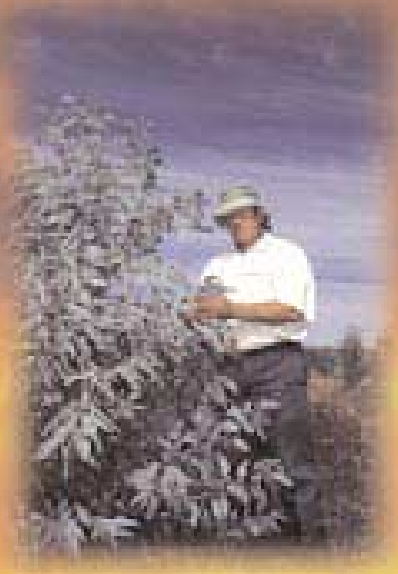
victorian Landcare

Issue 12 Winter 1999



Landcare Mallee-style

Better Farming Train

Best of luck to all the nominees in the 1999 Victorian landcare and Farm Management awards

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LANDCARE VICTORIA

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ALCOA AUSTRALIA

Natural Resources and Environment

VICTORIAN FARMERS FEDERATION

Victorian Catchment Management Council

From the editors

For this issue we travelled to the State's far north-west, deep into Mallee landcare territory, to highlight the innovative projects the groups there are up to. Landcarers near Murrayville and Panitya South have opened their gates and shown just how well trees can grow in the Mallee and how to lift productivity by thinking outside the square.

Landcare launches

Autumn saw the launch of a number of greenhouse initiatives which impact on landcare groups around the state.

The first was the launch of the Edision Mission Energy Landcare Program. A $1 million program over five years working on revegetation projects in Gippsland. EME Landcare will be linked to the federal 'Bush for Greenhouse' program launched at the same time by Senator Hill.

Victoria also launched its greenhouse program 'Replanting Victoria 2020' in the Woady Yaloak catchment area near Ballarat. The State Government has committed $9 million over three years to building the state's 'carbon sink' capacity.

These greenhouse initiatives provide landcare groups with another source of funding for revegetation projects, so contact your local NRE office to find out more.

Biolinks

Another theme in this issue is biolinks or wildlife corridors. Landcare has always been about linking productivity and conservation, so this time we thought we would look at the conservation angle. A do-it-yourself guide to a biolink shows you the main steps involved in setting up a successful project.

Next Features

Group process

In the spring edition we are going into 'group processes'. How groups avoid burnout, leading catchment group models, group administrative processes, facilitation methods and more. We want your experiences, what has worked for your group and what has not.

Farm planning

We will also be looking at innovative farm planning ideas, fencing solutions to difficult problems and where farm planning has come to from the Potter Farm days.

Please keep your letters coming in as the magazine is designed to be a forum to express your ideas and opinions.

Paul Crock, Sally Gibson, Jo Safstrom

Letters

Dear Editors,

I read with keen interest the article in your last edition (autumn '99) entitled 'Bright blue plantings', where farmers are integrating blue gums into their existing farming systems.

A wise financial move with the way the wool and beef markets appear perennially depressed. By strategically planting the blue gums on less productive land the landowner has been able to alleviate other problems on the farm as well, including curbing salinity and soil erosion and providing valuable shelter for stock.

We may even extrapolate the benefits beyond the farm gate with private plantations taking some of the pressures off our native forests for timber and woodchip supply.

I would, however, like to point out the two photos used in the article showing the ground prepared and waiting for trees to be planted. I believe something important is missing. How about a bit of biodiversity? In other words, the area where the blue gums are not being planted – i.e. the creek and surrounds – could be used for planting local understorey shrubs and trees.

What a wonderful opportunity to add ecological benefits to the list of financial and productivity benefits.

Providing even a small bush habitat for the birds, mammals and insects is so important in areas denuded of these plants. The costs would be minimal as the fence is already in place – seedlings, herbicide and a small amount of labour would be all that is needed to make your blue gum plantation into something much more valuable in more than just monetary terms!

Mike Robinson-Koss
Otway Greening Farm Tree Nursery

Dear Editors,

I am writing to tell you of my hobby in retirement, which is planting trees with the aim of beautifying the area in which we live. I also wanted to share with your readers my ambition to green Australia somewhat by Promoting Arbor Week (PAW).

Over time I have planted 3000 trees in schools on the Gold Coast and now, living in Bendigo, I have planted similar numbers in schools and around Bendigo and hundreds of trees on roadsides, farms and river banks.

Interestingly, the first Arbor Week or Arbor Day as it was then known, was held in Nebraska, USA in 1872 when 1,000,000 trees were planted.

In Australia the first such Arbor Day was held at Ryde Public School in Sydney in 1890, as an environmental event of importance preceded only by the establishment of the Royal National Park in Audely, NSW. (The second national park ever established in the world – the first being Yellowstone.)

Arbor Week was first presented as Arbor Day and was changed to Arbor Week some years ago to allow more time to organise plantings.

I now have my PAW in many schools and some universities in all states across Australia. I recently visited China, USA and England where Bendigo has sister cities. When the schools there write to me, I will match them up with Bendigo schools so they can compare notes and PAW.

If 1,000,000 trees can be planted in 1872 without mobile phones, the esky and McDonald's, imagine what could be achieved in 1999, more than 100 years later.

Ten thousand trees for Bendigo, 1,000,000 for Australia. Let's put our hearts into it . . . Come on we can do it, of course we can.

Des Murphy, PAW
Bendigo

Letters

A 'tabular berg' near Balleny Island, Antarctica. A solution to our water problems? Photo: Kate Irving and Bill Fitzgerald.

Dear Editors,

Plentiful pure water – an iceberg solution

My grandfather and father were farmers in South Australia and endured much hardship in the drought and depression years. I believe that Australia's main problem is lack of potable water. With enough fresh water this wide fertile land has the rural production potential to feed larger, future world populations.

An answer to our water shortage and to the effects of El Nino lies in icebergs. This nation's proximity to the Southern Ocean's phenomenon of flotillas of ice makes an iceberg management project feasible and timely.

All icebergs floating in the Southern Ocean originate from Antarctica, a frozen, desolate continent much larger than Australia. The vast icecap, averaging a thickness of 2000 metres, is built up of constant snowfalls which become compressed into icy layers.

As the fronts of the moving icecap reach the Antarctic's continuous coastline they slide into the surrounding seas, bays and sounds. Ice shelves fissure and form into tens of thousands of almost level, tabular (rectangular, table-shaped) icebergs.

The icebergs are conveyed by the Antarctic circumpolar current and the winds of the 'roaring forties' in the Southern Ocean which push them eastwards – sometimes passing near Tasmania's southern coast.

Once a suitable iceberg has been selected (say 3km long, 2km wide and 500m deep) an icebreaker would intercept and divert it towards South Australia's south-east coast. It may be possible to slightly increase the icy giant's speed by pushing the berg from behind. It is impractical to try to tow a berg because its enormous weight would break the strongest towline when it tensions in turbulent seas.

Ice has a lower density than water and about 90 per cent of an iceberg's mass lies below sea level. When grounding on a continental shelf a tabular berg would push up a great undersea mound of rubble gradually bringing its long-lasting momentum to a stop.

The next stage is the conversion from lake to reservoir to pipeline. Berg water would be piped into Lake Bonney in the Canunda National Park creating a large reservoir. Lake Bonney is the best potential reservoir site on Australia's Southern Ocean coastline, which adjoins a continental shelf narrow enough to allow bergs to be grounded within 25km of the site.

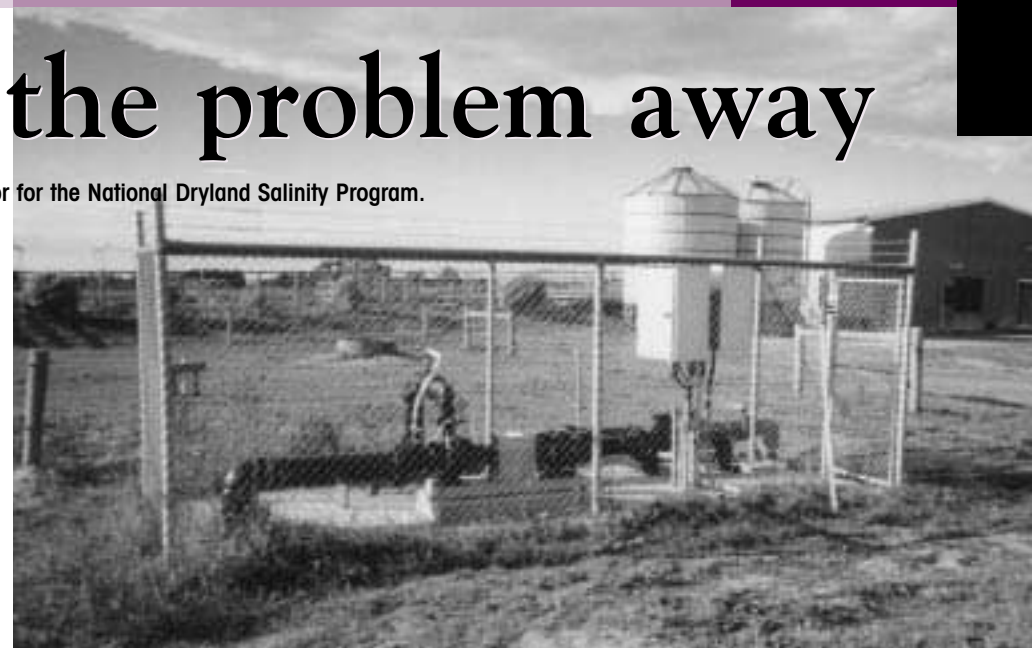
The potential Lake Bonney reservoir is in a most suitable geographic and topographic location from which berg-water pipelines can spread and serve the largest (and probably the most polluted) river-irrigation systems in the nation. Piped berg-water could stretch north-east from the reservoir to the Murray Darling Basin and tributary rivers throughout New South Wales and Queensland.

As the 20th century closes, the Southern Ocean, in our own backyard, is still inviting us to unwrap her icy gifts. We should be happy to arrange collection and develop a vital resource to further advance Australia Fair.

C. Henry

Pumping the problem away

By Jo Curkpatrick, Communications Co-ordinator for the National Dryland Salinity Program.



Research Results

Flooding tends to be an above-ground problem, causing very visible damage to the land and property. But underneath the surface, where watertable levels are rising across the country, the problem is not so obvious.

Just as floods can be controlled, there are growing efforts to minimise the effects of rising watertables. In Gippsland's Lake Wellington catchment, groundwater pumping is having a major impact on the watertable and, as a consequence, reducing the threat of losses due to salinity.

The Lake Wellington public groundwater pump program intercepts groundwater in the Macalister Irrigation District (MID) before it gets to the surrounding dryland areas. By stopping the problem early, the community is reducing the environmental impact further down the catchment and any salinity problems in the MID and beyond.

