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Victorian Landcare & Catchment Management

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Outfoxing the fox in Gippsland

Wimmera Landcare round-up

Filling the winter feed gap

Direct seeding success stories

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Cover photograph:
Kerry Reid collects seed on the property he manages at Ravenswood. The seed is being used to revegetate the bare hills in the background. By Rawdon Sthradher.

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Victorian Landcare and Catchment Management is published for the Victorian Landcare community by the Victorian Farmers Federation in partnership with the Department of Natural Resources and Environment, Alcoa World Alumina Australia, the Victorian Catchment Management Council and the Natural Heritage Trust.

From the editors

In this issue we feature several stories on direct seeding (this is a good time of year to start planning revegetation projects). Local knowledge and resources about direct seeding are abundant. With thorough planning direct seeding can be a quick and cost-effective method of revegetation. Greening Australia Victoria is a good source of information and advice.

Landfest 2001

For a positive start to the Landcare year go to Landfest – Australia's only Landcare festival. Landfest is on again at the Victorian Landcare Centre in Creswick, from 10am to 4pm on Sunday 18 March 2001. Located on Daylesford Road, the centre's picturesque gardens, walking trails and natural shady amphitheatre make it a great place to see this year's top billing singer, Deborah Conway.

The theme of Landfest 2001 is fashions in the field. It will highlight trends in revegetation over the last century exposing the monumental blunders that have spawned environmental weeds such as blackberries and display the latest in today's revegetation technology. You can punt on your favourite trend in the inaugural revegetation stakes and enter fashions in the field for quality prizes.

The festival has a carnival atmosphere with environmental and Landcare entertainment, activities, workshops, displays, food, wine and local produce. Entry is $3 for adults and free for children under 15. For more information contact the Victorian Landcare Centre on (03) 5345 2200.

Reprinting our articles

We've had a number of enquiries from Landcare groups wanting to reprint articles or extracts of articles from this magazine in local newsletters. We are keen to spread the word as far as possible so reprinting is welcome, as long as the *Victorian Landcare and Catchment Management* Magazine is acknowledged as the source.

Please keep your stories and letters coming. We are always interested in hearing from our readers.

Lyall Grey, Jo Safstrom and Carrie Tiffany

Deborah Conway will perform at Landfest 2001.

REVIEW COMMITTEE

to provide advice on irrigation farm dams

This month the Farm Dams (Irrigation) Review Committee will present its final recommendations to the Minister for Environment and Conservation, Sherryl Garbutt.

The committee's recommendations follow an extensive process of community consultation that commenced in April 2000, to enable stakeholders to make recommendations and comment on the issues raised.

According to Don Blackmore, Chairman of the Farm Dams (Irrigation) Review Committee, the most difficult issue for the community is how to resolve the dilemma of there being only a fixed amount of water available in catchments.

"In an increasing number of catchments the water that is available on a sustainable basis has already been fully utilised by existing users. As it stands, if other people in the catchment want access to additional water this can only be done by taking water off these users, or unacceptably damaging our rivers," Don Blackmore said.

In response to this emerging problem, the committee has proposed three major recommendations in its draft report, which was released for public comment in December 2000.

Firstly, the committee proposed that there should be no change to the current arrangement for existing domestic and stock water use.

Secondly, the committee proposed that the State's current licensing system should be extended to cover all water harvested for irrigation purposes. This approach was adopted to ensure that the legal rights of existing water users could be protected and that the State's rivers could be managed on a sustainable basis.

This approach has the additional advantage of treating all water users equally, regardless of whether they take water from a waterway or from the gullies that feed the waterways.

Thirdly, the committee proposed that streamflow management plans be developed by local community reference groups. The purpose of these plans would be to develop local management plans to share the available water within the local catchment on a fair basis and to manage the local streams on a sustainable basis.

Public comment on the committee's draft recommendations closed on 18 February 2001. The committee is now considering these comments and expects to provide final recommendations to the Minister by the end of March.

To ensure both the ecological sustainability of our creeks and rivers and that the security of existing users is protected, it is clear that we need to effectively manage all of the water resources in our catchments.

Proper management of our water resources is vital to Victoria's economic, social and ecological well-being.

The committee's Draft Report and more information is available at http://home.vicnet.net.au/~farmdams/ or by calling the NRE Customer Service Centre on 136 186.

The Farm Dams Review Committee is an independent committee chaired by the Chief Executive Officer of the Murray Darling Basin Commission, Don Blackmore. Its members are Sylvia Davey (West Gippsland CMA), Tim Fisher (Australian Conservation Foundation), Christine Forster (Victorian Catchment Management Council), Peter Sutherland (Catchment and Water Division, NRE) and Peter Walsh (Victorian Farmers Federation).

For further information contact Kevan Richards, Executive Officer, Farm Dams (Irrigation) Review Committee, on (03) 9412 4316.

Grovedale West students win the National Landcare Garden Competition

Students from Grovedale West Primary School have beaten schools from around Australia to win the 2000 Design a Landcare Garden Competition.

The grade six students put their creative talents to good use and designed a Landcare garden for their school, incorporating projects to protect frogs and monitor water quality. The garden also aims to attract native birds and animals, promote the Landcare ethic and be a place where students from other local schools can learn about the environment.

Chief Executive of Landcare Australia, Brian Scarsbrick, said it was inspiring to see how thoroughly the students embraced the Landcare concept in designing the garden.

"The calibre of entries in the competition was exceptionally high this year so Grovedale students should feel justifiably proud of their achievement.

"Given the havoc salinity is causing to our landscape I was particularly impressed with the students' involvement in Saltwatch and the plans for expanding this program when the Landcare garden is installed."

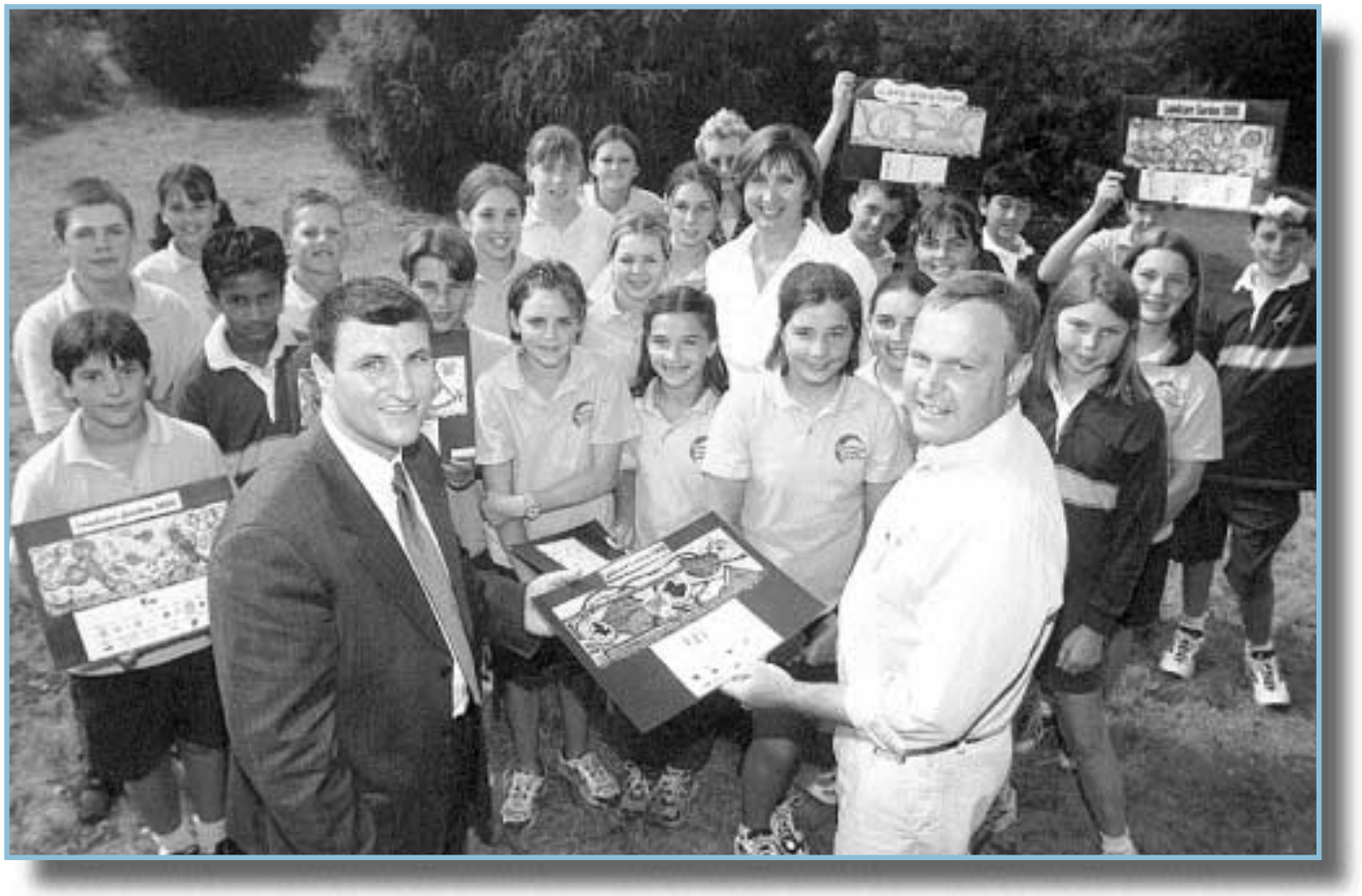
The students' ideas and plans for a Landcare garden will now be incorporated into a garden within the school grounds. Building is due to start early in 2001 with local Landcare facilitators assisting the school with technical advice.

