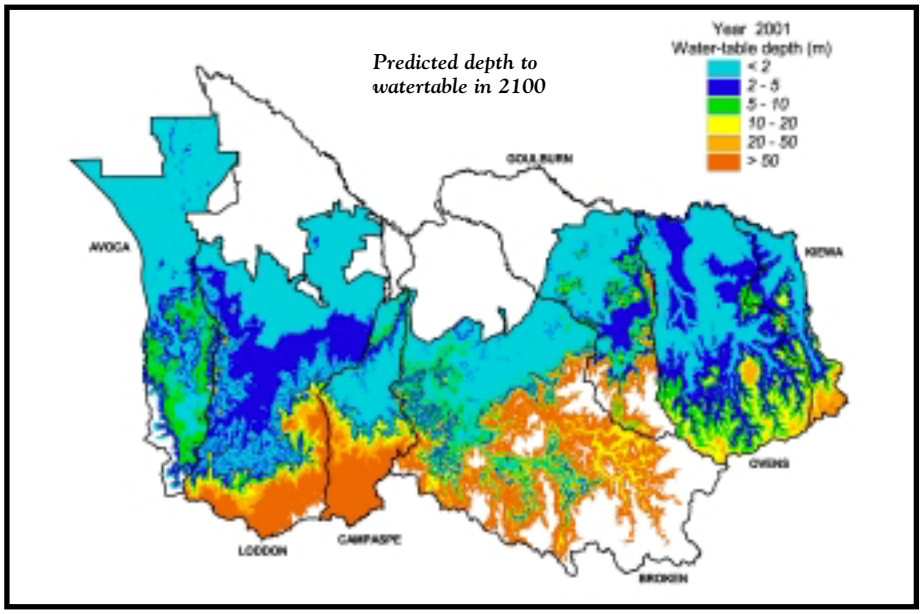
For the study, each catchment has been divided into a number of separate land units, called Hydrogeomorphic units (HGU). These units are based on topography, slope and geology. For each HGU, a median rate of rise is provided based on the monitoring record.

Using the rate of rise combined with the HGU it is possible to predict the depth to watertable across the whole of the Victorian dryland in the Murray Basin.

This has been done for increments up to the year 2100. The depth to watertable distribution across the catchments at 2100 is shown.

The project is managed by Mr Greg Hoxley for Sinclair Knight Merz, he can be contacted on (03) 9248 3345 or GHoxley@skm.com.au for more information.

For further information on NDSP projects, contact Jo Curkpatrick on (03) 9370 1789 or jocurk@enternet.com.au



the River Murray 2100

Research Results

aims to do just that, predicting the state of catchments and the River Murray 100 years from now and helping catchment communities put the right management strategies in place.

Called the 'Ultimate Salt Loads Project', the study will provide estimates of the effect of rising groundwater across the whole of the dryland part of the Victorian Murray Basin and predict the likely salt load entering the Murray River from Victorian catchments over the next century.

NRE is undertaking the study as part of a review of the Murray Darling Basin Salinity and Drainage Strategy. Sinclair Knight Merz (SKM) is carrying out project work with researchers from the Centre for Land Protection Research (CLPR) at Bendigo.

It has been a mammoth task according to project manager and Principal Hydrogeologist with SKM, Greg Hoxley.

"The project has involved assessing the groundwater trends for some 1500 monitoring bores in dryland catchments and for each one, the historical rate of rise in groundwater has had to be estimated," Greg said.

While the project has been aimed at understanding the impact on the Murray River, it has become clear that there are potentially large areas of land, especially within the plains, which may be threatened by high watertables.

"The impact of this on agriculture has not been determined at this stage in the project, but from projections made so far, the study shows that there is potential for large areas to be threatened by shallow groundwater," he said.

The study has also pointed to a general expansion over the next 100 years in break of slope salinity at the highland fringe.

Watertable levels in the riverine plain part of the dryland are expected to develop into vast areas of shallow watertable within the next 100 years.

Groundwater discharge into streams could result in significant rises in salinity in tributary streams.

While the overall effect on the Murray River of this salinity is modest, with perhaps up to a 50EC to 100EC increase at Morgan.

"The project is still to be finalised, but the results so far would indicate that the distribution and extensive nature of the threat requires a co-ordinated response," Greg said.

The link between flooding and salinity

By Mark Reid from the Centre for Land Protection Research.

Research into groundwater behaviour is showing that flooding plays a major, and even dominant, role in the development and spread of high watertables and salinity in parts of northern Victoria.

In the Avon-Richardson and lower Avoca catchments there has been a significant rise in the incidence and duration of flooding in the last 25 year period. Research supports that this increase in flooding results from a marked change in the rainfall-runoff relationship. For a given amount of rainfall, the runoff is now much greater than it was prior to 1973.

The Avon-Richardson and Avoca catchments are characterised by generally upward groundwater trends.

Both catchments are supported by regional land and water management plans which focus mainly on maximising plant water use and improving productivity to arrest the salinity problem.

In the Avon-Richardson catchment, research has demonstrated that high recharge occurs beneath the floor of Lake Buloke when it is flooded. In addition, it has been found that increased 'localised recharge' resulting from greater inundation of low-lying flood prone areas is the major cause of the present salinity problem in this catchment.