As well, by intercepting the groundwater 'upstream' in the catchment, there are more opportunities to reuse or dispose of the water while it is still good quality.

The stakes are high in protecting the catchment. The Lake Wellington catchment in Central Gippsland is one of Victoria's most important agricultural regions and includes the state's second largest dairy community, with production from the dairy industry worth more than $325 million annually.

With the introduction of irrigation and the clearing of trees, the level of the watertable has been on the rise.

It is now estimated that over 28,000 hectares of the catchment area are affected by high watertables, causing lost agricultural production, dryland salinity, and putting the region's wetlands at risk.

A recent study by consulting economists Read Sturgess and Associates has shown that salinity is currently costing the Lake Wellington community about $9.3 million per year. The study, commissioned by the Wellington Salinity Group (now a management group of the West Gippsland CMA), identified salinity-associated losses for all sectors of the community including agriculture, regional infrastructure such as roads and buildings and the environment. According to the study, if nothing were done the cost would blow out to $13.9 million per year in 30 years from now.

The Lake Wellington public pumping program has also been subject to an audit. According to Joanne Caminiti, Salinity and Nutrient Management Co-ordinator for the West Gippsland CMA, the audit has highlighted the benefits of the pumping program.

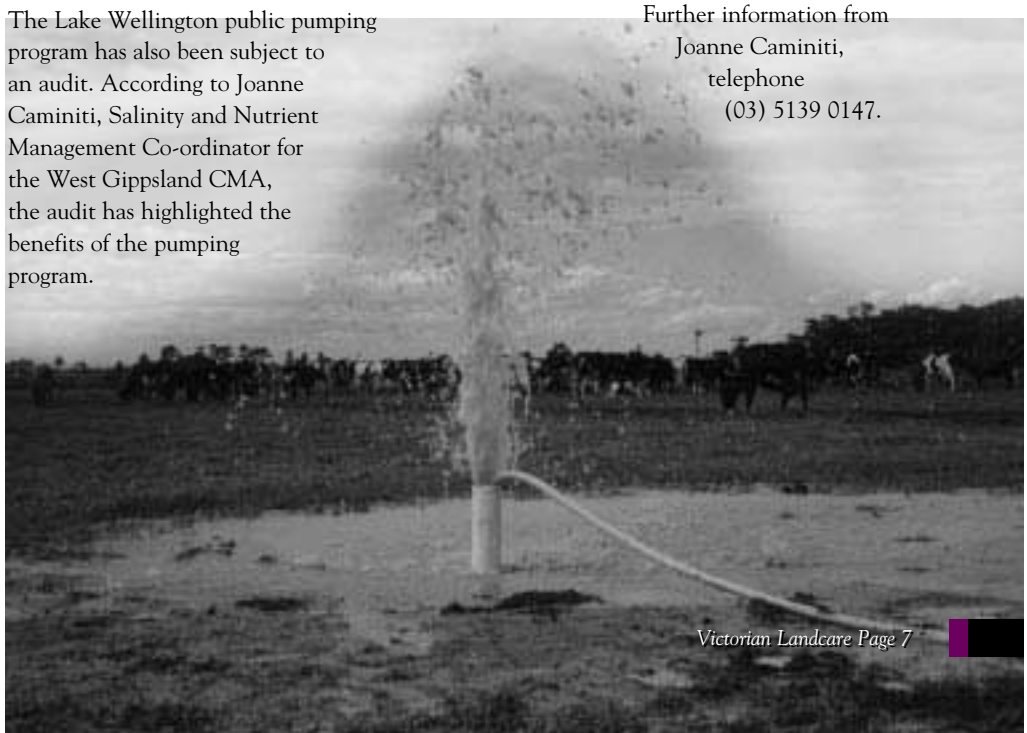
"Pumping of groundwater has been shown to be a cost-effective solution to the rising watertable," said Ms Caminiti.

The nature of the region's aquifer system means suitable pump sites are easily and quickly found and a public pump provides a watertable draw-down over a very wide area, providing benefits to many landholders.

"For a relatively low capital cost, the community is reaping high economic, environmental and social returns," she said.

The Wellington Salinity Group's public groundwater pumping program is provided with technical support from Southern Rural Water, consultants Sinclair Knight and Merz and the Catchment and Agriculture Services unit of DNRE.

Further information from Joanne Caminiti, telephone (03) 5139 0147.



Replanting

Nine million dollars will be spent by the Victorian Government over the next three years in an effort to increase the area of Victoria's carbon sinks and extend our knowledge of them.

The funding comes through 'Replanting Victoria 2020', a new program launched by the Minister for Conservation and Land Management, The Hon. Marie Tehan on 27 April in the Woady Yaloak Catchment at Pittong near Ballarat.

The program has been developed as part of Victoria's efforts to meet Australia's commitments under the Kyoto Protocol – an international agreement to limit the worldwide growth in greenhouse gases released into the atmosphere.

Greenhouse gases are a natural part of the climate system. They absorb heat rising from the earth's surface and radiate it back towards the ground.

Human activities like burning fossil fuels and clearing land for agriculture increase the amount of greenhouse gases released into the atmosphere causing global warming.

Carbon dioxide is a greenhouse gas. Increasing activities that absorb carbon from the atmosphere will help to reduce total emissions.

Plants absorb carbon dioxide. Through the process of photosynthesis, they actively remove carbon dioxide from the atmosphere through their leaves and expel the oxygen back into the atmosphere. The carbon is stored in their trunks, roots and leaves throughout their lifetime and in their wood products after harvesting. Where many trees are together, such as in a forest or a plantation, they act as a large-scale storage reserve for carbon known as a 'carbon sink'.

By increasing the area of land permanently planted with trees, the amount of carbon dioxide removed from the atmosphere will also increase and thereby reduce the total volume of greenhouse gas emissions.

Good news for landcare in review

The Minister for Conservation and Land Management, Marie Tehan, and the Deputy Premier and Minister for Agriculture and Resources, Patrick McNamara, have released the fifth review of the progress of landcare in Victoria.

Alan Curtis and his team at Charles Sturt University prepared the report. Alan Curtis has been involved in monitoring landcare group activity in Victoria since 1989.

The major findings of the report were:–

- There are now 890 landcare groups in Victoria, with an estimated total membership of 27,500.
- About half of all rural property owners belong to landcare groups.
- The membership and level of participation continues to grow despite concerns about burnout of office-bearing members.
- The issues of greatest concern to landcare group members, in priority order are:
  1. tree decline and the need for revegetation;
  2. pest plants and animals;
  3. salinity and rising watertables;
  4. water quality; and
  5. waterway and stream bank erosion.
- In response to these concerns Victoria's landcare groups planted over three million trees and erected 4539km of fencing. 79 per cent of groups took action on weed control, 56 per cent on rabbit control and 36 per cent on erosion and salinity control.

Minister Tehan noted that: "The landcare groups' record of achievements is as impressive as in previous years which is a significant result given the drought conditions that existed during the 1997/98 financial year.

"Another pleasing result was the growth of landcare networks where individual landcare groups join with neighbouring groups to address catchment-wide issues. The survey showed that 71% of landcare groups are members of a network," said Minister Tehan. "Groups were very positive about being part of a network with a majority of the survey respondents indicating major benefits from improved communication and understanding of regional issues."

Minister McNamara said the survey also highlighted the very significant financial contribution of landcare groups in Victoria to achieving on-ground works. "The survey indicated that financial and labour contributions for erecting 4539km of landcare fencing in 1997/98 was valued at $13.6 million," he said.

Copies of the report will be sent to all land-care groups who participated in the survey.

Victoria 2020

Grants

"The Victorian Government is committed to action on climate change," said Minister Tehan.

"The Victorian Greenhouse Action Statement outlines ways of reducing greenhouse emissions, increasing our carbon sinks and planning for the future. 'Replanting Victoria 2020' is one of the programs under the Action Statement."

Many of the projects within 'Replanting Victoria 2020' will be undertaken in partnership with Catchment Management Authorities and will benefit the community.

There are four components of 'Replanting Victoria 2020'.

1. Revegetation

Planting trees is the key to increasing our carbon sinks. The revegetation component of the program aims to get large-scale tree planting projects underway with 14 large-scale projects to start in 1999. The native trees will be planted by landcare and community groups across the state.

Industry is also being encouraged to support and participate in this program. Alcoa of Australia and Edison Mission Energy have already taken up the initiative – thus providing a positive outcome for both industry and catchment groups.

2. Reforestation

Victoria's native forests are large, natural carbon sinks. The reforestation component of the program will increase the carbon sink capacity of our forests by planting 1266 hectares of new forests.

3. Plantations

Plantations of either native or introduced trees also act as carbon sinks. The plantations component of the program will develop greenhouse demonstration plantations around the state. Landowners can apply for assistance in setting up greenhouse plantations. This component will complement Victoria's Private Forestry Strategy that aims to treble the tree plantation area in Victoria by 2020, bringing the number of hectares in plantation from 250,000 to 750,000.

4. Carbon tracking

The first priority of the carbon tracking component of 'Replanting Victoria 2020' is mapping Victoria's carbon sinks. The detailed scale of the maps will identify our current carbon sinks and allow changes to be tracked over time

For more information contact Caroline Douglass at NRE on (03) 9637 8373.

IN BRIEF

Leongatha to host national tree conference

Leongatha is to host a national tree conference this 24, 25 and 26 September. National Treefest '99 is a three-day celebration of all aspects of vegetation use and management.

Dr Tim Flannery will be the keynote speaker at this year's National Treefest. His recent book *The Future Eaters* has received international acclaim. Other guest speakers include The Hon.Wilson Tuckey, MP, Minister for Forestry and Conservation; Stan Wallis, Amcor; Michael Rae from the World Wide Fund for Nature; and Pam Robinson, Forest Community Co-ordinator.

National Treefest is being run in conjunction with Agroforestry Expo '99, a national event sponsored by the University of Melbourne School of Forestry and the Australian Master Tree Growers. The expo is designed to promote farm forestry on farms, by farmers, for the sustainable development of their rural communities.

If you're interested in coming along as a delegate, sponsoring or exhibiting, contact Jacqui Granger, Treefest '99 Co-ordinator, on (03) 5143 0005.

History award for La Gerche book and trail

The La Gerche Walking Track and Angela Taylor's book, *A Foresters Log*, about early landcarer John La Gerche, have been awarded the 1999 Victorian Community and Local History Award.

The La Gerche Walking Track – one of a series of Living Land Trails being developed by the Creswick Landcare Centre – takes visitors through historic Sawpit Gully Plantation in the Creswick Regional Park. Nine interpretive signs and an information brochure tell the story of John La Gerche, who pioneered the replanting of denuded diggings in the gully with many species of conifers, deciduous trees and eucalypts. He was a progenitor of landcare.

The book, *A Foresters Log*, examines the process by which John La Gerche managed the Ballarat-Creswick State Forest in the 1880s and 1890s.

A helping hand for landcare

Thrifty-Link Hardware has announced a new fundraising initiative to assist local community organisations such as landcare groups.