The garden is valued at $5000 and the students have also won a 4000 gallon water tank with pressure pump from Team Poly, a $500 voucher for Scholastic books and 5000 bonus points from Scholastic to be added to Grovedale's account.

The Grovedale West Landcare garden will have a focus on educational purposes, allowing students to learn more about environmental science, maths, technology, art and aboriginal heritage.

The school plans to involve the local Aboriginal Cultural Centre to liaise on the garden and help promote its significance to our past and present Australians.

For more information contact Dineke Matheson on (03) 5241 4776.

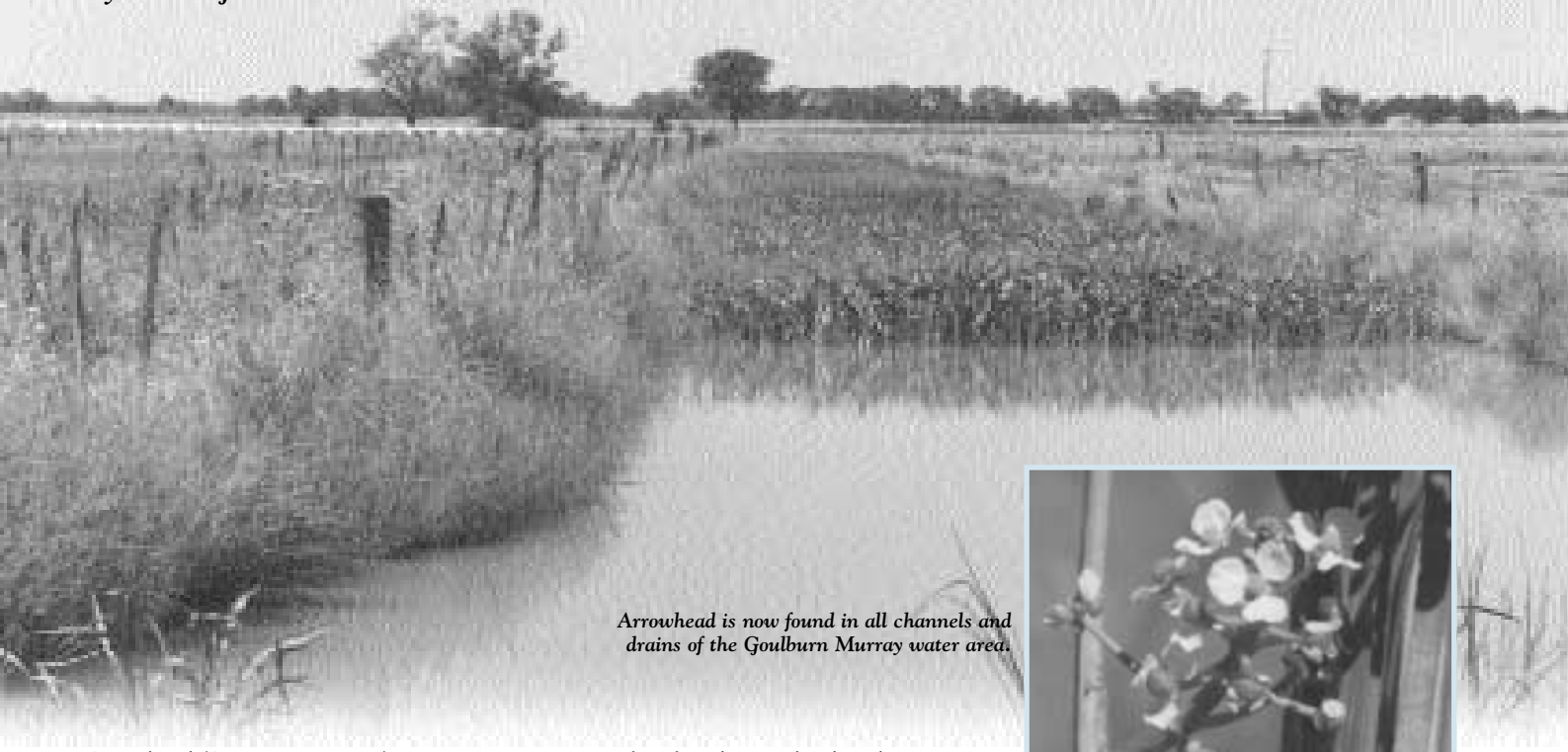


Scott Gibson (left) from Landcare Australia with students from Grovedale West Primary School, their teacher, Dineke Matheson and Bronte Payne from NRE.

ARROWHEAD –
a serious aquatic weed in northern Victoria

Research Results

By Lalith Gunasekera and Kevin Krake



Arrowhead is now found in all channels and drains of the Goulburn Murray water area.

Arrowhead (*Sagittaria graminea*) is an attractive, emergent, erect, aquatic perennial plant that has become a serious problem in a number of irrigation areas, watercourses and wetlands along the River Murray, including the river itself.

A recent survey carried out jointly by NRE and Goulburn Murray Water has revealed an alarming spread of the plant from upstream of the Ovens and Murray confluence to downstream of the Torrumbarry Weir. This affects irrigation on both sides of the river and also contributes to the degradation of the flora and fauna values in the river itself. Infestations have been recorded in riverine lagoons and waterways, including the waterways of the Barmah-Millewa Forest.

This aggressive plant spreads rapidly in natural waterways, irrigation supply channels and drains, where it causes disruption to the flow of water.

Arrowhead originated in North America and has been introduced to many countries as an ornamental aquatic. It was first found naturalised in the Ekibin Creek near Brisbane in 1959. By the early 1970s it had spread into channels and drains around Nathalia and Numurkah and soon after to the Shepparton irrigation area. In the 1980s it gradually spread throughout most of the Murray Valley area and became well established in the Shepparton area in both channels and drains.

It now exists in all Goulburn Murray water areas to a greater or lesser degree. The invasion of Arrowhead is considered to be the greatest threat to the efficient operation and management of our open, earthen channel supply systems. Arrowhead can severely retard and completely choke water flow in irrigation channels, resulting in difficulties to meet agreed levels of service. In drains, it retards water flow, which may result in flooding during rain and periods of high drain flows.

Arrowhead roots in the swamp floor and reproduces by seed, rhizomes and tubers. Stems are erect or occasionally bent near the middle, five to 20 centimetres long, bearing two to 12 whorls of flowers at the apex. There are two types of leaves: emergent leaves are linear or ovate, tapering abruptly to a point, on a triangular cross-sectioned stalk; submerged leaves are strap-like, to 50 centimetres long and 2.5 centimetres wide.

It is clear that more needs to be known about the biology of Arrowhead to maximise control opportunities. Previous research work has been limited to small trials of herbicide efficacy, timing and a combination of herbicide/mechanical methods of control. Little is known about the plant's seed viability and spreading mechanisms.

For more information contact Lalith Gunasekera at the Keith Turnbull Research Institute on (03) 9785 0111.

Direct seeding shelterbelts – *good*

Mike and Sally Skermer operate a 700 hectare wool-growing enterprise east of Hamilton in south-west Victoria. Since taking over the farm in 1988, the Skermers have seen the importance of native shelterbelts to their farm business.

"We see the vegetation belts as a legitimate means of increasing our productivity," Mike said.

"By providing stock with shade in the summer months and shelter when the weather turns, we reduce stock losses and produce more wool."

The challenge

In 1995 Mike and Sally tried their first direct seeding into a well-prepared site. For the Skermers, tubestock planting was too much like hard work and they saw direct seeding as a cost-effective option for establishing shelter.

"The possibility of completing the annual tree planting program as quickly as possible, while still achieving a good result, was highly desirable," Mike said.

The solution – direct seeding

Mike explained that site preparation was the key to a successful project.

"If you want a good result, you can get it with minimal effort, provided it is done at the right times," Mike said.

"Our experience shows that the first spray should be in the autumn to knock down germinating weeds."