Flooding in general and of Lake Buloke and the lower Avon River in particular, has a profound impact on groundwater dynamics and salinisation, not just locally but on a regional scale.

The effects of recharge from flooding in the lower Avon-Richardson catchment outweigh the effects of recharge from rainfall in the mid-upper catchment. Further significant expansion of salinity in this catchment is likely if the problems of flooding and runoff are not satisfactorily addressed.

The findings on the impacts of flooding in the Avoca and Avon-Richardson catchments have many implications. Importantly, in order to address the salinity problems in these and many similar poorly drained, flood-prone areas, the focus needs to shift more towards such things as identifying and treating the areas of greatest runoff water contribution, maximising the plant water use within flood-prone areas, and generally improving surface water management.

Water Resources Data: available at last!

By Stuart Minchin, Water Quality Project Manager.

Most of us are aware that water is an extremely important resource and must be properly managed. Every activity that occurs in a catchment either relies on water or affects it in some way. Both the quality and quantity of water are important for uses such as irrigation, drinking water supply, recreation and the maintenance of environmental values, but do you know what the water is like in your catchment?

For the last 20-25 years a statewide program of water quality and quantity monitoring has been conducted by the State Government that is aimed at characterisation of resource condition, measuring availability of water for various uses and assessing trends in water quality and quantity.

The data collected by this program has been available to interested parties, including landholders, the general public and professionals, however these groups have found the data difficult to obtain at times due to it being stored in a number of different databases in a number of different formats. Interested parties have generally had to phone the data custodians to request data, which often took weeks to arrive and was delivered on floppy disk.

This difficulty in obtaining raw data has meant that the amount of interpreted information available for use by land and resource managers has been sparse and that landowners and the public have been unable to obtain information about the water bodies that they are interested in.

A number of steps are being taken by the Department of Natural Resources and Environment (in conjunction with the Environment Protection Authority and the Victorian Catchment Management Council) to improve the management of information collected about the water resources of the State.

A major program has been initiated involving design and implementation of a State Water Resources Data Warehouse, a single database for water quality, water quantity and groundwater information collected in the State. Having all this data in a single, well-designed database allows great flexibility in data querying and reporting and, most importantly, makes electronic access to this information much easier.

NRE has already taken the first important steps in making some of this information available over the World Wide Web in an easily accessible format. A website has been developed that allows access to summary statistics for water quality, water quantity and river health, as well as some results from trend analyses, all from a clickable map-type interface.

This site will be greatly expanded as the data warehouse is completed and will ultimately be a one-stop-shop for information on the State's water resources with mapping products, on-line querying of raw data, interpretive reports and methodologies all available through your chosen World Wide Web browser.

You can access the website by visiting and browsing the NRE website at: http://www.nre.vic.gov.au or by going directly to the State Water Resources Monitoring Network site at: http://www.nre.vic.gov.au/catchmnt/water/vwrmn/vic/index.htm

For further information contact Stuart Minchin on (03) 9412 4051.

A photograph of the Thompson River from the Water Monitoring Network Website.

Junior Landcare

Landcare grants in demand

Students from Natte Yallock Primary School in Central Victoria have been monitoring the Avoca River for two years. When they found some disturbing results - very low levels of oxygen in the river they wanted to find out more.

The students thought the increased oxygen levels might be caused by nutrients from nearby farming, but they needed some questions answered: What were the effects? How does it happen? What can be done? They used the Waterwatch Internet site to put these questions to 'Scientists-On-Line'.

This sort of creative problem-solving is a feature of Natte Yallock Primary. The school has been open since 1874. Four generations of some local families have attended the school. Although steeped in history it has very modern methods.

Last year six students from the school made a presentation at the National Kids Congress for Catchment Care in Adelaide. In front of more than 400 people the students presented their 'Catchment Challenge Quiz Show'. The show is high-tech, colourful theatre with characters like 'Staley Slug', 'Wendy Wells', 'Bertie Bug' and 'Donald Fisher'. 'Nicky Buckets' gave away the prizes!

But before their moment in the spotlight, the school had to raise $2000 to send the six students, a teacher and a parent across to Adelaide. The Avoca River Management Board, Natte Yallock Landcare Group, Avoca Salinity Group, Wimmera Catchment, Waterwatch Victoria, the Department of Education and Midland Computers came to the party with funds for the trip.

According to Patrick Monaghan, the local Waterwatch Co-ordinator, the driving force behind the school's great environmental program is local teacher Hayden Pilgrim. "Natte Yallock is a magic place, magic pupils and magic teacher. Hayden's enthusiasm and energy means fantastic learning opportunities for the students."

Natte Yallock kids are Catchment Quiz Champs!

The Victorian Government's Junior Landcare Initiative has been met with great enthusiasm by community and school groups across the State.

The Junior Landcare Initiative provides funding of $250,000 per year for the next two years. In its first round of grants there were nearly 200 submissions for funding.

'Nicky Buckets' does her stuff.

According to Tarnya Kruger, the Department of Natural Resources and Environment's Landcare Education Officer, grant applications came from both primary and secondary schools and community groups. "It's great to see such a positive reaction in our first year. Many of the groups who applied have been doing Landcare works for many years but the funding will help give them an extra boost."

Tarnya said there was a wide variety of applications, with water quality and tree planting projects proving popular. "Landcare education in Victoria is a hiveof activity.