Group members sign up for a Helping Hand Community Support Card which keeps a running record of hardware purchases made at any Thrifty-Link store. After five validated purchases the store refunds five per cent of the card-value to the organisation every quarter. Set across a year of sales, with the entire group becoming involved, the total amount of funds raised could be quite substantial.

For further information contact your local Thrifty-Link Hardware store.

MAKING FUNDING

The Landcare Revolving

Low cost loans for landcare

Many of you would have read in previous editions of the magazine about our network of landcare groups in the north-east looking at starting a revolving loan scheme to help spread the equity of financial support for landcare works in our area.

An update

The Landcare Revolving Loan Fund Limited has now been established as a not-for-profit company owned by seven landcare groups in the Broken River catchment.

Our fledgling company is presently establishing a capital fund with grants, donations and sponsorship which will form the basis for our revolving loans. Monies raised will be loaned to landholders in the Broken catchment region for land-care works and repaid to the fund.

As repayments are made, money is made available for further low cost loans. Only a small administrative charge, equivalent to approximately three per cent of the principal, is levied to the borrowing landcarer to ensure the fund's capital will not depreciate over time and to help cover administrative costs.

Who's in charge?

The Board of Directors are elected by the seven member landcare groups. The inaugural board's members have expertise in banking, catchment management, farm forestry, landcare and farmers' federation groups.

Members of the board are not responsible for undertaking all the work, as the Broken Catchment Landcare Network executive serve as the advisory committee, providing recommendations on loan policy and administration. Each member landcare group also takes responsibility for loan applications in its area by 'pre-screening' applications and acting as a referee.

On these recommendations, the board members make their decision to fund or reject loan applications. Successful applicants are signed up and administered over the counter at a regional credit co-operative. This lessens the administrative burden on the board and the sense of community ownership is shared.

Setbacks and achievements

It was hoped to raise $60,000 in time to make loans in 1998. Much effort was expended seeking capital from charitable trusts and government programs, however the fund project was considered ineligible and no fund capital at all was raised from these sources.

Concern was expressed by funding bodies that the fund may not be viable; that landholders would not take up loans; and that the company was not founded on a firm legal and financial base.

The Australian Forest Growers north-east Victoria branch and the Molyullah/Tatong Tree & Land Protection Group however agreed with the fund's objective and contributed $15,000 in start-up capital in time for autumn 1999.

This money came from the branch's own funds to at least prove the viability of the revolving loan concept (albeit on a small scale). The AFG contribution has provided the cash-flow for the first loans made by the fund to landholders.

The loan fund will facilitate on-ground works.

GO FURTHER:

Loan Fund Limited

Group News

By Derek Mortimer

Derek Mortimer, left with some of the inventors of the revolving loan fund at the Goulburn Broken Landcare Network regional forum.

Since then, the fund has won small grants to help with set-up costs from Landcare Australia Limited and the Deputy Premier, Pat McNamara, has commended the project as a complement to government initiatives, and has given the fund company space and assistance at the DNRE facilities in Benalla.

A major breakthrough for the group has come from assistance from RIRDC. The Broken Catchment Landcare Network is being supported as a 'research organisation' to develop the loan fund project from January 1999 until June 2000.

The aim of this RIRDC project, providing the loan fund company is indeed viable, is to produce an information kit for use by landcare networks elsewhere. This kit will show groups how to set up a loan fund and will provide model legal documents.

Presently the Broken Catchment Landcare Network members are working with Rob Youl at the Landcare Foundation Victoria to develop a capital-raising strategy.

The first loans from The Landcare Revolving Loan Fund Limited have been made but it remains to be seen how useful the project will be.

While the funding capital still needs to be raised, the project has come a long way since late 1995 when groups in the Broken catchment first decided to support the concept.

How to qualify for a landcare loan

Loans are available for any activity that can protect and enhance:

- air;
- water;
- soil quality;
- wildlife habitat; and
- activities that encourage ecologically sustainable development also qualify.

Such activities may include, for example, establishment of farm forestry, shelterbelts, perennial pasture and wildlife corridors.

Applicants must provide:

- three credit referees (e.g. local business);
- one personal referee (landcare group executive member);
- group membership – landcare, forest growers or VFF; and
- a management plan and budget on two-page pro-forma.

Evidence of the borrower's financial status is not required.

Loan amounts

- Loans presently are available for $1000, $1500 or $2000, over 1-2 years.

Administrative charge

- A flat rate administrative charge is payable on agreement. This charge reflects depreciation of capital and a contribution to company overheads.

No other fees or charges are levied.

Disbursements process

- Applications close late January.
- Approval takes two weeks.
- The borrower is required to submit an invoice for expenditure incurred prior to receiving the loan cheque.

Repayment rate

- All loans are repayable at $250 per quarter, i.e. $1000p.a.

For more information about the revolving loan scheme, contact Derek Mortimer on (03) 5767 2330

Activities such as establishment of farm forestry and shelterbelts are eligible for revolving loans.

OUR RIVER

By Nicole Murnane, Hawkesdale College

Dad always used to tell me about the river that runs through our place. Each time we'd go down there, he would have a story from when he was a kid to tell me about the river.

He would tell me about the huge swimming hole with its old hanging gum tree that you could climb up and jump off into the water, to cool off in the heat of a summer's day. Or about the times when he and his brothers would sit down on the banks of the river and have contests to see who could catch the biggest fish or who could get the most skims across the water with the mussel shells that you could find along the edge of the banks.

The banks were covered in native vegetation back then, with gum trees lining both sides of the river. Dad said the water used to be alive with fish, yabbies and eels and even platypus, that you could sometimes catch a glimpse of as they dived beneath the water.

From time to time, when Dad and his brothers would camp out in their tents beside the river, the night would be bustling with the sounds of frogs, crickets, owl hoots and the occasional splash of a night bird diving on its prey in the river.

I often think about Dad's stories and wonder what's happened to our river now. I sit on the rocks above the river banks and try to imagine how it was before. With its cool flowing water, running under the tall gums and she-oaks that protected the banks from the wind, along with the small bushes of the woolly tea-tree and banksia that was home to dozens of native birds and wildlife. I look around to find the gums are still standing, but the river banks are completely bare. I can only just make out the swimming hole Dad used to talk about, which has disappeared into no more than a muddy pond in the middle of the shallow water. The once crystal clear running water of the river is now murky and covered with weeds.

I sit there and think of our rivers and how come we've let them get to this stage. Our rivers contain the most important natural resource in the world and we have to protect them for this reason. Every year since I can remember, Dad has been planting hundreds of trees all over our property in the hope that this will attract more wildlife back to the river and try to decrease the amount of salt in the water.

But everyone has got to work together if the rivers are to return to their original state. Not only so that our most precious resource is protected and that the important ecosystems for the aquatic animals are restored, but so our children can enjoy the beauty of the rivers that we've missed out on.

Nicole Murnane is a year 11 student at Hawkesdale College. 'Our River' won first prize in the 1998 National Water Week Secondary Schools Essay Competition.

Nicole Murnane examines the river on her family's property at Hawkesdale.

Yarriambiack Biolink Planting Festival

By Tracey Delbridge

Group News

The Wimmera/Mallee is set to come alive as the Yarriambiack Shire and its landcare and community groups celebrate biodiversity. The last weekend in July is set to be a planting extravaganza, encouraging people from the region and elsewhere in the state to come and join in the Biolink Planting Festival. The weekend's activities include helping to establish 20,000 plants, an evening bazaar – and for those who haven't had enough – a bush dance.

Last year the shire and Greening Australia Victoria were granted NHT funds to the tune of$220,000 for a three-year project of national significance. The funding is to be used to create a biolink corridor, essentially linking the Grampians National Park in the south of the shire with Wyperfeld National Park in the north. Strategic roadside reserves will be used to link remnant vegetation 'nodes' throughout the shire with the Yarriambiack Creek as the central vegetation corridor. We will also be endeavouring to link across to the west with the large Hindmarsh Biolink project completed last year.

The Yarriambiack Landcare Network formed late last year is the backbone of the project.The vegetation subcommittee of the network are the brains behind the project and is comprised of landcare group members, Greening Australia, NRCL, TFN, DNRE and CMA representatives.

Year one – 'creek to creek' protecting our local environment.

The first year of the project is focused on the Minyip to Rupanyup region.

The aim is to establish a 'creek to creek' link from the Dunmunkle Creek to the Yarriambiack Creek. This link will cover 20km and involve filling the gaps in the vegetation with 15,000 plants, 52kg of seed and 5km of fencing. This stage of the corridor will follow the Banyena-Pimpinio Rd, incorporating reserves and other adjoining remnants.

The project has attracted $18,000 from the Roadside Conservation Advisory Committee. This boosts the project budget and allows us to enhance another corridor from Lake Marma to Barrabool/Marma State Forest adding another 5000 trees and 5km of fencing to add to the project total for this year.

Landholders adjoining the project can obtain fencing for remnant vegetation or for stream frontage. The grant also offers a great opportunity for individuals, landcare groups and service clubs to learn about seed collection and gives them a chance to earn some money.

The project is a fantastic chance for the Yarriambiack Shire and community to celebrate landcare by encouraging others to help establish the first stage of the biolink planting. The planting festival encourages communities to enhance and protect local diversity of plants, keeping the gene pool alive and providing a corridor for the movement of birds and small fauna species.

If you are interested, please join us for the Yarriambiack Biolink Planting Festival, 31 July-1 August. For more information please contact Tracey Delbridge, GAV Project Manager, on (03) 5394 1400.

Shelterbelting Panitya

Anthony Sheldon and Graham McKechnie look at the prolific seeding of the Acacia saligna plantations. Seed is worth anything up to $130/kg.

Low yields and dust storms may be a thing of the past in the far north-west of the state if Mallee Landcare Group and Murrayville VFF/Landcare members have anything to say about it.

Since the group's inception in 1985, the Mallee Tree Group and now the Mallee Landcare Group have been looking into ways to increase tree cover in the area without impacting on their productivity. The results of their work have been exciting and prove that large-scale tree planting in the Mallee is not just possible, but the positive impact on the bottom line can be significant.

Anthony Sheldon at Panitya South, near the South Australian border, has long believed that shelterbelts, land class fencing and fodder trees are the key to farm management in the Mallee.

"The benefits of vegetation – in particular perennial plants – within a farming system are numerous, including shelter for stock and crops, barriers to soil erosion, a source of fodder to fill our autumn feed gap and a reliable means to combat salinity recharge," Anthony said.

Among other beneficial aspects of farm vegetation, Anthony includes the habitat value for birds and predatory wasps for pest control, as well as new opportunities for alternative sources of income including timber and tree seed.

"My trees and shrubs have now started to produce seed, which I use in direct seeding, but can also sell to local nurseries or interested farmers for anything up to $125/kg if not more," he said.

Anthony's innovative revegetation works started in earnest following the successful trialling of vegetation in a dune stabilisation project in 1994, supported by the National Landcare Program.