Sally collects most of the seed from local remnant tree populations.

Mike used Roundup or Glyphosate at a rate of three to four litres per hectare.

"Our second spray is just prior to sowing and is a mix of Roundup and Simazine. The Simazine is a residual herbicide, stopping weed seed germination and giving the tree seedlings a head start.

"We use Roundup or Glyphosate at a rate of three to four litres per hectare and Simazine at five to six litres per hectare and include Fastac for the red-legged earth mites."

Mike explained that both sprays are done with a four-wheeled bike with a one-metre-wide boom, only killing the areas in strips and not the whole area fenced off. A Hamilton Tree Seeder is used to sow the seed.

Species selection

Sally explained that they try and collect seed from local species within a 20 kilometres radius of the farm.

"What we can't collect locally, we source from the Greening Australia Alcoa Portland Seedbank."

Sally keeps detailed records of where the seed is sourced from and on which plantations it is used. Provenances are kept separate in different plantations.

"Within a few years we will be able to collect seed from our plantations and take the pressure off the remnant populations we sourced it from. Seed from our plantations could then be on-sold to other farmers or back to the seedbank," Sally said.

As for the species mix, the Skermers do not alter species between rows in a shelterbelt. "We only discriminate between wet sites and drier sites," Sally said.

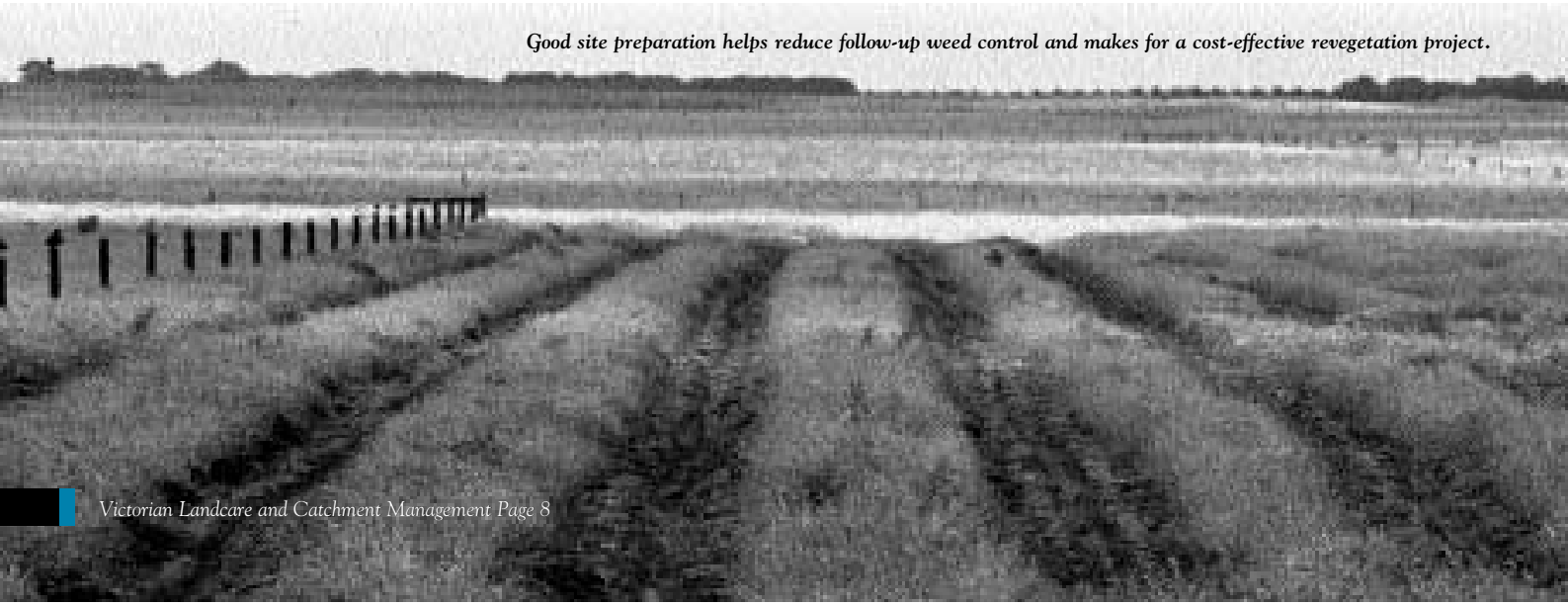
The wet sites on the Skermer's property are (in normal years) subject to heavier flooding and some inundation, while the drier sites are usually gravelly and well drained.

Ongoing maintenance

Mike said the first thing to look for are red-legged earth mites and spray if they are present.

"We also watch for slugs, however we have not yet had to bait them."

Follow-up weed control was something the Skermers used to do in the autumn following sowing, however they decided that they killed more trees in the process than it was worth.



Good site preparation helps reduce follow-up weed control and makes for a cost-effective revegetation project.

for the farm and easy on the pocket

They now only spot-spray phalaris with Fusilade – a grass-specific herbicide.

Mike said it was important to be careful with which herbicides you use close to the seedlings and to seek advice specifically regarding the effect of the product on juvenile seedlings.

He also explained that they never use residual herbicides after the initial spraying.

"With direct seeding, seed can germinate up to five years later. Using a residual herbicide after sowing the seed risks limiting this later germination."

Budget

The Skermer's main cost is the fencing. Keeping stock out is the highest priority. One sheep in a plantation can ruin years of work. The cost of chemicals is minimal.

Four weeks a year is set aside for collecting, extracting and recording seed sources. A day here and there is enough to collect the seed for large-scale projects (>20ha/yr). The cost per kilogram of seed from the seedbank is around $180 but varies with species required.

Greening Australia hire the Hamilton Tree Seeders and other direct seeding machines through the Alcoa Machinery Loan Scheme from $30 per day.

The benefits

It becomes evident when looking across Lime Creek that a significant landscape change has occurred in a short time. According to Mike, they are achieving their goals without placing too much extra strain on the resources of the business.

"It is important to realise that while the direct seeding program has not significantly added to the workload of the farm, it is crucial that such a program is undertaken methodically and meticulously to achieve the desired results," Mike said.

"Thorough site preparation, timing and diligent monitoring are key elements to achieving consistently good results from direct seeding."

For more information contact Mike and Sally Skermer on (03) 5350 5526 or Dave Warne at the seedbank on (03) 5521 7856.

By Paul Crock

The Hamilton Tree Seeder

The Hamilton Tree Seeder comprises a seed box and a small double-sided mouldboard plough which turns over the top few inches of soil leaving a furrow the seed falls into.

Through the Greening Australia Alcoa Machinery Loan Scheme, seeders such as this one are available to Landcare groups and individuals for direct seeding projects across the State.

For more information contact Greening Australia on (03) 9457 3024.

After. December 2000 at 26 months.

Before. April 1999 at six months.

Direct seeding success at Willatook

The Hopkins-Moyne Land Management and Farm Tree Group is an active Landcare group working in the Hopkins and Moyne River catchments. With over 120 members the group is one of the largest in the Glenelg-Hopkins region.

The group have their own Hamilton Tree Seeder and a number of the members have consistently achieved excellent results over the last seven or eight years using this machine.

The challenge

Mick Stevens, a member of the group's executive, said they had sought to encourage others to adopt direct seeding as a cost-effective revegetation option.

"We decided that a demonstration site should be established to show people how successful direct seeding could be and to encourage more locals to adopt direct seeding."

Kangaroo Apples were dominant initially but died out allowing longer-lived species to flourish.

A small amount of funding was gained through the Federal Government's One Billion Trees Program to assist with signage and site preparation.

In conjunction with the Recreation Reserve Committee, the group fenced the site and sprayed the area to be seeded.

"We sprayed five weeks prior to sowing with Roundup, at four litres per hectare, to knock down the weeds. The second spray, just prior to sowing, was with Roundup again at four litres per hectare, but this time we also added Simazine at six litres per hectare for residual weed control," Mick said.

The residual weed control was to enable the seedlings to get established with minimal competition in the first year.

According to Mick, Simazine was effective in keeping the weeds under control.

"We didn't over-spray for weeds in the following autumn as group members had had mixed success with this method of follow-up."

The group purchased their seed from the Greening Australia Alcoa Regional Seedbank at Portland.

Sowing the seeds

Following the careful site preparation a mixture of seed was sown using a Hamilton Tree Seeder.

Helen Keegan, the President of the group, said the seed mix was the same for all the rows in the plantation.

"We abandoned the idea of different species mix for the outer rows as experience had shown that some species were slow to germinate or died out leaving gaps."

She said group members were really pleased with the excellent rate of germination at the site.

"We were lucky – heavy follow-up rains in January probably contributed to the great survival and fast growth rates," she said.