These grant applications show that schools and local communities recognise the benefits of involving young people in Landcare."

For further information contact Tarnya Kruger on (03) 5345 2200.

The Catchment Challenge Crew.

What are Lan

Groups organising field days need to be covered for public liabilities.

Many people view Landcare as a great thing to be involved in and a great way to contributing to the environment in a meaningful hands-on manner. Others not only contribute in a hands-on manner, but often give up huge amounts of time to help co-ordinate and lead local Landcare groups in the capacity of office-bearers - president, treasurer or secretary - or as valuable committee members.

What many volunteers do not often consider (or perhaps not well enough) are the liabilities that are associated with being in such a position and the impact that could have in a worst case scenario.

The Victorian Farmers Federation has been looking into the liabilities for Landcare groups with new vigour since the expansion of the Natural Heritage Trust, in particular, the liabilities which arise from group activities and also issues related to employment of co-ordinators, facilitators or project managers.

What is incorporation?

A most vital part of group administration is incorporation. Incorporation is a process for limiting the liabilities of individuals in Landcare groups.

In a nutshell, an incorporated group is a legal entity and is recognised as such in the eyes of the law.

For example: If a volunteer is hurt during a group activity as a result of an accident or negligence, that person may want to sue for damages. If the group is incorporated, the injured person would sue the group, and hence the group, as a legal entity, would have to pay out the damages. If the group however is not incorporated, then the injured person would sue the individual office-bearers and members in the group and either one or all of them would be responsible for paying out the damages.

In this way incorporation is an important form of protection for the group. An incorporated group still, however, has liabilities.

What liabilities?

Many would argue and possibly rightly so, that public liability is probably the most important liability to be abreast of. However, as we enter the new age of NHT, there are other liabilities Landcare groups not only need to be aware of, but also need to know how to manage.

Generally speaking, liabilities may arise from three broad categories being: common law liabilities, contracts and statutory liabilities.

Let's take a look at these separately.

Common law

Common law liabilities arise primarily from 'duty of care'. In other words, groups need not only take reasonable care in how they do their business, but also be seen to be taking reasonable care.

For example, a Landcare group organising a community planting or some other Landcare activity must ensure that everything has been done to ensure the safety of volunteers or group members working on the project site. This could include making sure transport to the work site was safe, chemicals were applied as directed and with minimal risk of contamination or drift, etc.

Contracts

When a group enters a contractual arrangement, legal rights and obligations are created between the group and the other party. These rights and obligations are determined by the type of contract that is held.

There are commonly two types of contacts which are relevant to Landcare groups, these being material contracts and employment contracts.

A material contract is simply a contract the group enters into to receive or deliver a supply of goods. Examples include contracting the services of a nursery to supply trees for a Landcare planting, where the obligation is on the nursery to deliver the right trees in the timelines agreed by the both the group and the contractor (nursery). Another example which has come to light in the NHT process is the acceptance of NHT funding for group projects, where the obligation is on the group to deliver the agreed outcomes of the NHT application within the funding provided from NHT.

dcare liabilities?

By Paul Crock

Employment contracts have become more of an issue since the expansion of the number of Landcare professionals employed either part-time or full-time by Landcare groups. There is a very technical difference between a contractor and an employee, yet many groups find it hard to determine whether a person is a contractor or an employee.

Generally speaking the person is an employee of the group if the group:

- is paying wages;
- has control of the individual;
- supplies the equipment; or
- if the individual only works for one group or network.

The person is likely to be a contractor if the group pays on submitted invoices, the individual supplies equipment for the job and works for other groups or networks as well.

The distinction between contractor and employee is an important one. When employing someone the group is responsible for that person's tax, superannuation and WorkCover payments. A very important point that is often overlooked, is that these factors apply even if the group signs a contract with a person stating that the person is in fact an independent contractor - i.e. groups cannot avoid employee liabilities by simply writing them out in a contract.

If the group engages contractors, the group should ensure that the contractors have their own insurance and WorkCover policy in place in the event of an accident or injury. Independent contractors are also responsible for their own tax arrangements.

Safety net

The first question that has to be asked is where will the incorporated group raise the money to pay out a damages claim if it is sued as a result of any of the liabilities outlined above? And secondly, we now know that incorporation may make it harder for people to sue individuals in the group, but does it mean that we can be assured that this can never happen?

The answer to the both is very clear - we can't.

Never fear. Insurance is the key to both questions.

Insuring your group is now simple and will protect your group and your individual members from legal actions arising from your liabilities. There are different types of insurance for different types of liabilities, however through Aradlay Insurance and the VFF Farm Trees & Landcare Association the worry of which policy and appropriate amount of coverage has been simplified.