The dune reclamation work included planting *Acacias saligna* and *bracyabotrya*, flanked with saltbush species in rows at 18m intervals. The areas between the rows were sown down with perennial pasture species including lucerne and evening primrose, as conditions suited.

"The site survived the 1994 dry period and was grazed off for the first time in the autumn of 1995," Anthony said.

"Each year the area is grazed off with a mob of ewes for six weeks with a bit of additional dry fodder supplementing the saltbush and acacia tucker."

The dune is now stable with plenty of vegetative cover and has had no additional works performed on the site since the initial plantings in 1994. The aim of stabilising the sand dune and providing a supplementary source of stock feed for lean times has proven successful.

Silverton, or inland red gums, have performed well in the Mallee climate.

South

By Paul Crock

Profile

Shelterbelt plantings

Adjacent to the initial trial sites are some very impressive shelterbelt plantings, in which Anthony takes great pride.

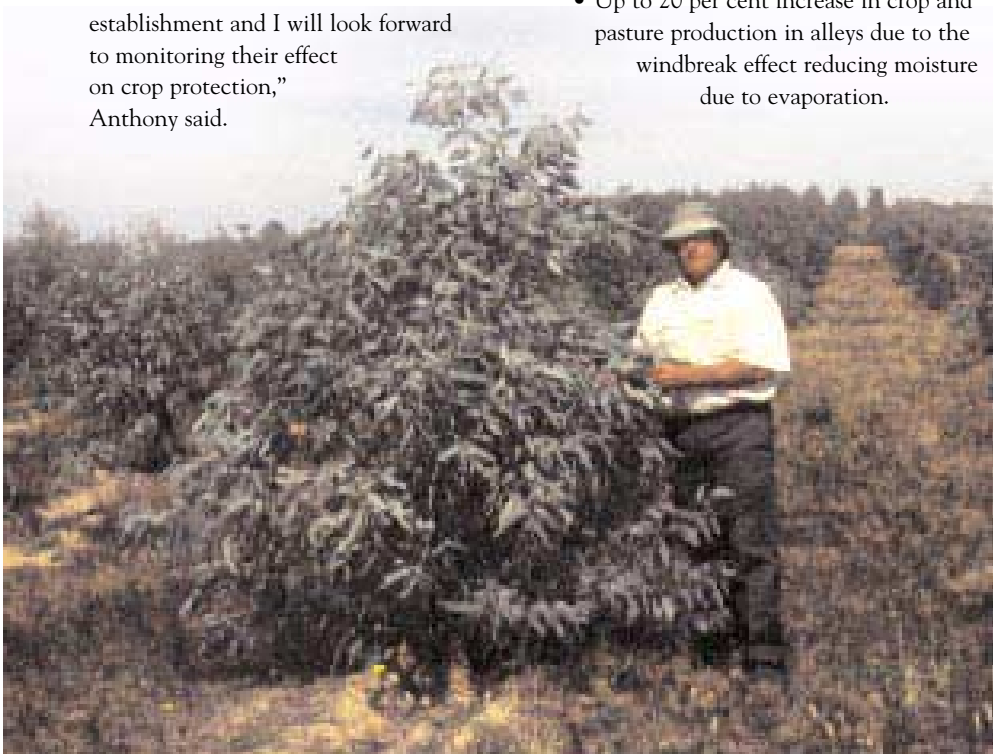
"Many people say you can't grow timber in the Mallee. With these windbreaks I hope not only to diversify my income sources by adding timber production to my business, but also to increase the productivity from my crops by lessening evaporation effects from wind," he said.

Anthony initially intended to work with a north-south three-row alley design established every 200m across his 640 acre paddocks, but opted for the additional benefits from a timber enterprise and establishing multiple row plantations and even a 19-row plantation on an old fence drift bank.

"The species selection was important, to maximise value from timber and benefits to wind protection, we chose inland red gums or silverton gums," Anthony said.

"These gums are used to living in arid areas around Silverton in western NSW and once they get their roots down into the underground water, they flourish here too.

"The support and shelter the trees have given each other in the wider plantations have contributed to their successful establishment and I will look forward to monitoring their effect on crop protection," Anthony said.



The plantations were planned to also take in native vegetation stands and to act as wildlife corridors between these stands and the three and five chain roads containing remnant native vegetation surrounding Anthony's property.

Rabbit control works and replanting in these areas along with Anthony's shelterbelts and alley farming methods are effectively contributing to the overall corridor development for flora and fauna species in the Murrayville area.

Expected benefits from the dune stabilisation and shelterbelt plantations –

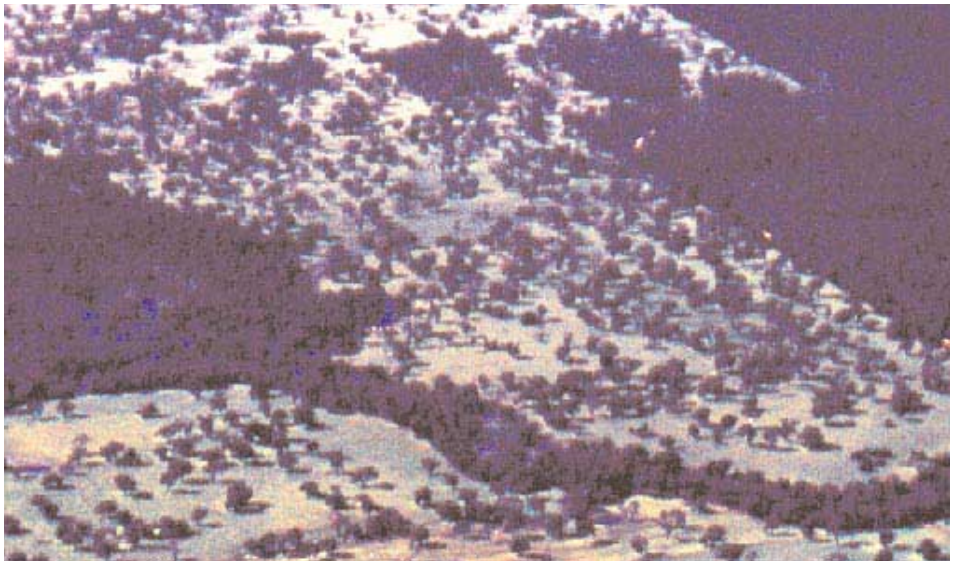
- Up to 20 per cent increase in crop and pasture production in alleys due to the windbreak effect reducing moisture due to evaporation.
- Tree species used are adapted to grow in the semi-arid environment and will assist in adding organic matter to the topsoil.
- Both acacias and casuarinas fix nitrogen, so they will benefit crop and pasture growth.
- Windbreaks and alleys will provide habitat for birds and predatory insects for pest control.
- Once plants are established, they will provide fodder to fill the autumn feed gap experienced in the Mallee and stocking rates can be increased.
- Only 4.5 per cent of the total area of the paddock is allocated to tree cover.
- Saltbush have the potential to remineralise the topsoil by mining nutrients and minerals from subsoil and releasing to the topsoil via natural leaf dropping or senescence. Sheep droppings post consumption of the saltbush also add to the fertility of the topsoil.

For more information about alley farming at Panitya South, contact Anthony Sheldon on (08) 8577 8098 or the Mallee Landcare Group, contact Graham McKechnie on (03) 5092 1322.

A do-it-yourself guide to

Biodiversity was the buzz word of the early 90s and, not surprisingly, it has given rise to other fashionable terms such as 'biolinks'. Biolinks used to be known as corridors until that term was corrupted by applying it to anything vaguely green and linear.

Like most things that come into fashion, they easily go out of fashion if they don't live up to expectations. So if you're serious about developing a biolink, you'll need realistic expectations and to be in it for the long haul.



What is a biolink?

A biolink is literally a biological link that:

- connects two or more patches of similar remnant habitat that were historically linked;
- usually comprises one or a series of corridors; and
- enables a range of flora and fauna to 'move' between isolated patches of remnant vegetation or habitat zones.

Why do we need them?

Many patches of habitat have been isolated by land clearance for agriculture or urban development. These patches now support a smaller range of plants and animals than the original expanses of vegetation and will continue to lose species if they remain isolated.

Isolation has both genetic and physical implications for populations –

- it reduces the ability of small populations to adapt to changing conditions;
- it causes inbreeding in smaller populations over time; and
- physically, it may prevent recolonisation after fire or other destructive events.

Movement of individuals (and their genes) from patch to patch can allow smaller habitat areas to function much like larger areas. But movement involves risk. Migrating fauna run the risk of attack from predators in areas without suitable cover, so many species will not take the risk and so will only move where continuous habitat is available.

How to reinstate the habitat so as to achieve movement is the key to creating a successful biolink.

Designing a biolink

Recent experience has shown that the most critical step in developing a biolink proposal is setting clear, measurable objectives of what you want to achieve.

This needs to be done in two stages:

- firstly, you need a broad objective to facilitate mapping and other information gathering – for example, identify the larger areas of habitat you want to link; and
- secondly, develop specific milestones after discussing possible options with landholders in the project area – in other words, identify the best linkage route and, following consultation with landholders along the path, divide the proposed linkage up into achievable targets or sub-projects and set timelines for implementation.

The grand plan

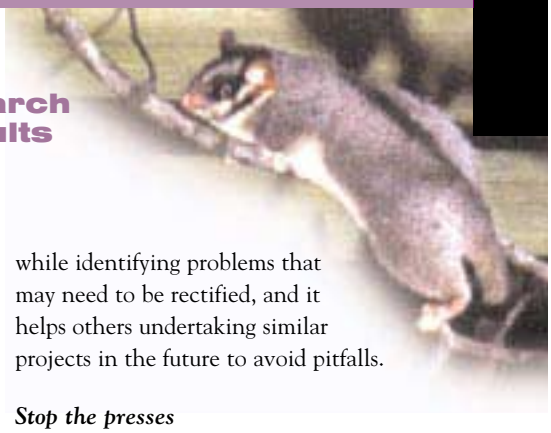
Mapping what vegetation remains between your larger habitats will allow you to develop one or more proposed routes that link the best smaller remnants with the minimum of replanting.

Roadsides, road reserves, railway lines and watercourses are obvious components moving through the landscape which usually have at least some if not considerable amounts of remnant vegetation, but larger patches of habitat in reserves and on private land should also be considered in the plan.

biolinks

Dale Tonkinson and Martine Maron

Research Results



Getting down to business

Before proceeding with detailed milestone planning it will be necessary to meet with small groups of landholders and public land mangers. Meetings should aim to incorporate the detailed knowledge of local people into the project and to gain their support and commitment to the project.

Features that will need to be looked at during the detailed planning stage include the width of the corridor, the quality of the habitat and the distance between remnant vegetation 'nodes'.

Nodes are important as they are larger patches of remnant habitat on or adjacent to the proposed corridor that can act as stopping off points for migrating individuals. They also provide breeding habitat for smaller or less mobile species. (See diagram.)