Helen explained that despite the timely rain, on average, the year was still a dry one.

The results

After the first two years, group members were interested to note that the dominant species at the site was Kangaroo Apple (*Solanum laciniatum*).

According to Geoff Harbel, another group member, they appeared to act as a nurse crop and provide quick shelter.

"At first we thought it was a weed and we were all worried that it would spread. In the medium term it became apparent that the slower-growing species, including gums and sheoaks, seemed to benefit from the Kangaroo Apples."

Three years later, nearly all of the Kangaroo Apple has gone and the other longer-lived species are beginning to dominate the site.

Success

Dave Warne, Greening Australia Alcoa Regional Seedbank Manager at Portland, said that since the project's success direct seeding adoption rates have increased dramatically in the area.

"The project highlighted how effective demonstration sites are in helping lift adoption rates. The group has also obtained funding for a Hamilton Tree Seeder which is used continuously throughout the direct seeding season.

"The site broadcasts a clear message – thorough site preparation, timing, monitoring and follow-up action are all necessary if a project is to succeed," he said.

For more information contact Mick Stevens from the Hopkins Moyne Land Management and Farm Tree Group on (03) 5560 6253, or Dave Warne at the seedbank on (03) 5521 7856.

Clear signage identifies the site and an interpretative board describes the project.

spreads the message

By Paul Crock

The change in species mix over time is an interesting feature of the Willatook demonstration.

SALINITY and the law

Emerging legal issues surrounding dryland salinity in Australia left farmers and catchment managers with plenty to think about at Australia's National Dryland Salinity Program (NDSP) Salinity Stocktake conference held in Bendigo last November.

Keynote speaker at the conference, environmental law specialist from Wollongong University's Centre for Natural Resources Law and Policy, Professor David Farrier, told delegates that dryland salinity was not only one of the most significant environmental problems facing Australia, but also a massive social problem.

Professor Farrier said that existing Commonwealth legislative initiatives under the Environmental Protection and Biodiversity Act, 1999 failed to take a whole-of-landscape approach to natural resource management. He warned that the difficulties of regulating landuse by introducing tradeable permit systems should not be overlooked.

Ian Turley, Barrister and Solicitor, Supreme Courts of Victoria and NSW, told the NDSP conference that dryland salinity was likely to spawn many common law claims for damages.

"It is arguable that methods of agriculture and water management advocated, implemented or even mandated by various private entities and public authorities may have contributed to the problem," Ian Turley said.

Other speakers examined the role of local government in the battle against salinity, the role of taxation and financial incentives in salinity management, and salinity credits.

For further information contact NDSP Communication Co-ordinator, Jo Curkpatrick, on (03) 9328 530.

Richard Price from NDSP (left) with Professor David Farrier at the Salinity Stocktake conference in Bendigo.

Upper Wimmera Land

Hill country rabbits down for the count

The rabbit calicivirus disease, along with rabbit warren ripping works, has caused a dramatic increase in vegetation on the hills of the upper Wimmera River catchment.

Large-scale rabbit warren ripping campaigns conducted by landholders since 1996 have seen rabbit numbers plummet from 50-70 rabbits per kilometre to 1-2 per kilometre.

Until 1996 most farmers considered it virtually impossible to control rabbits in the hills of the Pyrenees Ranges. The Rabbit Buster Program provided incentives to support large-scale community ripping programs in the steep hill country of the upper Wimmera River catchment in 1996.

Ron and Barry Leslie have achieved rabbit-free status on their hill country property near Stawell.

Previously, farmers had found steep hill country ripping cost prohibitive due the specialised equipment required such as bulldozers and excavators, and the large scale of the rabbit problem.

Now, three hill country landholders have been accredited as rabbit-free under the Rabbit Free Scheme, which is an initiative of Rotary International, NRE and the Catchment Management Authorities.

The scheme aims to raise the standard of rabbit control, protect previous investments in rabbit control and give recognition to good land managers.

The previously severe impact of rabbits in the upper Wimmera River catchment has been significantly reduced. An increase in vegetation regeneration has reduced soil loss thereby reducing sedimentation and eutrophication of the degraded Wimmera River. Benefits to biodiversity and improved stock carrying capacity have also been achieved.

Where warren-ripping works have been undertaken rabbits have been held at very low numbers for the past four years. Only minimal control efforts have been required to keep numbers at very low levels. The requirement for rabbit baiting in the Stawell district has been reduced by 97%.

Some rabbit control figures for the recent activities in the upper Wimmera River catchment include: 22,000 hectares ripped; 58,000 warrens ripped; 360 landholders involved; rabbits reduced by 81%; $452,000 in ripping costs.

Rabbits cause severe land degradation in the hill country.

care round-up

By Andrew Scanlon and Mark Farrer

Group News

The hills are alive with the sound of music

This March the Wimmera hills will once again be alive with the sound of music. In 1999 the Concongella Landcare Group hosted the first Annual Landcare Tune-up Music Festival. The event featured a line-up of local farmers and landholders musically talented and keen to strut their stuff.

In particular the Kilpatrick Brothers, who have been very active in the Great Western Landcare Group, played to a packed house. The Granite Creek Landcare Group, who were guests of Project Platypus, came all the way from the Seymour area to witness the event.

In 2000 the Crowlands Landcare Group hosted the Tune-Up at the Crowlands Hall. The weather was foul, the wind was howling and the dust was thick, but people came from far and wide to be part of the action. Herb Krelle and his band from Horsham headed the line-up and once again the fabulous Kilpatrick Boys hit their straps and produced a fine show.

This year's Landcare Tune-Up Music Festival will be held on 31 March 2001 in the Stawell area. All those with a love of music and the land are welcome. For further information contact Andrew Scanlon from NRE Stawell on (03) 5358 1588.

The fabulous Kilpatrick Brothers play to a packed house at the 1999 Landcare Tune-Up Music Festival.

Landmates work for Landcare

Landmate Supervisor, Keith Price, looking down the long line of burnt fencing being removed on Brendan Hall's property near Stawell.

Landcare in the upper Wimmera is benefiting from a close working relationship with HM Prison Ararat. The Landmate Crew Initiative involves prisoners in community and environmental projects.

The Ararat Prison Landmate Crew is operated by prison supervisors Keith Price and Mark Nestor, in conjunction with Andrew Scanlon and Brian Howlet from NRE. The crews work on fencing, weed and pest control, tree planting, site preparation and miscellaneous community work.

Last year the Crowlands Landcare Group, in conjunction with NRE and Project Platypus, hosted the first major community tree planting event in the upper Wimmera – Plantout 2000. The Landmate Crew did all the site preparation for the event. This included rabbit-proof fencing, spot spraying for trees, rabbit control and rabbit harbour removal.

Andrew Scanlon said that without the crew the site would not have been ready for planting on time.

"Landmate Crews are in high demand from all quarters. Landcare group work takes the highest priority without question, NRE tasks come next and then individual landholders."

The crews, whose numbers vary from six to eight prisoners, have a strong work ethic and a reputation for quality work. The work is popular amongst prisoners as it allows them to give something back to the community, help the environment, take part in on-the-job training and prepare for reintegration into life outside the prison walls.

Landmate Supervisor, Keith Price, said the crews have a good understanding of what needs to be achieved.

"We have little wins day to day. The members of the crew understand what is required of them and they do the work to their utmost ability. The work is interesting and often our office – the upper Wimmera – affords us some spectacular views."

The crews are currently helping to restore the fencing lost in the recent Stawell fires.

Outfoxing the fox in

By Paul Crock

The Anderson's Inlet Landcare Group, in conjunction with NRE, recently completed a highly successful Foxoff baiting program in the Pound Creek and Screw Creek catchment areas in South Gippsland.

The group tallied their results and concluded that the program had eliminated at least 700 foxes – an incredible effort when one considers the target area was less than ten square kilometres.

According to Martin Fuller, Bass Coast Landcare Projects Manager, these results highlight just how serious the fox problem has become in Victoria.

"The group devised the program because foxes have an enormous impact on members' farming businesses.

"Foxes kill lambs, maul calves and maul teats off dairy cows and are known to spread diseases amongst livestock, not to mention their impact on native wildlife populations," he said.

"30% of a fox's diet is sheep and lamb, 30% rabbits, mice and insects and 30% native wildlife," Martin said.

While not many fox carcasses are usually found after a Foxoff baiting program, the ones that are found remind the others to stay away.

Ludwigia Gigantekera with Dense Waterweed (Egeria) infesting the Merri Creek.

South Gippsland

Group News

The program

The baiting program saw over 1070 individual Foxoff baits laid in strategic locations across farmland in the Screw Creek and Pound Creek catchments. All of the baits were taken.

Daryl Hook, a woolgrower in the Screw Creek catchment near Inverloch, helped organise the program, and explained the approach used to run the baiting project.