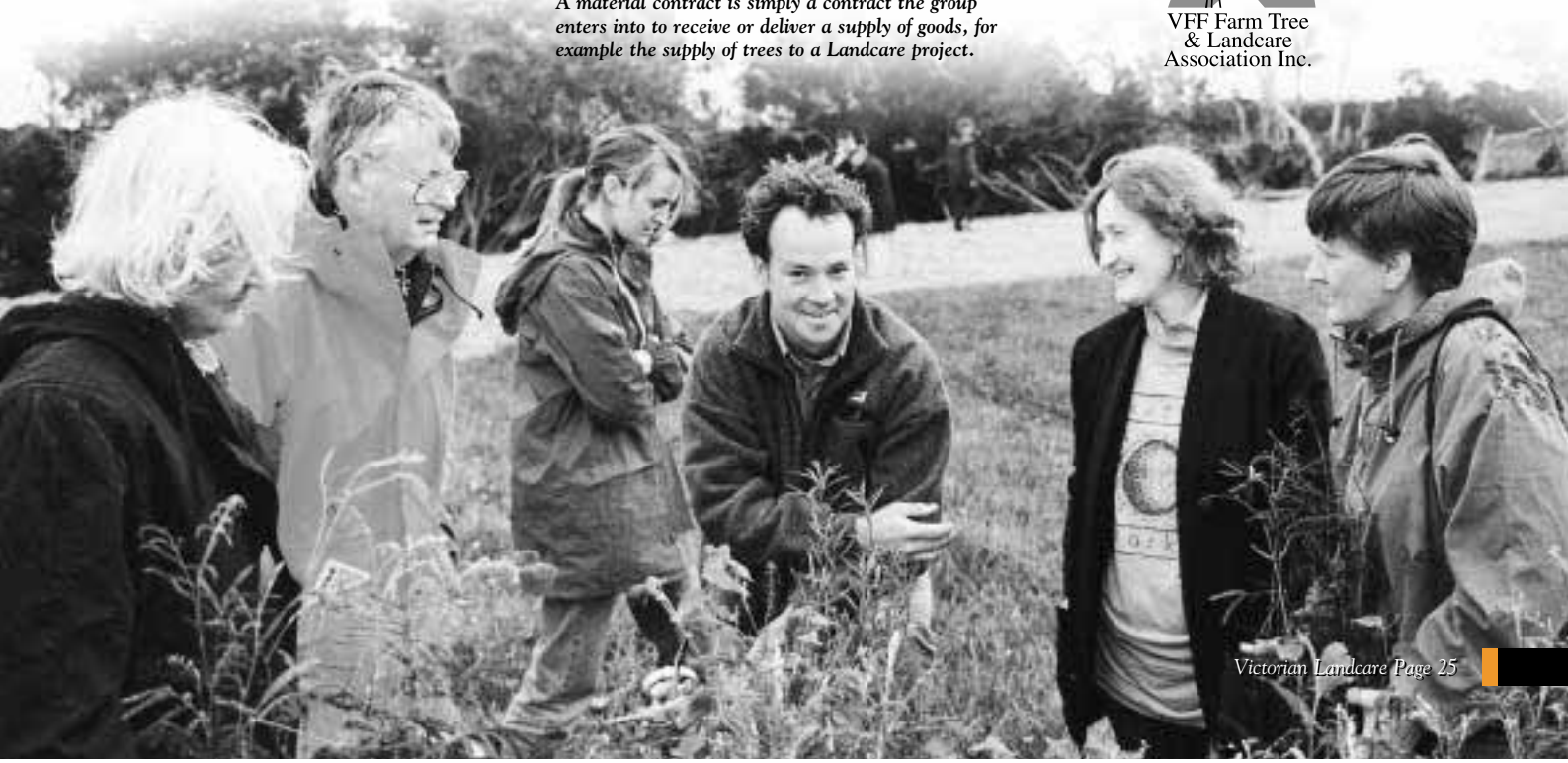
A material contract is simply a contract the group enters into to receive or deliver a supply of goods, for example the supply of trees to a Landcare project.

It is important for groups to recognise the difference between an employee and a contractor.

An important note: All networks and consortia (or 'groups of groups') must be incorporated and insured in their own right. This applies even if all network member groups are already insured and incorporated.

The ONE-STOP-SHOP for group administrative support is the VFF Farm Trees & Landcare Association Incorporated. The VFF provides access to incorporation and insurance cover and also pro-forma contracts and legal advice on employment-related issues for VFF/FTLA member groups. If you want more information, contact Paul Crock on (03) 9207 5562.

VFF Farm Tree & Landcare Association Inc.



Where is the king of

By Carrie Tiffany.

One of the Wimmera's giants - a competitor describes the ordeal to a journalist.

It wasn't serious athletics, it isn't a proper mountain, most of the contestants were farm boys and it only ran for 10 years. Why then, did King of the Mountain put the Mallee town of Wycheproof on the map and then take it off again?

Half way between Melbourne and Mildura, Wycheproof is remarkable for its train tracks that run down the main street. The seed and the super come in, the wheat and the wool go out. But from 1978 to 1988 the town staged a major resurgence as the home to King of the Mountain.

Wycheproof's old blokes have forgotten the name of the man from the tourism department who dreamed up the race, but they agree he was a visionary. A race up the world's smallest registered mountain carrying a bag of wheat. Considering the mountain has a one in six gradient and that a bag of wheat weighs around 70kg it was also a major feat of strength and athleticism.

King of the Mountain was a major event on Victoria's calendar - a full weekend of action. The race winner was crowned and presented with a cape made from hessian wheat sacks. There was a local festival with markets, kids races and a huge party in one of the grain sheds. Locals and out-of-towners came together for 'a real country affair'.

For a while the race even had a naming sponsor. Australian Eagle, a local insurance company, put in some money for advertising and plaques. Now they too have gone by the wayside, taken over by insurance giant MLC.