The width of a corridor is vital. The willingness of species to move along the biolink is greatly influenced by their susceptibility to predation. This is often referred to as the 'edge effect'. A simple way of tackling edge effect is to assume the wider the corridor the better.

Bushcare biolinks are funded with the minimum average width at 30m, however even at 30m, in many cases, much of the corridor is taken up by edge effect. This means the biolink it is really only used by common species.

Monitoring

Your objectives must be reflected in your monitoring program. If your objectives relate to a specific species, then that species should be monitored accordingly. With more general objectives, a range of species (both plant and animal) will need to be observed to determine the effectiveness of the biolink.

Monitoring needs to be undertaken throughout the project and requires particular attention before any on-ground works commence.

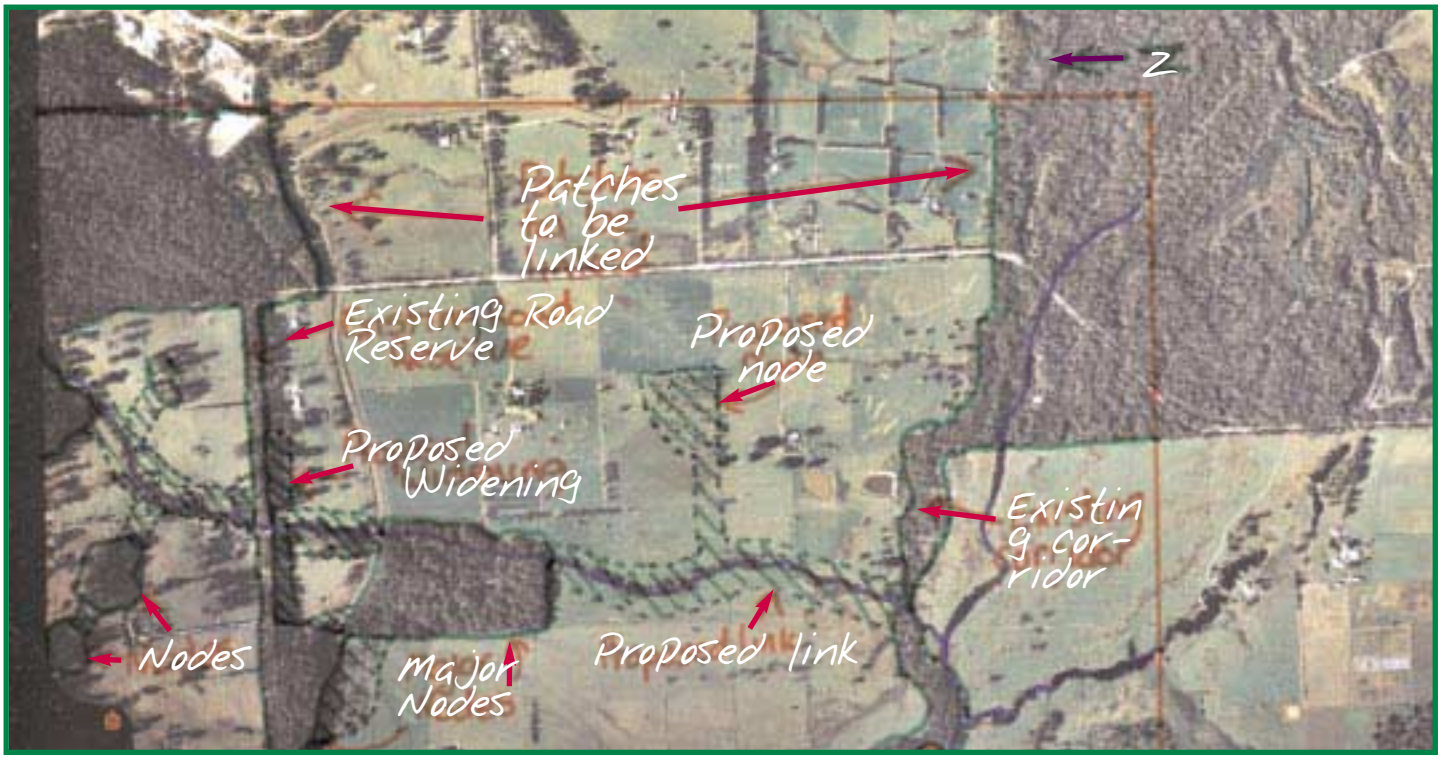
Remember, monitoring is not just a tool for reporting to funding agencies, it also provides valuable insights into how the whole project is progressing. It should highlight areas and techniques that have been particularly successful, while identifying problems that may need to be rectified, and it helps others undertaking similar projects in the future to avoid pitfalls.

Stop the presses

Finally, don't forget to tell people about your biolink. Promote the project widely, advertise your successes and acknowledge where improvement is necessary so that others may learn from your experiences. And remember, ongoing consultation and communication, as with any project, is essential.

Dale Tonkinson is Greening Australia's Environmental Research Officer jointly employed at the Arthur Rylah Institute for Environmental Research. He has been involved in the development, implementation and monitoring of numerous major bio-link projects across the state. Martine Maron is a wildlife photographer and final year biology student at La Trobe University.

For more information contact Dale at the Arthur Rylah Institute on (03) 9450 8733.



Edison Mission Energy backs Gippslandcare Partnership

Group News

By Paul Crock

From left to right Dale Scott, Maffra and Districts Landcare Network Chair; Greg Hoppe, Managing Director, EME; Sen. Robert Hill; and Col Sutherland, General Manager EME; plant the first red gum to mark the launch of the Edision Mission Energy's landcare initiative.

The Federal Minister for the Environment, Senator Robert Hill, officially launched the Edison Mission Energy Landcare Program in Maffra recently, heralding the arrival of the newest million dollar landcare supporter to Victoria.

Edison Mission Energy, the owner and operator of the Loy Yang B power station in Gippsland, has committed up to $1 million for a five-year program of revegetation and other land rehabilitation work in the region. This follows on from their successful involvement in the Powlett Project and the Phillip Island Wildlife Corridor which have seen the establishment of over 120,000 indigenous plants in the last two years.

The new Edison Mission Energy Landcare Program has a set of objectives which include reversing land and water degradation, increasing biodiversity, facilitating greenhouse-related data collection and research and expanding Victoria's and Australia's 'carbon sink' capacity.

The key elements to the new program are: a new seed bank at Maffra for the collection and supply of viable seed from indigenous vegetation; revegetation assistance to help farming and community groups in regional revegetation and salinity projects; and support for whole-farm planning approaches including the promotion of the twin objectives of increased productivity and sustainable agricultural practices.

The Gippslandcare Partners

The Edison Mission Energy Landcare Partners are:

Wellington Greenprint

This is a new, large-scale revegetation project being undertaken by landcare groups in the Maffra district.

At its heart is the establishment of an indigenous seedbank at Maffra to supply local seed for direct seeding revegetation activities throughout the region.

The project aims to rehabilitate land degraded by erosion and salinity, assisted by the introduction of whole-farm planning concepts.

Powlett Project

The Powlett Project is a well-established project in South Gippsland which addresses land, water and coastal degradation in the Powlett River catchment between Korumburra in the upper catchment, and the Bass Strait coast at Kilcunda.

Phillip Island Wildlife Corridor

This project is linking historic plantings by members of the Phillip Island Landcare Group, remnant stands of bush on private land and native reserves across Phillip Island. The support from Edison Mission Energy Landcare has helped speed up the implementation of the group's long-term goals to achieve these linkages.

Martin Fuller (left) and Brian Embom welcome Edison Mission continuation with the Powlett Project

Churchill

In co-operation with Monash University, bushland is being revegetated near the university's Gippsland campus.

Bush for Greenhouse links

The Edison Mission Energy and Wellington Greenprint projects are the first revegetation initiatives under the Federal Government's Bush for Greenhouse program.

The objectives of Bush for Greenhouse are to address land degradation and biodiversity issues through revegetation, while building greenhouse 'carbon sink' capacity.

Landcare projects supported by Edison Mission Energy will become important sources of data in determining the greenhouse benefits of revegetation initiatives.

Speaking at the launch, Edison Mission Energy's Managing Director, Greg Hoppe, said: "We are supporting landcare in Gippsland because of the company's philosophy of environmental responsibility generally and because of our ongoing commitment to the Greenhouse Challenge Program."

Mr Hoppe stressed the Edison Mission Energy Landcare Program was a partnership between landholders, landcare groups, community organisations and governments at local, state and federal levels.

For more information about the Edison Mission Energy Landcare Program contact Chris Welberry on (03) 9642 3611.

Thinking outside the square

Group News

By Paul Crock

When people think about alley farming, nine times out of 10, they think about trees in a farming system.

Innovative Mallee Landcare Group members, however, are looking to saltbush species as a means to stabilise their dunes in an alley system with a difference.

The Kingdon family at Murrayville, have been trialling different methods of incorporating *Attriplex* species, or saltbushes, into their organic farming system with great results.

Not only do the saltbushes provide great soil stabililty, but they have helped lift the stocking rate on the Kingdon's dune country to 7 DSE/ha.

The Kingdons are trialling numerous alley farming options with saltbush, many incorporating larger polyculture tree shelterbelts at 200m intervals, but some of the more interesting dune trials include closely spaced rows of saltbushes and an innovative circular plan designed to fit in with cropping systems.

Kym Kingdon explained the rationale behind the spiral system.

"It is designed to enable us to sow as we would a conventional crop, with the rows of saltbushes being spaced to suit our widest implement," Kym said.

"The corners of the saltbush rows are left open to let us finish off the headlands as we would in our open paddocks, an aerial photo probably best describes what I mean," he said.

Kym says the benefits in the cropping system are that the saltbushes shelter the crop from wind and reduce evaporative effects, improving crop and pasture production.

"The saltbushes send their roots deep into the subsoil to get their moisture and do not compete with the crop as Mallee or other tree species would, allowing us to have numerous rows spaced closely together throughout the crop. They also 'mine' the subsoil, bringing up minerals from the clay to add to the topsoil via the sheep.

"This means we can get better shelter across the paddock than by having tree plantations at 200m intervals," he said.

Nursery

Kym is also a well-known permaculturalist in the area and runs an indigenous nursery with most Mallee area species.

One of his main production lines however is open-rooted *Attriplex* or saltbush species. Kym provides these to farmers and land-care group members for revegetating dunes and providing fodder alternatives for saline areas.

The method Kym uses to propagate the seedlings is very interesting.

"We direct seed saltbush seed into rows and feed them with a dripper until they have grown to a decent height.