"Firstly we had to assess the problem – to try and determine the numbers of foxes we were up against. The group had a series of spotlight nights to estimate fox numbers in their area. NRE staff were of great assistance to the group providing us with advice. We worked with them to develop a plan as to the best locations for laying the Foxoff baits.

"We identified over 300 sites – mostly along fence lines and tracks, spaced about 200 metres apart."

Members buried the Foxoff baits just under the surface, as per the recommendations, and marked each location clearly with either stakes or ribbons tied to fences or overhanging branches.

Individuals monitored their own bait stations and replaced the baits every three to four days to make sure that all the foxes in a given area had the chance to take a bait.

Darryl explained that the community group approach to fox baiting proved highly successful.

"It is no use getting rid of foxes on your farm if they are replaced by others from your neighbour's place or further afield.

When foxes are the only roadkill, it points to huge populations and an enormous impact on native wildlife populations.

To celebrate the success of the group's baiting project, Daryl wore a fox pelt to the meeting and encouraged others to follow his lead next year – much to the amusement of those attending.

Having a co-ordinated approach, with neighbours working closely together, got us the best results we could have hoped for," he said.

All members reported that they had encountered fewer problems with foxes during the lambing and calving season than in the past. They also realised that while their little patch of Gippsland was fox-free for a short time, infiltration of neighbouring foxes would soon mean they would have to repeat the program.

The future

"The success of the project was such that the South Gippsland Landcare Network are now looking to try and replicate it across a much wider area of the district," Martin Fuller said.

"We hope to build on the example set in the Pound and Screw Creek catchments and see if we can get the other 32 Landcare groups in the network to run a joint baiting program covering most of South Gippsland."

Martin said it was a very ambitious project, but that the dedication and resolve of the South Gippsland Landcare community to take on the fox problem head-on should not be underestimated.

For more information contact Martin Fuller on 0417 051 132.

Foxoff program tips

Do

- Read and follow product directions – not folklore.
- Notify and work closely with neighbours.
- Replace all baits taken over a two to four week period.
- Chain up or muzzle all working dogs and pets while baits are being used.
- Store baits only for the duration of the program – locked away from food areas and children.
- Be prepared to make a reasonable effort selecting bait sites and checking regularly.
- Recover uneaten baits at the end of the program and burn them.

Don't

- Underestimate the size of the problem.
- Invent your own special method.
- Store baits for next time – get more as or when required.
- Place baits too close together.
- Drag a continuous lure scent trail.
- Place baits near boundaries or housing.
- Place more than one bait in each hole.
- Use baits if there is a risk to non-target native animals. If in doubt seek local advice.
- Worry about human scent.

Research Results

Filling the winter

Alan (Blue) and Bev Smith run 2200 fine wool merinos and 200 first-cross ewes on their 290 hectare property at Deereel.

Tired of the rising costs of supplementary feeding and fodder conservation, the Smiths teamed up with other farmers in the Mt Mercer area to form a local neighbourhood group. Their aim was to trial different methods of filling the winter feed gap.

The problem

Blue explained that phosphorous, potassium and pH levels in the paddocks were low and that bent grass was endemic.

"We chose to try a winter fodder crop as an option in our bent grass control, as it can get too wet for a conventional crop of oats."

Blue opted to sow Winfred Rape and Progro Ryegrass in a paddock that he said would have been hard pressed to carry 130 sheep without hand feeding.

"Our involvement in the Mt Mercer Group – and support from our Sustainable Grazing Systems Co-ordinator, Cam Nicholson – gave us the confidence to give the Winfred Rape and Progro Ryegrass mix a go," Blue said.

The solution

Alan sprayed the paddock out with Roundup CT at a rate of 2l litres per hectare in early November.

"We followed up with a very hard graze to remove the dry material and cultivated in February to remove any weeds present. Keeping the area weed-free was important to maintain the moisture levels for sowing in March, but also gave us a chance to work-in lime to lift the pH," Blue said.

The crop was sown down in early March, with the Winfred Rape and Progro Ryegrass drilled at a rate of 1.5 and six kilograms per hectare respectively.

A legume-special fertiliser (6:16:0:10) was drilled at the same time.

"Super potash 3:1 was topdressed at a rate of 100 kilograms per hectare and we sprayed for red-legged earth mite in early April," Blue said.

Results

According to Blue, the increase in feed in the paddock was remarkable.

"Where once we would have been pushing 130 sheep, we were running 420 weaner replacements.

"We added another 480 wethers to graze the crop down and reduce the likelihood of it going to seed."

For more information contact Alan (Blue) Smith on (03) 5346 1244 or Cam Nicholson on (03) 5258 3860.

The stocking rate over the short term equated to 420 weaners from late May through until mid December (190 days) and 480 wethers from July and part of August (38 days).

THE BUDGET

Pre-renovation:

Stocking rate – 2.5 DSE
Gross margin – $76.87/ha
Income:
2.5 DSE/ha x $40/DSE = $100
Costs:
Animal health – $3
Feeding – $6.25/hd
2.5 DSE/ha x $9.25 = $23.13/ha]

Renovation phase:

Stocking rate – 43 DSE/ha
Gross margin – $159/ha
Income:
43 DSE/ha x $18/DSE
(over six months) = $387/ha
Costs:
Animal Health – $1
Crop establishment – $185/ha
$43 + $185 = $228/ha

feed gap

By Paul Crock

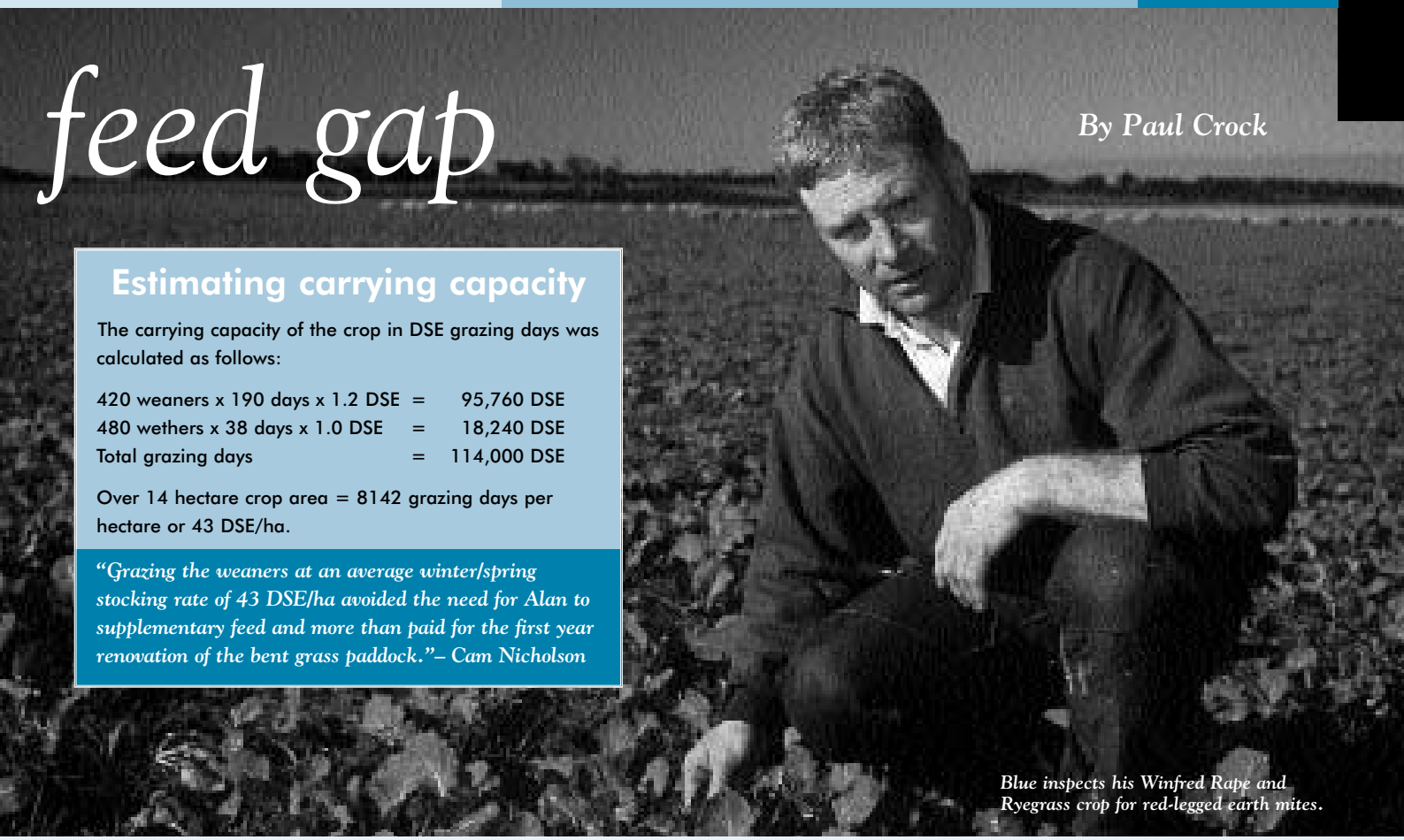
Estimating carrying capacity

The carrying capacity of the crop in DSE grazing days was calculated as follows:

420 weaners x 190 days x 1.2 DSE	=	95,760 DSE
480 wethers x 38 days x 1.0 DSE	=	18,240 DSE
Total grazing days	=	114,000 DSE

Over 14 hectare crop area = 8142 grazing days per hectare or 43 DSE/ha.