Alan Milburn, Wycheproof's local newsagent, was involved from the start. "You can't imagine what a lot of work something like this was. On King of the Mountain weekend the town went from 600 to nearly 5000 people. We worked on it all year, everyone did something and, of course, it was all voluntary.

"For the first two years we worked so hard and had nothing to show for it, but then we started making some money and in the end we made quite a bit of money. All of the local groups who helped were paid a dividend of the profits and then there were the big projects.

the mountain?

"King of the Mountain money built our local medical centre and upgraded the cemetery. The town has great resources. We built our own BBQs, we bought 500 chairs and trestle tables and we have a big walk-in coolroom. All of this belongs to the town now and it's there for everyone to use."

Alan Milburn says there is still a bit of King of the Mountain money left, but not much. "We didn't do it for the money, we did it for the town and for each other. King of the Mountain made Wycheproof come alive, it was a terrific 10 years and it's sad to see it gone."

The king

In 1978 Greg Dax was 19 and working in nearby Donald as a farmhand. He went on a football trip with some local lads and after a few too many beers was challenged to enter the first King of the Mountain race. "I hadn't done any training at all. I remember asking an old guy on the starting line about tactics. He said 'just go like buggery'."

Greg won the race easily, even after running into the back of the local TV station's camera van. But he says it was the hardest thing physically that he's ever done. "I was absolutely knackered, it took me a long time to recover. I've played a lot of footy but this was something else."

Greg used the prize money to fix his car which he had just pranged. He went on to win the race again in 1979 and 1980 and would probably have been unbeatable if he hadn't left the district for a job on a cattle station in the Northern Territory.

Greg attributes his strength and size, he's 6ft 4in, to his viking ancestors. His father is Austrian and his mother's family were Danish.

Robin Letts from the *Donald and Buloke Times* remembers Greg Dax's first King of the Mountain win clearly. "He was just so big. You couldn't get over the size and strength of the man. He was our local Goliath. There was a big buzz around Donald when Greg won. Our local menswear manufacturer toyed with the idea of making some tough men's trousers called 'King of the Mountain Dax'.

Greg says he doesn't think about the race much anymore and he hasn't kept the crown and cape fashioned from hessian bags. But he's still a force in country football - currently playing in the ruck for Manangatang Reserves.

Why did it end?

Mick Giddings runs a museum at Wycheproof and is the unofficial keeper of King of the Mountain memorabilia. He was heavily involved in organising the race and even ran in it in 1978, bringing home a respectable sixth place.

Mick says King of the Mountain died for the same reason many small rural towns are dieing - "because our best export is our kids". Mick says the work involved in a major community event like King of the Mountain is huge and you need to have a supply of enthusiastic youngsters ready and trained to take over.

"The Lions handed it to Apex, but Apex died. They needed 50-60 officials but couldn't get them. We've had tough times and most of the young folk have left town to study or work."

Alan Milburn agrees but he says there were also some 'political problems'. "We started to get a bit of a hooligan element coming in from out of town.

A working bee to fill the wheat sacks.

Particularly at the dance in the evening there was some trouble. The local police were great but the ones from Swan Hill just made it worse. They thought it was getting too big and too difficult and they weren't supportive."

Alan says these problems with police are still continuing. Many small country towns are sour at police refusal to give them licences for B&S Balls - a major rural fundraising and social event.

Wycheproof 2000

Since its demise in 1998 there have been several attempts to get King of the Mountain going again. Danny Verbeek is President of the Wycheproof 2000 Committee and a major player in the current King of the Mountain push. At 31 Danny Verbeek is one of the few younger men in Wycheproof who are active in the community. As an 18-year-old he even considered entering the race, but his mother, a nurse at the local hospital, was worried about the stress it would put on his young body.

Danny believes the great old King of the Mountain days can be lived again and he spends a lot of time talking to locals and trying to convince them. He's full of awe at what the town achieved. "The old blokes were incredible but they just got tired. You should have seen the organisation, they worked 10 months of the year in teams, always reporting, changing, improving. It was like a military campaign."

Thanks to the Herald and Weekly Times and Alan Milburn of Wycheproof for the photographs.

The starting field in 1978.

Catch-up around the CMAs

North-Central

North-Central CMA recently held a successful Catchment Conference with Landcarers among the 120 community participants. Workshops reinforced the need for on-ground works; good communication and co-ordination of effort as well as the whole-of-catchment approach. The catchment region boasts some 140 Landcare groups and the CMA is working towards supporting the needs of this massive volunteer effort.

Mallee

Landcare in the Mallee CMA region recently received a considerable boost. Steve Erlandsen was appointed to assist the CMA in its Landcare leadership function and Graham McKechnie to audit the resources - both human and physical - of the region's 22 Landcare groups. As a result, the region's group database has been updated, group boundaries have been mapped and groups helped to develop their direction.

Goulburn-Broken

Research is underway in the Goulburn-Broken catchment to gauge how Landcarers and potential Landcarers feel about Landcare and their future role in it. Participation levels, participant expectations, burnout and the role of a Landcare network are some areas being addressed to assess where Landcare is at and where it is headed in the Shepparton Irrigation Region. Charles Sturt University and NRE are supporting the work and the outcomes are expected to be widely transferable.