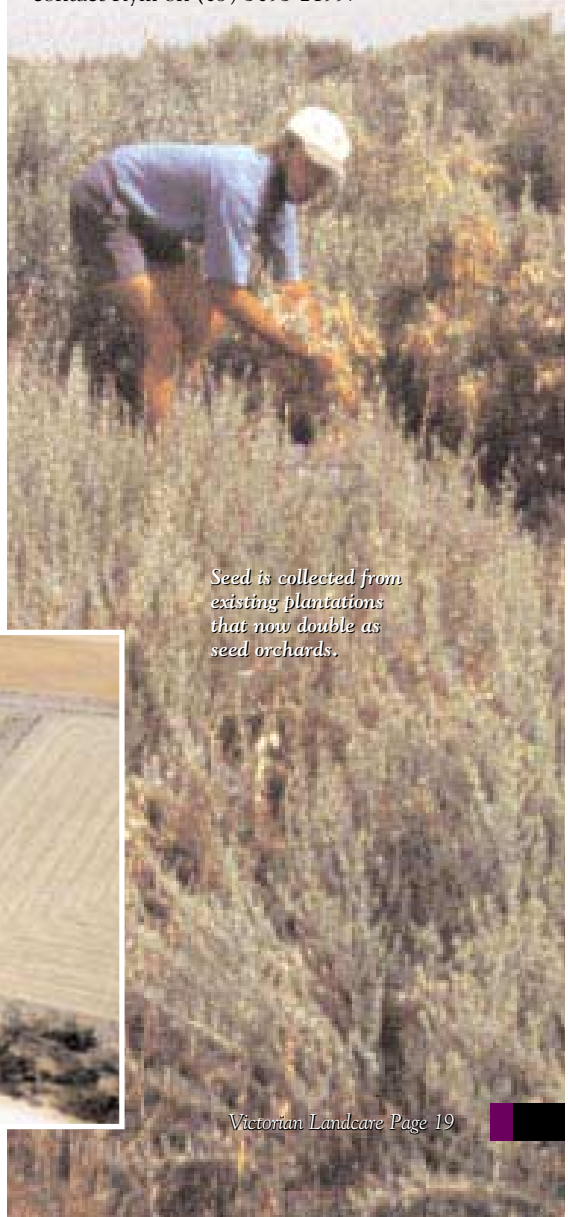
We then run over them with a slasher, cutting the tops down to toughen up trunk," Kym said.

"The tops are not the only thing we prune though, I use a U-shaped hoop iron to prune the roots to encourage development of lateral roots giving the plants a better chance when transplanted."

Kym sells the plants as bare root stock and plants them out by hand or on mass with a mechanical planter.

For more information about using saltbushes in alley farming systems contact Kym on (03) 5095 2199.

The successful saltbush trial site on the Kingdon's property near Murrayville.



Seed is collected from existing plantations that now double as seed orchards.

Taming the rugged hills of the Avoca catchment

By Jo Curkpatrick

Research Results

Greening the rugged hills of the Avoca catchment with perennial pastures.

Farmers in the upper reaches of the Avoca catchment have been concerned for some time about finding a reliable and cost-effective fix for the severe soil degradation and generally poor pasture condition in the rugged sedimentary hills common throughout the area.

Although pasture improvement is still an option, with deep-rooted perennial pastures having a proven ability to use large quantities of water and significantly reduce run-off, the successful establishment and persistence of perennial pastures has proven both difficult and expensive and the problems remain.

According to DNRE Pasture Agronomist at St Arnaud, Vicky Rush, the trends show that groundwater is rising commonly between seven and 17cm a year in the southern areas of the Avoca catchment.

"So establishing persistent perennial pastures in the hill country is important if we are going to improve productivity and reduce the threat of erosion and dryland salinity."

The Avoca Implementation Committee initiated the development of the demonstration site and co-ordinated its establishment with Vicky Rush. It was sown near Stuart Mill in autumn last year and new and existing technology is now being used to increase awareness and to improve the success of establishment and persistence of perennial pastures in steep sedimentary country.

The site also aims to demonstrate successful management of perennial pastures as both the establishment and long-term management of pastures is an integral component of the Avoca Whole of Catchment Plan.

Vicky will monitor the site over the next three years to investigate establishment methods and measure changes in productivity of both the pastures and the livestock grazing them.

"It has been proven that the establishment of perennial pastures and careful attention to management can double the stocking rate of the hill country of the Avoca catchment, so it is important that we can demonstrate these issues."

The perennial pasture sown was a mix of phalaris, cocksfoot, sub and balansa clover, sown at the recommended rates of two, one, four, and half a kilogram per hectare.

Fay Holt (left), Chairperson of the Avoca Implementation Committee, inspects pasture works with Vicki Rush, NRE's St Arnaud Pasture Agronomist.

Measurements will be taken for stocking density, sheep liveweights, wool production, pasture availability and composition. Soil tests will also be taken and animal health monitored.

Productivity isn't the only benefit coming from better pastures in this steep country where rainfall is under 550mm a year. Salinity and erosion control will be other positive outcomes.

Researchers from the Centre for Land Protection Research (CLPR) are aiming to use the Stuart Mill demonstration site to look at the relationship between perennial pastures, run-off and groundwater recharge and compare this with the relationship for an unimproved control paddock.

In another proposed demonstration at the site, alternative perennial vegetation options are planned for display. Darren McGrath from CLPR's environmental monitoring program aims to include a range of locally native trees and shrubs and native grasses and establish an area of browse fodder shrubs that can be grazed periodically.

For more information contact Jo Curkpatrick on (03) 9370 1789 or Vicky Rush at DNRE St Arnaud on (03) 5495 1700

GVEEPers to the rescue

Fencing remnants for the Superb Parrot Project is one of the projects the GVEEP is assisting.

Group News

By Sharon Keir

An innovative program in Northern Victoria is winning friends in the community as young people work hard and learn skills in conservation and land management.

The Goulburn Valley Environment Employment Program or GVEEP is employing young people as conservation trainees. One of those young people, Sharon Keir, sent us this brief account of what is happening.

Some people think nothing of the problem of the degradation of our rivers, streams and bushland, but, in conjunction with the Department of Natural Resources (DNRE) and the Goulburn Broken Catchment Management Authority (CMA), 11 dedicated young adults have set out to make a small but significant difference within the Goulburn Valley.

The GVEEP was started to provide employment for young people seeking jobs within the workforce, but who were also keen to make a difference to our declining environment. The trainees are studying and working towards the Certificate 2 in Land Conservation and Restoration. This means one day a week at school, two days with their private employers and two days a week working as a group on projects for DNRE and the CMA.

Works already carried out by the group have been significant. Two reserves north of Picola featuring a remnant stand of grey box and murray pine have been fenced off and later will be revegetated with complementary native understorey species. Inspection and maintenance of nesting boxes for species including the sugar glider at the Wyuna Bushland Reserve are also under way.

The trainees have planted over 2000 seedlings at an experimental plot at Mount Scobie to determine different growth rates of a variety of native species in saline conditions and expect to be planting another 150,000 trees around the Goulburn Valley in the near future.

Agroforestry has also been a highlight of the program with group members being involved in pruning and thinning three plots of river red gum, river sheoak and a stand of swamp oak at the Girgarre evaporation basin.

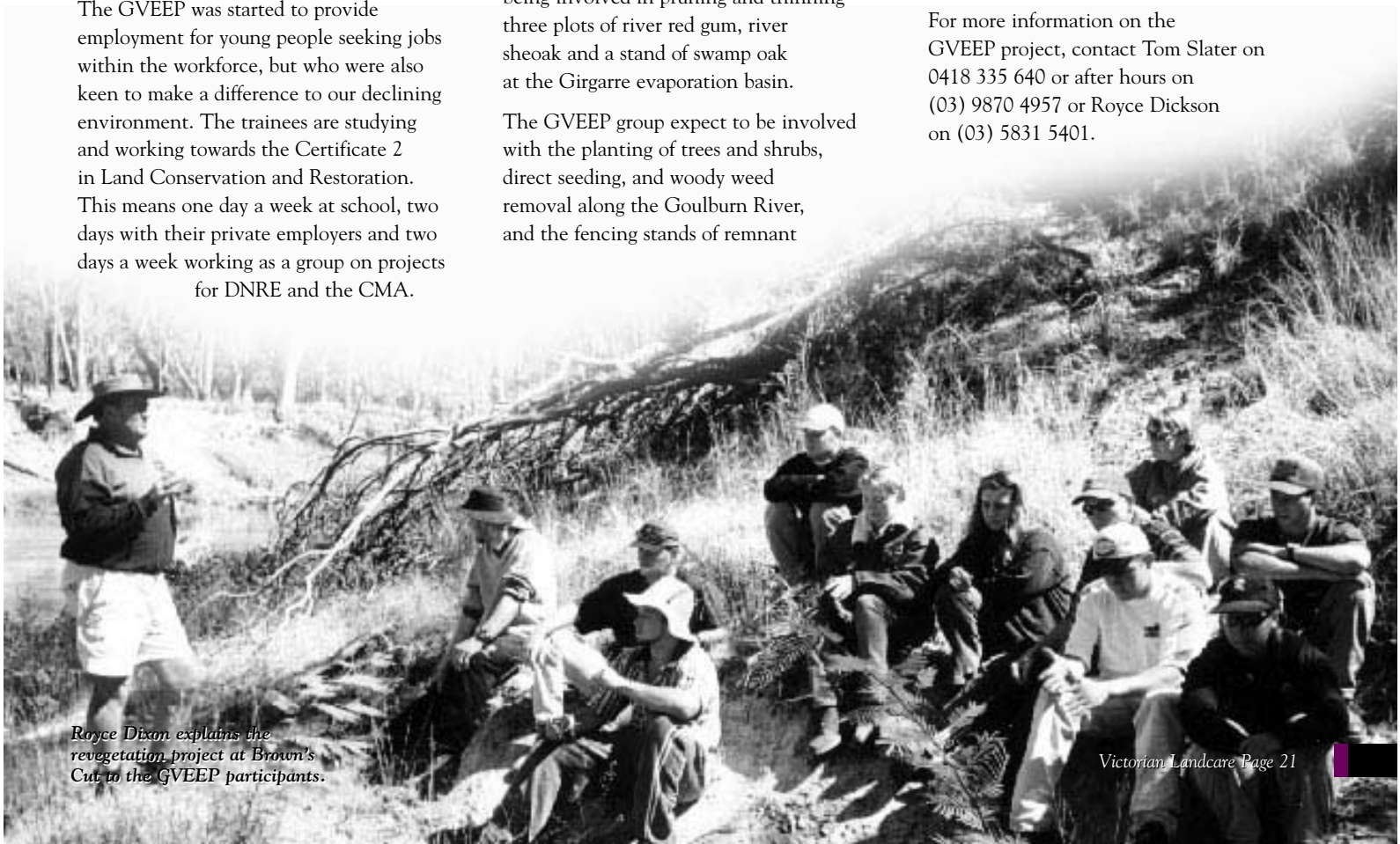
The GVEEP group expect to be involved with the planting of trees and shrubs, direct seeding, and woody weed removal along the Goulburn River, and the fencing stands of remnant vegetation and roadside reserves in conjunction with the Superb Parrot Project.

Achievements so far include involvement in tackling erosion and salinity problems along the Goulburn River, with the revegetation of the riparian zone at Pell's Cut.