"Grazing the weaners at an average winter/spring stocking rate of 43 DSE/ha avoided the need for Alan to supplementary feed and more than paid for the first year renovation of the bent grass paddock."– Cam Nicholson



Blue inspects his Winfred Rape and Ryegrass crop for red-legged earth mites.

IN BRIEF

National Action Plan for Salinity and Water Quality

The Federal Government will commit $700 million Australia-wide over the next seven years to the National Action Plan for Salinity and Water Quality in Australia the first comprehensive national strategy to address salinity and water quality problems.

The Commonwealth is seeking a dollar for dollar matching commitment from the states in order to address dryland salinity and deteriorating water quality in key catchments and to build on the work established under the Natural Heritage Trust, the Murray-Darling Basin Commission, state strategies and the CoAG Water Agreement.

The funding will be applied to practical remedies including protecting and rehabilitating waterways, improvements to native vegetation, engineering works to address salt intrusion and land and water use changes.

The strategy, outlined by the Commonwealth, involves detailed scientific assessments to decide the areas needing attention and the most effective action; setting targets and standards for natural resource management; developing integrated plans for catchments and regions so that solutions can be tailored to the differing problems; and empowering communities to help themselves so they can play a significant role in developing plans and carrying them out.

In Victoria, this will put considerable focus on regional catchment strategies at the broad level and on salinity management plans and water quality/ nutrient management plans at the more detailed level.

Minister for Environment and Conservation, Sherryl Garbutt, said that Victoria is well-placed to enter into partnership with the Commonwealth in addressing the major challenges of salinity and water quality and that the strong focus of the proposed new arrangements on community-developed catchment action plans is wholeheartedly supported by Victoria.

More information on the National Action Plan for Salinity and Water Quality in Australia can be found at www.affa.gov.au

Victorian Landcare Awards

There is no doubt that Landcare continues to make an outstanding contribution to the management of our natural resources.

The Victorian Landcare Awards will be held during 2001 and are a great opportunity for individuals, groups and networks to reflect on their achievements and celebrate their successes.

For information on closing dates and application forms contact the NRE customer service centre on 136 186.

Paired catchments in the Great Western

The Great Western Paired Catchment Salinity Control Project has been testing the effectiveness of salinity control measures in Victoria's Wimmera for the past five years.

The trial was established to scientifically test recommendations for salinity control, specifically in upper catchments in lower rainfall areas of 500 to 600mm. According to Julie Andrew from NRE at Stawell, the findings will have important implications for future management of recharge areas in Victoria's inland catchments.

The 1992 Wimmera Salinity Management Plan recommendations for high recharge areas, based on information available at that time, included fencing out and high-density tree planting of greater than 500 trees per hectare on steeper country and planting perennial pastures on lesser slopes.

Bill Kilpatrick monitors a bore on the Great Western Paired Catchments trial.

To test the recommendations two adjacent, similar catchment areas existing in a saline system – one being the test site and the other the control – were required.

Thirty sites were investigated before Bill Kilpatrick's 2000 hectare grazing and cropping property was chosen.

The paired catchments on the Kilpatrick's property were about the same size, had very similar characteristics, were adjacent, experienced the same 520mm rainfall and, most importantly, had good support from the landholder.

SKM assessed the sites for water movement through the catchments, salinisation processes, how different geologies affect salinisation and the water balance.

An agronomist recommended pasture and stock management to consider what size paddock subdivisions were desirable, how often stock rotation should occur and recommend stocking rates. An economist is assessing the economic impact to the farmer.

Bill Kilpatrick said salinity has always been an issue for farmers around Great Western, with his family trying to combat the problem for the past 40 years, including fencing out salt-affected areas, gully battering and building rock structures.

Following the assessments both catchments (about 50 hectares in size) were fenced according to land capability and internal subdivision fencing on the treated catchment pasture was installed for rotational grazing.

Stocking rates were reduced, with 120 merino whethers running in the control paddock and 240 merinos in the treated paddock.

On the trial catchment hill paddocks, selected tree species such as Red Gum, Yellow Box, Red Stringy Bark and Red Box were planted. The flatter sections were sown down to perennial pastures of clovers, phalaris and cocksfoot.

One existing saline area was already fenced out and sown down to tall wheat grass, while another was planted with tall wheat grass and other salt-tolerant species.

Catchment Management

Julie Andrew measures water flow at a V-notch weir on one of the catchments.

Both catchments are being monitored for salinity and water flow through groundwater bore readings along drainage lines.

Monitoring will be undertaken for eight years and possibly longer depending upon the results.

The figures up to the last financial year have shown the control catchment is, on average, in front financially, but Bill Kilpatrick does not believe this is an accurate assessment of the trial.

"We couldn't have picked three worse years to compare." He also believes the sudden rise in wool prices this financial year will see a change in the figures, putting the treated catchment flock in front.

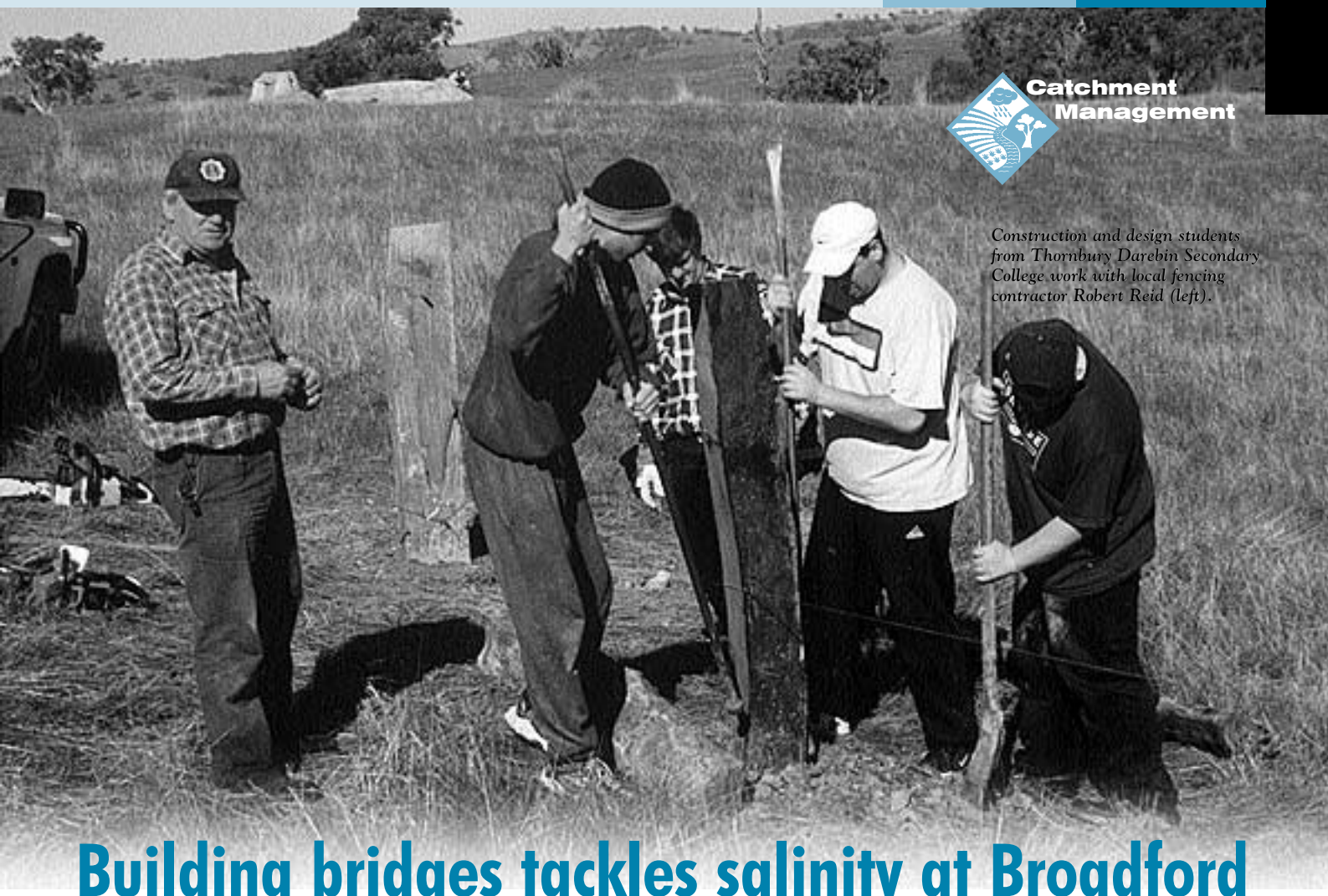
While Bill Kilpatrick is looking forward to gathering more substantial data from the trial, he has obviously seen enough positive changes to encourage him to continue with his salinity control program.