Port Phillip

More than 120,000 trees and native bushes will be planted in the next year by council and community groups across Melbourne. This is the result of some $350,000 from the Urban Bushcare component of the Natural Heritage Trust to the Port Phillip catchment region. Twenty-seven individual project sites are involved with work to include revegetation, the establishment or extension of wildlife corridors, fencing work to protect sensitive vegetation and protecting the habitat of local native species.

North East

The North East CMA contributed to the Landcare Forum run by the Ovens Landcare Network at Beechworth in August. The forum concluded that it was 'vital' to develop close links between the new implementation committees of the CMA, whose job it is to implement the regional catchment strategy, and Landcare groups as well as other community groups. Communication networks to advance that are now being forged.

East Gippsland

Many Landcare groups in the East Gippsland catchment region can expect contact with their regional CMA in relation to an extensive works program in the aftermath of the Gippsland floods. The CMA has been assessing flood damage and anticipates working with many Landcare groups on programs to ameliorate the effects.

Wimmera

Corella population management is a focus of work being undertaken in the Wimmera catchment region. A regional community reference group of interested parties is providing advice to NRE on the issue. It reports directly to the State Government through the Wimmera CMA and is exploring strategies which will help appease the problem of the long-billed native birds which cause havoc for crop farmers in the catchment region.

West Gippsland

Since the establishment of the West Gippsland CMA in July last year, the Authority reports extensive achievements in catchment management works. Some 132,000 trees have been planted; 241 kilometres of protective fencing have been constructed and willows have been cleared from 85 kilometres of waterways in both the northern and southern segments of the catchment region.

Glenelg-Hopkins

Glenelg-Hopkins CMA encourages the support of Landcare groups in developing its on-ground program, believing that community ownership of works ensures better results. In addition, recent successful NHT projects nominated by Landcare groups in the Dundas Tablelands and Casterton region are now being implemented in the catchment region. The funds will be invested in on-ground works for river restoration in the south-west of the region and water quality in the Hopkins Basin.

Corangamite

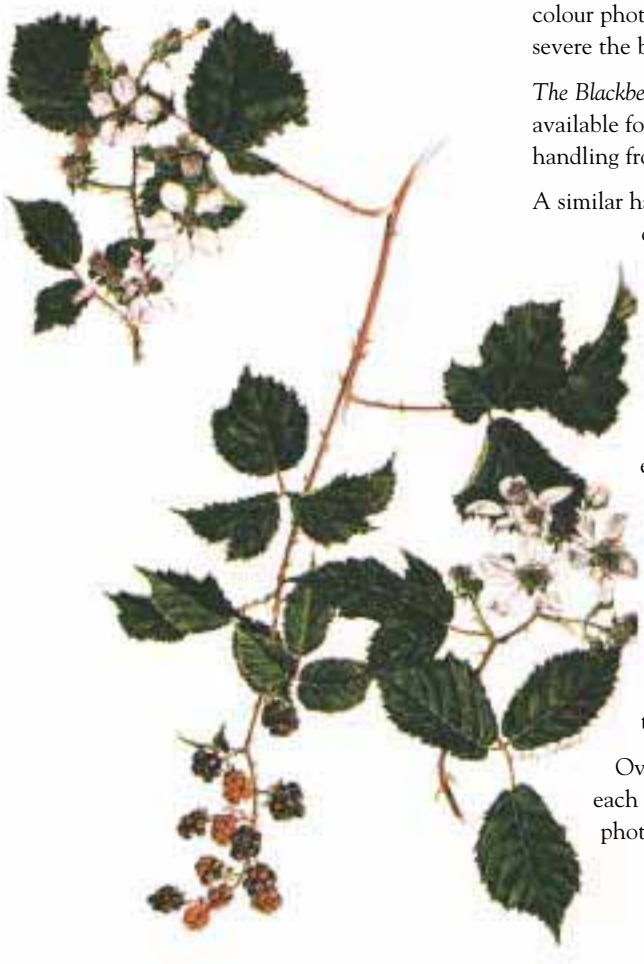
The Corangamite CMA and the City of Ballarat are working on a Stormwater Management Plan, including modifying existing flood retarding basins to include natural wetlands and litter traps. Also, since the establishment of the authority last year, some 102km of waterways have been fenced, 50ha of native vegetation protected and some 184,000 trees planted for the protection of streams and erosion. An influx of Federal and State funds of approx $2.5 million to the region this year will ensure the work continues.

ON THE SHELF - New Publications

Books

The Blackberry Management Handbook

For anyone really serious about long-term blackberry control *The Blackberry Management Handbook* is a highly detailed reference guide. The handbook covers blackberry biology, assessing the problem, management practices and how to rehabilitate infested land.



The handbook is the result of a Blackberry Management Workshop held at the Keith Turnbull Research Institute for leading weed experts. The handbook is simply produced but with some good colour photographs demonstrating how severe the blackberry problem is.

The Blackberry Management Handbook is available for $10 including postage and handling from KTRI on (03) 9785 0111.

A similar handbook is also available on ragwort management and another on patersons curse is in preparation.

South Gippsland Weed Identification Booklet

This little booklet is a great example of what local government can do to help landholders. South Gippsland Shire Council, in conjunction with the State Government's Weed Initiative Program, has produced a comprehensive guide to the region's weeds.

Over 50 species are included, each with a quality colour photograph and a good description.

The booklet also contains a guide to the native plants that we should be planting when weeds are removed.