Organisers Tom Slater and Royce Dickson have been overwhelmed by the show of support and donations from the Sidney Myer Fund, DNRE, GBCMA and a range of other sponsors and businesses in the Goulburn Valley.

The program is opening many opportunities for young people and its success is being closely monitored by sponsors, media and members of local government. The most important thing of all is that we are making a difference for our future.

For more information on the GVEEP project, contact Tom Slater on 0418 335 640 or after hours on (03) 9870 4957 or Royce Dickson on (03) 5831 5401.



Royce Dixon explains the revegetation project at Brown's Cut to the GVEEP participants.

Canadian Creek gets a boost from real estate

by Carrie Tiffany

Business has never been better for Jens-Gaunt Real Estate in Ballarat. When people buy or sell a property through Jens-Gaunt Real Estate four trees are planted on their behalf along Canadian Creek. Over the past year 2000 trees have been planted with Jens-Gaunt sponsorship. Business is busier than ever and the environment is reaping the rewards.

Proprietor Neil Jens said the idea to support an environmental project came up in a staff workshop. They had also done some market research into what people wanted from real estate agents – "less cut and thrust, more care and commitment to ethics".

"All of our 20 staff were keen. We asked the City of Ballarat to come up with a project and they suggested Canadian Creek. The trees are planted for us by the Australian Trust for Conservation Volunteers."

Canadian Creek is a major tributary of the Yarrowee River. It runs through Ballarat's central business district, through urban areas, recreation areas, farms and forests. It has suffered from a lack of co-ordinated management over the last 150 years. Mining was once practised in the area; names such as Pennyweight Gully and Specimen Vale are still in use today.

The City of Ballarat, through its program called LINCS (Linear Network of Communal Spaces), has been working with the community to revegetate the Yarrowee catchment including the Canadian Creek. The Mt Clear Primary School and the Mount Clear Secondary College have planted thousands of trees, shrubs and grasses as well as carrying out weed control and water quality monitoring along the creek.

The results-trees in the the ground at Canadian Gully, Mt Clear.

Neil Jens said it was great boost for the business and for his staff to become involved in the project. "It's added a new dimension to work for our staff. They get a real sense of achievement and satisfaction from what we are doing.

"There is no doubt it is also paying off for us as a business. We are building a perception within the community as a good firm that does good things."

Neil Jens is a past Chairman of ACTV and a board member of Greening Australia Victoria. His environmentally-friendly philosophy is seen throughout the Jens-Gaunt office, right down to the recycled paper.

Neil Jens (left) with students and teachers from Mt Clear Primary School and local MP Michael Ronaldson at the launch of the Jens-Gaunt project at Canadian Creek.

No despair for the Loddon River

by Carrie Tiffany

Bill Twigg's grandfather worked in a goldmine in Western Australia called 'Nil Desperandum'– never despair. Bill now uses the motto to guide his work as a farmer and a restorer of the environment.

The Twigg family's latest project on the Loddon River and Serpentine Creek near Serpentine was very urgent. They purchased some land with river frontage that had only been lightly stocked with cattle. According to Bill when they first took over the frontage many areas were covered with trees and grasses but within a year their sheep had done some terrible damage. "It was shocking to see the vegetation destroyed and erosion starting to set in."

Bill Twigg teamed up other landholders in the area through the Salisbury West and Jarklin Landcare Groups. The groups were very concerned about the health of the Loddon River and Serpentine Creek. Both were suffering from salinity and had heavy carp infestations. With stock constantly watering along the banks it seemed the deterioration would be difficult to stop.

Whilst many landholders were prepared to work on restoring the river they lacked the funds to have any major impact. But earlier this year the group's efforts were rewarded with a Natural Heritage Trust Bushcare Grant. The grant provides money for trees and fencing with the landholders contributing their labour.

Applications for Natural Heritage Trust Grants are assessed locally by the North Central Catchment Management Authority. Authority Chairman and Lake Meran farmer, Drew English, said the project promised great benefits for both agriculture and the environment. "Fixing up our waterways is a major task for the region. Our future depends upon clean water and a healthy environment. This is a very exciting project that will improve water quality and biodiversity with benefits for everyone in the catchment."

On the Twigg property the grant has meant major works are now well underway. Bill Twigg said the first task was preparing the land by spraying and fallowing. Then around 5000 trees and understorey plants were planted. The trees were chosen with care; in the future Bill hopes some may be suitable for furniture or hobby-craft timber.

Bill Twigg said when people want to improve the health of our creeks or rivers they need to think wider than just the stretch along the banks. He has built his fences 60m from the water.

"When we went to build our irrigation channels and site the fences we looked at the rivers' natural levee banks and made sure we stayed below them. Allowing the river to flood is essential. Flooding makes our country rich and healthy flood plains along rivers and creeks act as water filters – keeping water clean.

In total the Twigg family has erected 14km of fencing along the creek and river and they plan to do more in the future. "Agriculture has been good to me and so it feels right to be able to put a bit back in to the land," Bill said. Bill is not concerned about the area he has taken out of production. He believes we all do better in a healthy environment, both people and animals.

Bill Twigg at Pelican Bend on the Loddon River.

Victoria's Better

In October 1924 an unusual orange train steamed down to Gippsland. The Victorian Better Farming Train was a travelling demonstration of the science of farming. It toured throughout Victoria and to NSW and SA spreading advice and knowledge. Country people flocked to the train, often travelling many miles to meet and talk farming with each other and with the 'experts'. The train was in some ways a forerunner of landcare – it brought people together to talk about farming and the land.

Special educational trains had been operating in America for some years but they paled in comparison to the size and splendour of the Victorian Better Farming Train. A partnership between the railways, led by Mr Harold Clapp and the Department of Agriculture, led by Dr Samuel Cameron, put the train on the rails. Harold Clapp was no doubt introduced to the concept through his work on several American mid-west railways.

The Better Farming Train aimed to improve farm productivity and efficiency by disseminating information on scientific agriculture. It also improved the quality of life for farming families by offering lectures and demonstrations for women on domestic economy and public health.

The visit of the Better Farming Train was a major local event; crowds of 500 to 1500 people at each stop were common. The train's agricultural experts and demonstrators were feted and often invited to attend local functions or tour farms and attractions in each district.

Thirty-eight tours were conducted between 1924 and 1935. During this time 390 towns were visited and over 250,000 people attended the 'travelling agricultural college on rails'.

A great communicator

The train was a communicator at a time when communication was poor yet sorely needed. Many of the returned soldiers who returned from the First World War lacked farming experience, farm labour was scarce and mechanisation was slow to catch on. Unless farmers happened to visit one of the few agricultural research stations the only way of finding out about advances in farming was through newspapers or the *Victorian Agricultural Journal*.

The developers of the BFT recognised that most farmers of the era had only a primary school education and they learned best from talks or hands-on-demonstrations. The colourful displays and slogans show a sophisticated understanding of the techniques of advertising.

Livestock was a big drawcard, award-winning stock from the Royal Melbourne Show and high testing dairy cows graced the stock wagons. During the Gippsland tours an Ayrshire, Jersey, Friesian and Red Poll bull and cow were paraded and their butterfat records produced. The pure breeds were compared with the average 'handsome dairy cow of no particular parentage' to demonstrate that dairymen should not be satisfied with a cow because she looks good, they must test her output and eliminate her if it is poor.

Farming Train

By Carrie Tiffany

Herd testing was vigorously promoted, as was the need for better feeding, better breeding and the elimination of low-producing cows, so giving a higher value to the dairyman's labour.

Domestic arts popular

The women's car was especially popular. Sister Peck, principal of the Victorian Baby Health Centres, was in charge with assistance from other women qualified in the domestic arts. Subjects included hygiene, the care and clothing of infants and making and washing infant garments. In the sewing area women were taught how to measure, draft and cut out simple patterns for garments. Cooking lecturettes were given on dried fruits, casseroles, recooked meats, fish, pastry and scones.

The women were encouraged to ask questions and were quick to show their gratitude. Often as many as 150 women crowded into the small lecture car and senior girls from local schools also attended for instruction. One housewife told Sister Peck she had risen at 3.30am in order to milk the cows and get the children ready so she could drive 40 miles to the train for a lecture.

There is no doubt the Better Farming Train was an extremely successful instructional activity.

It appealed to people greatly in need of information who would not normally attend agricultural classes or read bulletins. On a Gippsland tour one farmer came a long distance to thank train staff for teaching his son to test milk on a previous stop. They had purchased an old testing machine from a neighbour, adjusted it and had commenced to test their cows. The information he received will lead directly to greater production from his herd and his farm.

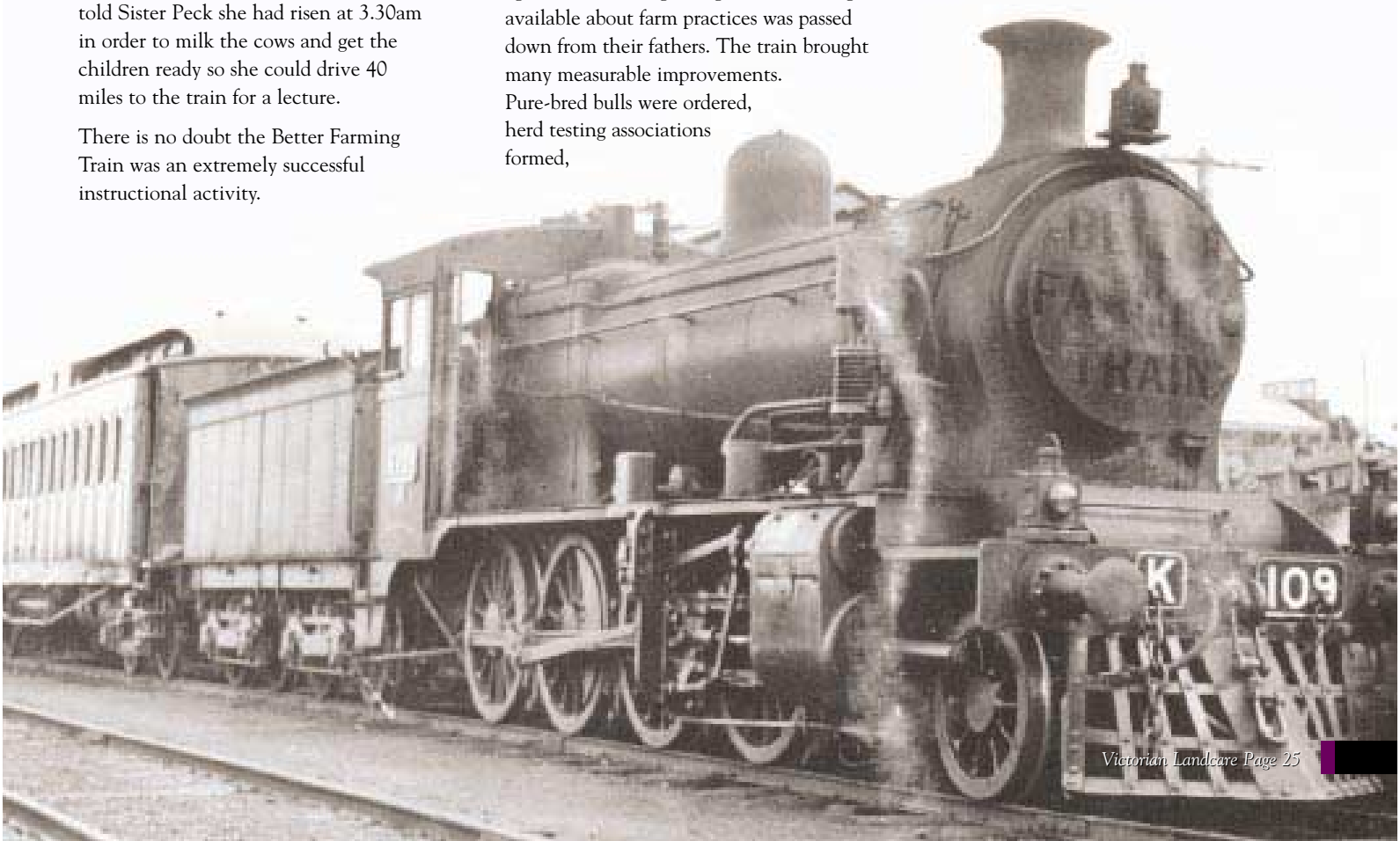
Information flowed in both directions. A huge number of plant specimens were brought in to the train by farmers. A specimen of hoary cress produced at Maffra resulted in steps to halt its spread. Many other serious weeds were identified and farmers alerted to their threat and how to control them.