"Eventually I would like to fence the hills to the ridge lines, plant the northern sides to trees and the south to phalaris and cocksfoot, and I might also consider agroforestry.

"In the back of my mind I'm thinking the hills are not productive anyway and we didn't stock the hills when times were good."

The trial is considered a work in progress as it could take up to 20 years to reach scientifically sound conclusions.

For further information contact Julie Andrew on (03) 5358 1588.



Catchment Management

Construction and design students from Thornbury Darebin Secondary College work with local fencing contractor Robert Reid (left).

Building bridges tackles salinity at Broadford

A partnership involving secondary students, NRE and community groups has launched a special project to help battle salinity in the Broadford area.

The Building Bridges Sugarloaf to Darebin project is growing 11,000 trees per year to be planted on farms in the Broadford area – which has one of the highest salt loads in the Murray Darling Basin System.

Building Bridges Project Co-ordinator, Brad Costin, said the project highlights a need to involve a wider sector of the community in natural resource management, hand in hand with hard-working groups such as Rotary.

"If one Rotary Club can facilitate the growth and planting of 11,000 on an annual basis, imagine the improvement to existing and future land and water resources if even a fraction of the existing Rotary Clubs across the nation were to take up projects such as this."

The Rotary Club of Northcote and NRE developed Building Bridges to expand on the existing partnership with Glenaroua Land Management Group.

Using its links with Thornbury Darebin Secondary College, the Rotary Club of Northcote is involving young people in solving some of the environmental problems we face.

"It is imperative, if programs such as this one are to continue, that we have young minds and hands working on the project too," said Fred Farugia, President of the Rotary Club of Northcote.

The works undertaken by students will be incorporated into school curricula to ensure the project and the learning will continue long into the future.

Noel Spooner, Principal of the Thornbury Darebin Secondary College, said the project draws real world linkages with science, environmental education, horticulture and building and construction and places them in an environment where they can make real contribution to a community.

"The project aims to provide attitudinal learning for students, as well as involvement. We are aiming to improve understanding of each other's lives and to foster mutual respect and tolerance."

Critical to the project has been the support of many of its partners, including the Natural Heritage Trust, Glenaroua Land Management Group, NRE, Thornbury Darebin Secondary College, Mitchell Shire Council, Common Ground Cooperative at Seymour, Department of Defence Puckapunyal, local fencing contractor Robert Reid, Greening Australia and the Goulburn Broken Catchment Management Authority.

For more information contact Cate Culley at NRE on (03) 5784 0600.

A fishy freeway for the Ovens River

By Margrit Beemster

Catchment Management

The native fish that live in the lower reaches of the Ovens River and in Lake Mulwala in north-east Victoria are now able to make their way back to their old breeding grounds via a newly constructed fishway.

Works done by the North East Catchment Management Authority (NECMA) at Sydney Beach on the Ovens River at Wangaratta this summer have provided a simple but effective solution to the problems caused by physical barriers to fish movement.

"By removing the barrier to fish movement, the Golden Perch and Murray Cod that could not come upstream from Mulwala to spawn in the Ovens are now able to do so," says project manager Veronica Lanigan, Water Quality Officer with NECMA.

"There are remnant populations of native fish upstream of Sydney Beach Weir but there's been no recruitment for 27 years. What we are doing will help restore fish quality and numbers to what they were before."

Potential barriers to fish movement across Victoria were identified in 1996 when a statewide barriers database, partly funded through the Murray Darling Basin Commission's Barriers to Fish Migration Project, was completed. In the Ovens catchment alone some 134 barriers ranging from waterfalls to fords to dams and weirs were identified.

Sydney Beach Weir, a 1.2 metre dropboard structure, was built in 1973 by the Wangaratta Council to maintain a weir pool from which Wangaratta's town water supply is drawn in summer.

In winter, when the river is high, the dropboards are removed and the flow passes over the weir.

In summer, when the river drops, the boards are replaced, creating a pool from which the water treatment plant 100 metres upstream can draw water.

Veronica says because Sydney Beach is a popular swimming spot, the City of Wangaratta was consulted. The North East Region Water Authority, NRE and NECMA workshopped various options to help solve the problem.

The group decided to make use of an existing overflow channel to the north of the weir. The channel flows in winter. However, in summer it is not deep enough to allow fish to move upstream.

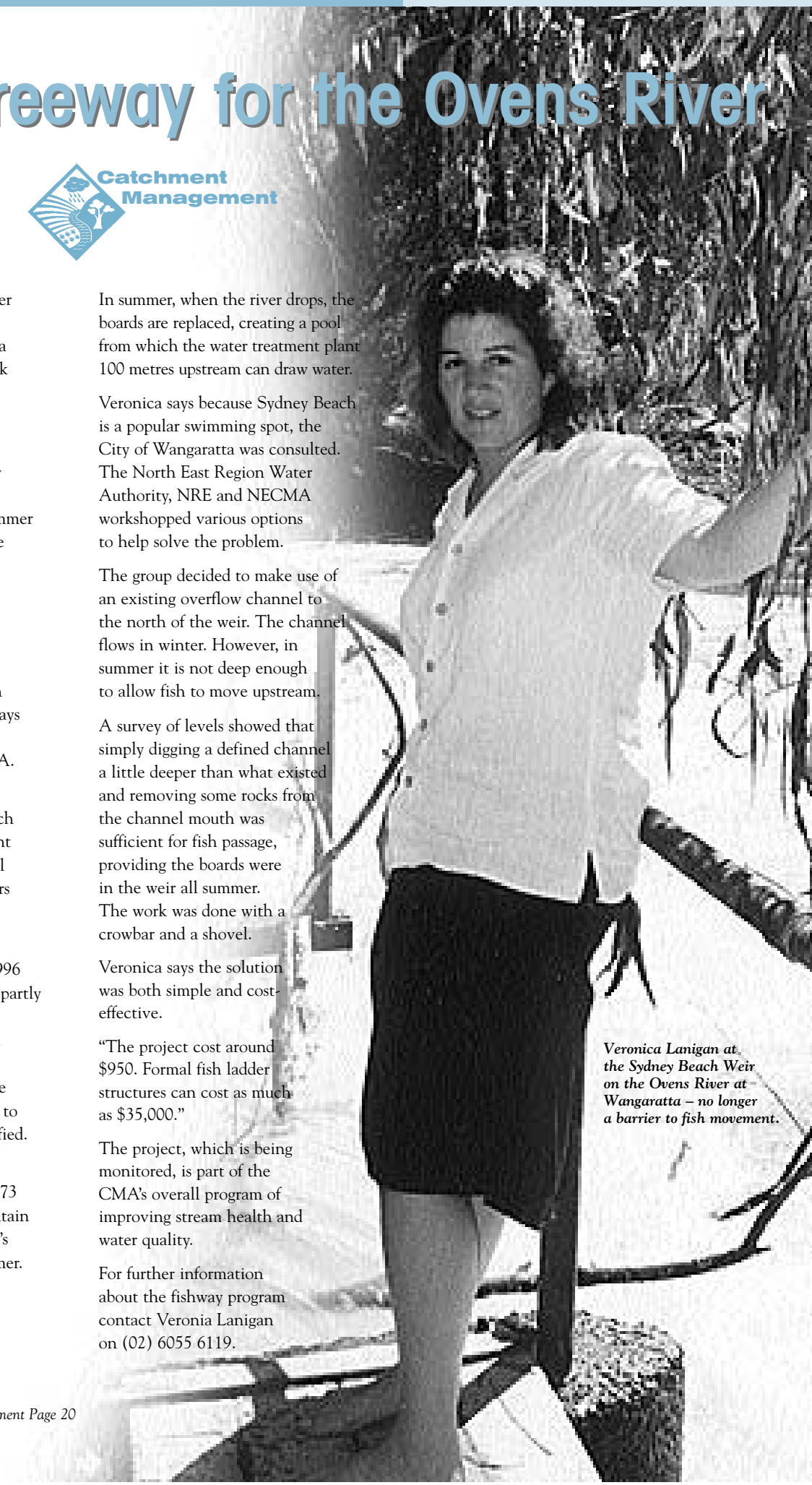
A survey of levels showed that simply digging a defined channel a little deeper than what existed and removing some rocks from the channel mouth was sufficient for fish passage, providing the boards were in the weir all summer. The work was done with a crowbar and a shovel.