The booklet is available free of charge by calling South Gippsland Shire on (03) 5662 9200.

Grassland Plants of South Eastern Australia

This field guide to the *Grassland Plants of South Eastern Australia* features 170 species of common grassland plants. A page is devoted to each plant with a detailed description and good quality colour photograph.

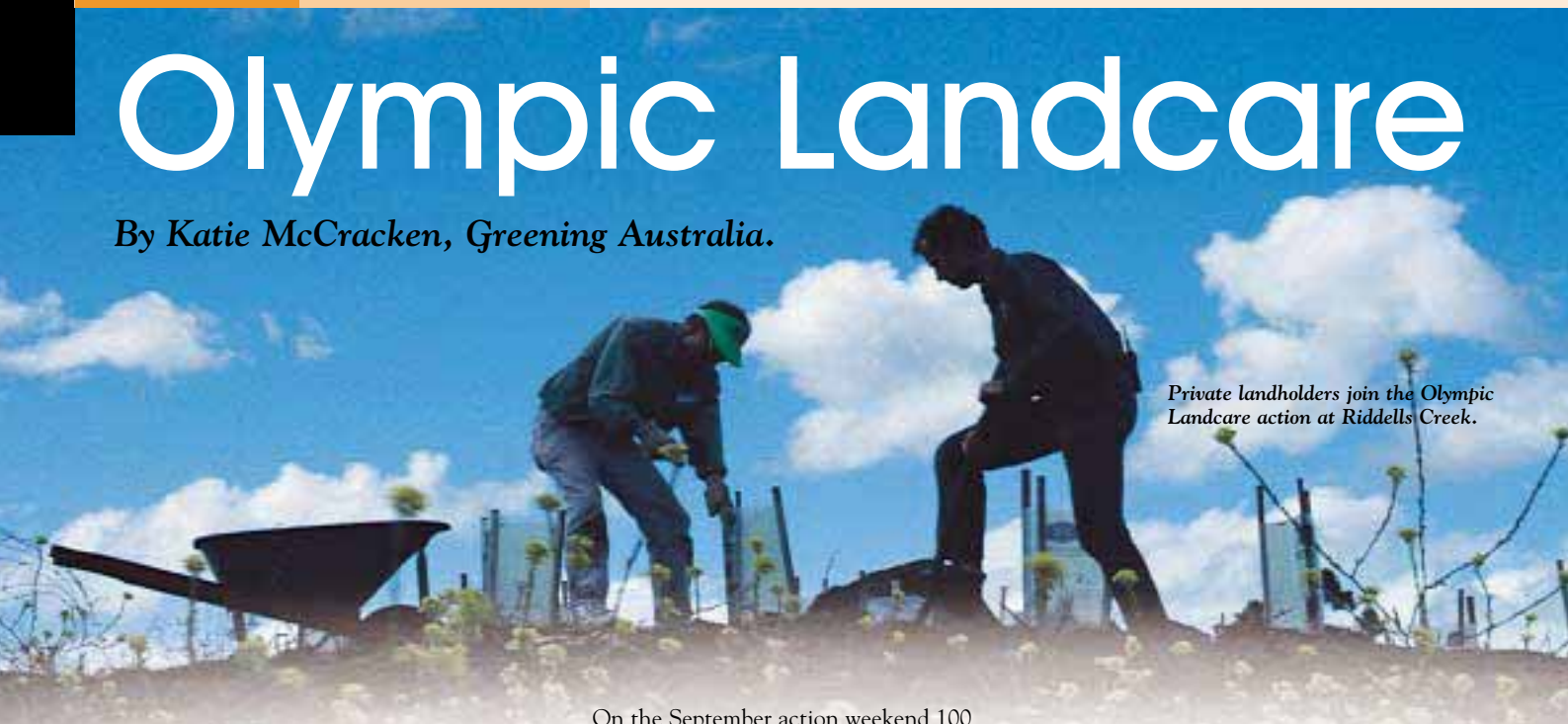
The guide would be useful for anyone trying to identify native grasses in the field. A beginner could learn the difference between kangaroo and wallaby grass; a native plant enthusiast could learn to separate confusing species; and an expert may find they can identify the 'little herbaceous plant' they have ignored for years.

Grassland Plants of South Eastern Australia should help to focus attention and interest on identifying, conserving and protecting our depleted grassland and grassy woodland ecosystems.

The guide is available from the authors, Jane and Neil Marriott, for $22 including postage, telephone (03) 5356 2404.

Olympic Landcare

By Katie McCracken, Greening Australia.



Private landholders join the Olympic Landcare action at Riddells Creek.

Olympic fever is taking over Australia - and not just the sports mad! During September 1998 volunteers from all over Australia were involved in Olympic Landcare - a national program involving people in rehabilitating rural areas.

Olympic Landcare is the biggest on-ground community environmental project ever and the first in association with an Olympic Games. Two million trees dedicated to our greatest sporting heroes will be planted over the next two years in over 600 degraded sites.

The trees will soak up 20,000 tonnes of carbon each year for 30 years - that's 600,000 tonnes all together. Olympic Landcare is about making Sydney 2000 a 'Green Games'. It takes the Olympics beyond sport and into a true community event that all of Australia can participate in.