Veronica says the solution was both simple and cost-effective.

"The project cost around $950. Formal fish ladder structures can cost as much as $35,000."

The project, which is being monitored, is part of the CMA's overall program of improving stream health and water quality.

For further information about the fishway program contact Veronia Lanigan on (02) 6055 6119.



Veronica Lanigan at the Sydney Beach Weir on the Ovens River at Wangaratta – no longer a barrier to fish movement.

Junior Landcare

Kids use drains to clean up our rivers

By Margrit Beemster

Three bright-yellow fish, coupled with the slogan 'Street to Stream' in vivid blue, are helping to raise awareness of the problems associated with stormwater pollution from the streets of the border town of Wodonga in Victoria.

The eye-catching message, that has been stencilled across 150 drain covers, is the work of 500 students from ten urban schools that have taken part in the two-phase Wodonga City Drain Stencilling Program.

"We are getting a lot of enquiries," says Fran Sorensen, north-east regional Waterwatch Co-ordinator.

"We've had parents come and help the children and people in the street have asked the children questions about what they were doing."

A stencil in production.

The exercise, part of a statewide scheme managed by the various Catchment Management Authorities' Waterwatch programs, is taking the message home to the children's parents and the wider community.

"For example, we had one child who came and told us that he helped his dad put the lawn clippings round the garden after the lawn had been mown instead of hosing them down the drain as he had in the past," says Fran.

"For a lot of people in urban areas, it's a case of out of sight, out of mind. They don't realise the impact on water quality from litter that's been dropped in the streets or from lawn clippings, dog droppings and soap suds from washing the car being washed down drains.

"This program has been excellent in stimulating interest in Waterwatch in urban schools," says Fran, who succeeded in getting all 75 schools in the north-east involved in Waterwatch, in various programs including its community water quality monitoring program.

The stencilling program is in line with the water quality strategies being implemented by the North East Catchment Management Authority for community education and stormwater management.

Keen helpers Ashleigh Knott, from year three at Wodonga South Primary School, and Thomas Trotman from year four, clearly understood the purpose of their work.

"What happens when you drop litter on the streets is that it eventually finds its way down the drains and into streams and rivers," Ashleigh said.

"By putting the stencils on the drains it helps people remember," says Thomas.

"Water is very, very important so we have to look after it."

For further information contact NECMA Water Quality Officer, Veronica Lanigan, on (02) 6055 6260.

Thomas Trotman and Ashleigh Knott from Wodonga South Primary School hard at work.

Junior Landcare across Victoria

The Victorian Landcare Centre at Creswick is continuing to provide advice and support to Junior Landcare groups across the State.

The Landcare Centre is intending to establish an email newsletter to share ideas and keep groups informed of events and activities happening around Victoria.

For further enquiries about Junior Landcare contact Tarnya Kruger at the NRE Victorian Landcare Centre at Creswick on (03) 5345 2200.

Natural Heritage Trust

A Federal Government Initiative

Volunteers – our

A big day out – the crowd at the community planting weekend.

The planting weekend attracted both young and old.

Fostering 444,000 trees

Four hundred volunteers braved the worst day's weather in five years to participate in a recent tree-planting project near Warrnambool.

"There was an inch of rain that morning and the rain was coming in sideways," organiser Lydia Fehring said.

"Still, all those people turned up. It was really great to see townspeople out getting their hands dirty."

Moyne Shire recognised the work done by the volunteers, rewarding the day's efforts with the Australia Day Award for Community Event of the Year.

Including this project, during the past 12 months more than 2000 volunteers have planted 60,000 seedlings in the Moyne, Merri and Hopkins River catchments.

Species include Manna and Swamp Gum, Blackwood and Black Wattle, Prickly and Woolly Teatree, Drooping She-Oak and Silver Banksia.

$300,000 funding from the Federal Government's Natural Heritage Trust has been combined with contributions from the community, Greening Australia and Hopkins Moyne Land Management and Farm Trees Group to provide more than $1,000,000 towards the project.

The massive fencing and revegetation campaign is aiming to foster 444,000 trees. Lydia Fehring has no doubt they will reach the target with the help of 1400 students at 10 local schools, Apex, Rotary, scouts, cubs, Warrnambool Psychiatric Services and Alcoa.

Lydia said local people were aware of the importance of revegetating to arrest erosion and reclaim saline areas.

"The Hopkins Basin is one of the most degraded basins in Victoria," she said. "We have to improve what we've got."

For more information about the project, phone Lydia Fehring on (03) 5560 7354.

Photographs courtesy of the Warrnambool Standard.

Ballarat redefines Landcare

City dwellers in the Victorian town of Ballarat are redefining Landcare as they join their nearby rural neighbours – and others up to 120 kilometres away – in a demonstration of co-operative catchment management.

"We're pretty proud of the fact that we've been able to bring so many people into Landcare and really broaden its definition," says Jenny Sedgwick, one of two project officers with the Leigh Catchment Group.

"As most of the water in the lower catchment first passes through Ballarat, it has been important to involve the urban community."

Jenny said the group was now in its third year of funding from the Natural Heritage Trust.

"In that time the number of landholders involved has grown from 23 to 83, but, most importantly, we've developed enormous support among the urban people of Ballarat."

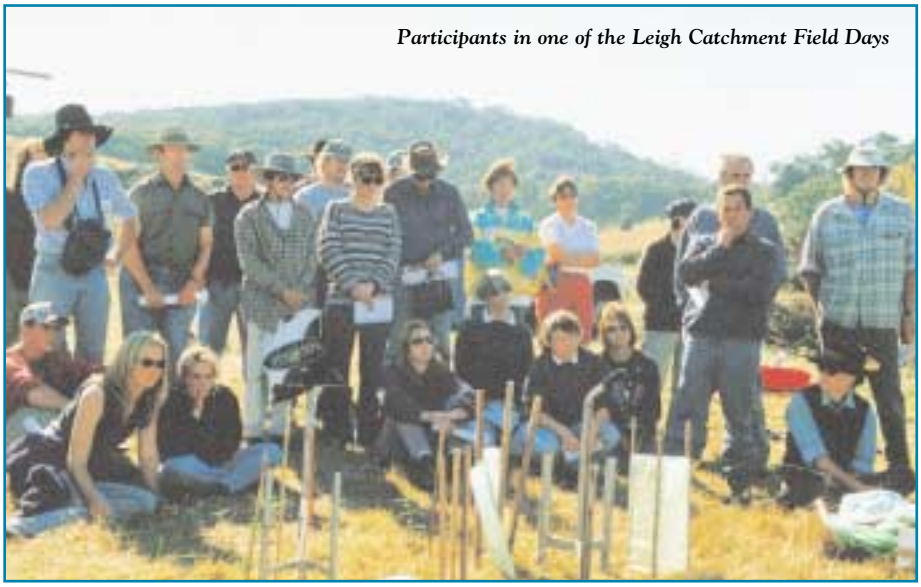
With help from other agencies including the City of Ballarat, the urban Landcare groups have installed stormwater litter traps, controlled weeds, revegetated degraded areas and helped build a walkway along the Yarrowee River through Ballarat.

The group aims for at least 60% of all rural landholders to have undertaken on-ground works by 2003 and is currently developing water quality targets so it can demonstrate that the projects are making a difference.

The narrow Leigh catchment drains nearly 900 square kilometres from Ballarat to Inverleigh.

As well as the City of Ballarat (population 83,000) it includes areas of vegetation of national significance and an extraordinary range of topography from gentle undulating valleys, river flats and floodplains to seldom-visited steep escarpments and rocky gorges.

The Leigh Catchment Group resulted from a growing interest and awareness that the catchment was both unique – in the remnant vegetation and fauna habitat it contains – and under severe threat.



Participants in one of the Leigh Catchment Field Days

VOLUNTEERS – our natural resource

An estimated 300,000 Australians have volunteered their time and been involved in around 9000 projects funded by the Federal Government's Natural Heritage Trust.

Volunteers play a crucial role in many of the on-ground environmental projects currently underway across Victoria.

If you want to find out more about volunteering on a project funded by the Natural Heritage Trust, visit the Trust website at www.nht.gov.au or call 1800 065 823.

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2,659 projects approved,

$183 million invested so far.

160,000 volunteers in hundreds of Victorian communities getting the support they need to do the work that matters.

To find out more freecall 1800 065 823.

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