Action at Maribyrnong

Victoria's project in the Maribyrnong catchment stretches from Diggers Rest right through to Lancefield. The Maribyrnong catchment is suffering badly from land and water degradation including salinity, erosion and noxious weed infestations.

Over 30 individual sites within the Maribyrnong catchment, including Organ Pipes National Park, have been planted out with 35,000 indigenous trees, shrubs and grasses.

On the September action weekend 100 volunteers from metropolitan Melbourne and the local community came to help with the task. In addition to the efforts of volunteers, around eight kilometres of direct seeding occurred in the Upper Maribyrnong catchment, which is expected to result in another 8000 plants.

Gold tree

A dead tree in the catchment has been painted gold symbolising the loss of an estimated 20 billion trees in Australia since European settlement and the work being done by Landcare groups to replace and protect our native vegetation. The gold tree is located on the Bulla-Sunbury Road, Bulla. Six local schools made green and gold leaves which were placed on the tree - a sign of the community participation in Landcare activities across the State.

Greening Australia President and former world champion athlete, John Landy, is the State patron of Olympic Landcare. "Looking after the environment is our shared responsibility - everyone has a role to play. Trees protect the soils, shelter stock and crops and provide habitat for wildlife as well as contributing to the natural beauty of the landscape," Mr Landy said.

The Olympic Landcare Project is co-ordinated by Landcare Australia Ltd and is supported by Greening Australia, Australian Trust for Conservation Volunteers and the Green Corps Teams.

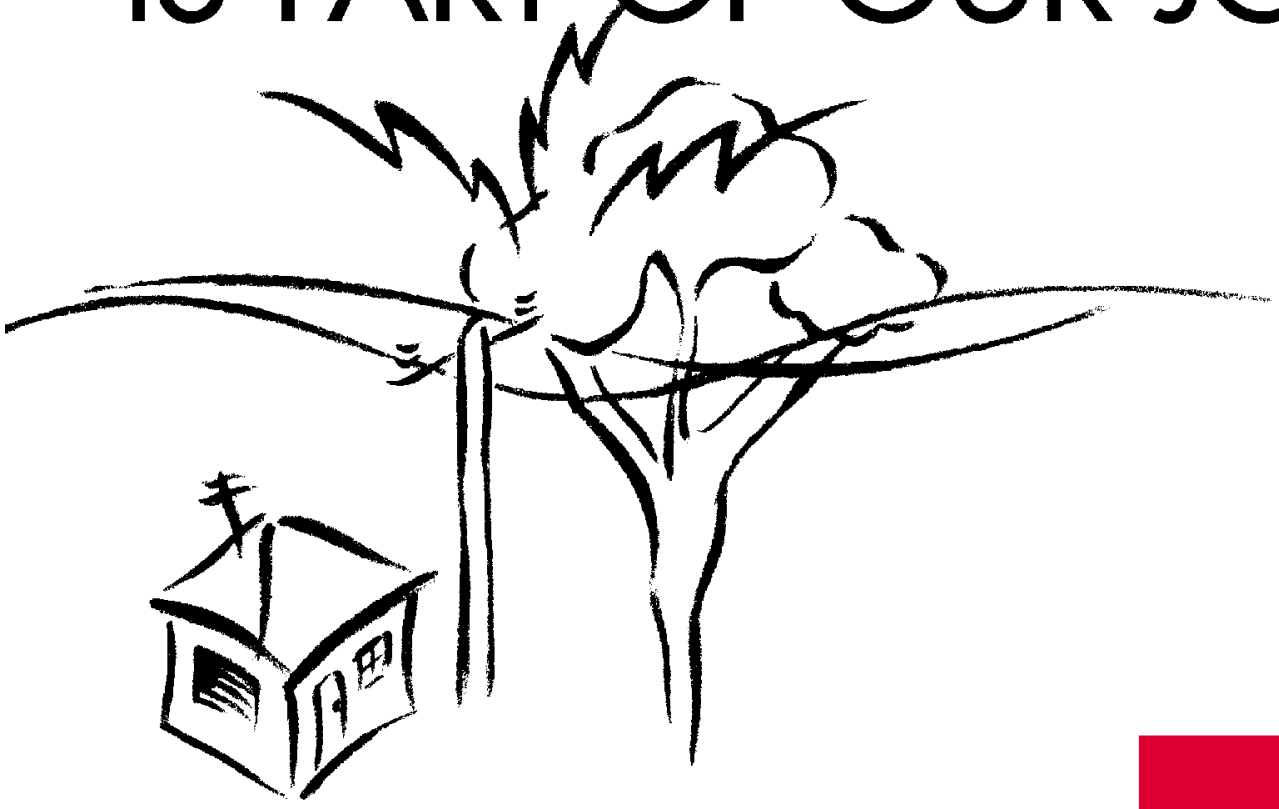
Sponsors for this national project include the National Landcare Program, a community initiative supported by the Natural Heritage Trust, BHP, Fuji Xerox, Gerard Industries, Westpac and Telstra.

"Corporations can play a vital role in support of revegetation activities," Mr Landy said. "Business and local communities can develop strong and successful working partnerships to attain quality environmental outcomes and mutual benefits for everyone involved."

For further information about Olympic Landcare, including the site for next year, contact Katie McCracken on (03) 9457 3034.

The gold tree at Bulla - a dramatic symbol.

REDUCING THE RISK OF BUSHFIRES IS PART OF OUR JOB



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