Science of agriculture

Many farmers were genuinely surprised there was such a thing as the 'science of agriculture', having thought all knowledge available about farm practices was passed down from their fathers. The train brought many measurable improvements. Pure-bred bulls were ordered, herd testing associations formed, cream coolers purchased, topdressing applied and hundreds of poor-producing cows culled.

The severe depression of the 1930s brought the train to a halt but not before it had done a great deal of good. The train popularised the Department of Agriculture and encouraged farmers to think critically about what they were doing. Knowledge from the train reverberated around the places it stopped, was discussed in dairies, in shearing sheds at sale yards and in the homes and kitchens of country Victorians.

My thanks to David Elvery of Bendigo for information on the Better Farming Train. David has written an extensive thesis on the Better Farming Train and the National Resources Development (RESO) Train. David Elvery is a former senior soil conservationist. He became interested in the farming trains after discovering his late father-in-law, George Walker, worked on the Better farming Train in 1927 as a dairy supervisor.



Landcare of the Century

Group News

By Tarnya Kruger and Jenny Pendlebury, NRE

Do you know which is the largest flowering plant in the world, or the longest river in Victoria, or what about the number of people that have walked on the moon? Questions like these and more were part of the quiz night organised during Landcare Month.

'Landcare of the Century' was trialled in the North Central and Goulburn regions during March. The quiz night was designed primarily as a social event, to bring people together, get to know other groups within the region and have fun.

The Community and Catchment Education Group (CCEG) developed a range of questions relating to landcare. The CCEG is made up of people largely from DNRE, with representation from Greening Australia and the VFF.

Groups were invited to participate in the quiz night and not only did they have to prepare themselves for the obscure questions on the night, but upon registering were issued a list of 20 'things' to hunt and find. (When was the last time you saw a landcare $1 coin?) The list included a range of landcare-related items such as stickers, a weeds calendar, the first issue of the *Victorian Landcare* magazine, an old rabbit trap, a photo of the 1983 dust storm – a varied list indeed!

In the North Central the quiz was co-ordinated by the Upper Campaspe Landcare Network, DNRE and the North Central Catchment Management Authority. Groups from Muckleford, Sandy Creek, Sandon and Axe Creek, and a group of former TAFE students gathered at historic Porcupine Village in Maldon to share the action.

The emphasis was on having fun and the night certainly had something in it for everyone.

The trivia hunt was keenly contested. Through 'devious' and other means, one group managed to find all 20 items – a fantastic effort.

As a bonus for the trivia hunt, extra points could be scored if a group would sing their landcare song. Spectacular performances of 'Old McDonald had some salt' by the Axe Creek group and 'La la la la la landcare, feelin' groovy' by the 'Environmental Extremists' were met with thunderous applause.

When memories failed, creativity was used to advantage by some people. In the 'Guess Who Guess What' section, one group renamed Heather Mitchell as 'Salvation Jane'!

Overall winner on the night for North Central was 'Sandon One' Landcare Group.

In the Goulburn region the quiz was co-ordinated by the Goulburn Murray Landcare Network and DNRE. The group from Stanhope Girgarre won the trivia hunt.

"It was terrific to see landcare group members relaxing and enjoying the night," said Master of Ceremonies David Clark (North Central CMA). "A lot of emphasis is placed on the serious side of landcare. However, landcare groups should also take time out for social gatherings like this because it encourages a unity and pride in what they are doing," he said.

We hope that the quiz night can be an annual event and that anyone interested will have an opportunity to participate in their local area for Landcare 2000.

Singing the praises of landcare – members of the Axe Creek Catchment Landcare Group show great harmony during the landcare quiz night.

CMA UPDATE

Riparian plantings in the Glenelg-Hopkins Catchment.

North East CMA tackles willows, wetlands and weeds

Victoria's nine Catchment Management Authorities have spent their first year on a wide range of waterway and catchment projects.

In the North East catchment region, many waterway projects are underway. High priorities include willow control, stabilising stream banks and conducting assessments of local waterways for the Index of Stream Condition.

A major ongoing willow control program was undertaken on the Mitta Mitta River. Willows were removed from the river banks and, with many left after previous removal programs, were burnt. The job was aided by the use of an innovative 'Fella Buncha' which quickly cut and removed a 20km section of willow from along the river bank. The removal sites are now being fenced and revegetated.

Wangaratta residents have also benefited from the work of the CMA. In conjunction with the Rural City of Wangaratta and the NLP Urban Water Quality Initiative, a new wetland has been created in the city centre. The wetland was formed by diverting a stormwater entry pipe that flows into the One Mile Creek.

It was excavated and three rock chutes constructed. A footbridge was built and the site was landscaped and revegetated.

The new wetland is a great asset for Wangaratta and will become important habitat for urban wildlife.

The CMA spreads its efforts across waterways and catchment programs. It has also been working alongside landcare groups, developing plans for roadside vegetation and focusing on weed control.

Glenelg Hopkins CMA: Works Underway

Catchment works are also well underway in the Glenelg Hopkins catchment region.

The CMA there is addressing waterway management issues along creeks in priority areas across the region.

There are more than 60 projects in progress with a further 138 recommended for funding. It is hoped that they will have commenced by the time of reading.

In Ballarat, the Burrumbeet Creek has had a long history of sedimentation and litter. To address these problems, the CMA has been working with the Ballarat City Council to install a litter trap. In the project's second stage, an artificial wetland will be developed to aid flood retention and improve water quality utilising aquatic plants to absorb nutrients and trap sediment.

Linked to this is a project to control gorse, blackberry and hawthorn along the Burrumbeet Creek. The newly-formed Miners Rest Landcare Group is working with the CMA to implement weed control and revegetate along the creek.

An audit by the CMA of structures installed up to a decade ago by the Glenelg River Improvement Trust revealed some maintenance works were required as well as works to prevent structure failure. Landholders have supported the CMA to upgrade these structures to ensure protection of the waterways.

Water quality is also being improved for residents in Ararat and Warrnambool. The respective cities are working with CMA assistance to address stormwater management issues, leading to more effective and environmentally-friendly storm water management.

The Waterways Program for Glenelg Hopkins CMA has also been launched and is focused on improving the region's waterways.

Alignment training and revegetation on the Fifteen Mile Creek.

ON THE SHELF – New Publications

Books

Biodiversity – nature's variety: Our Heritage: Our Future

This booklet, designed and produced by Environment Australia, is a good introduction to the complex topic of biodiversity. It describes the benefits which biodiversity brings to every part of our lives and provides simple advice on protecting biodiversity for ourselves and future generations.

The booklet describes biodiversity as: "...the web of life; the thin skin of living things which inhabit the earth including humans, animals, plants, fungi and microbes". With sections on bush foods, wild genes, natural pharmaceuticals, biodiversity on holiday and biodiversity on the farm, the booklet makes interesting reading and builds a convincing argument for biodiversity protection.

With its fold-out poster, simple illustrations and easy-to-read text, this publication would be a good resource for senior primary and secondary school students. Copies of *Biodiversity – nature's variety: Our Heritage: Our Future* are available free from Environment Australia's Community Information Unit on 1800 803 772.

Australian Trees Their Care & Repair

It is terrific to see such a comprehensive guide to the care of Australian trees. This book by Phillip Hadlington and Judith Johnson is packed with information, illustrations and photographs. It covers identifying and controlling insect pests, tree diseases, repairing trees and transplanting advanced trees.

The detailed illustrations will help farmers, gardeners and arboriculturalists identify which pests are destroying their trees and show how they can be controlled. Two useful appendices are helpful in distinguishing the particular needs of common Australian tree species and recommending where they should be planted.

Australian Trees Their Care & Repair is available in most good bookshops or direct from UNSW Press on (02) 9664 0999 for $24.95 + $5 postage and handling.

Conversing with the carers: a snapshot of landcare in north east Victoria

Produced earlier this year, Catherine Allen's 'snapshot' of landcare in the north-east is fascinating reading. Catherine interviewed representatives from 18 groups during 1997/98. She asked them where they had come from, what their current concerns are and what their futures might be. The focus was not on the physical activities and achievements of the group but on the groups themselves and their interactions with others in the community.

The report is made up of verbatim excerpts from Catherine Allen's interviews. The excerpts demonstrate the diverse nature of groups and their many and varied concerns. Whilst some groups have long-term vision others found the notion of long-term planning irrelevant.

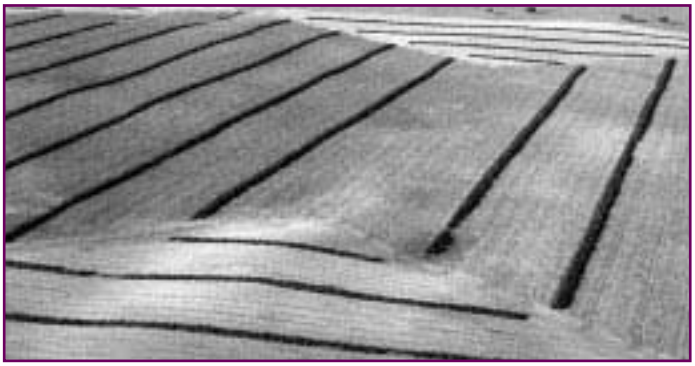
The clear message to emerge is that you can't generalise about landcare groups. Even within the same geographic area they are all very different beasts.

Conversing with the carers: a snapshot of landcare in north east Victoria is available free from the NRE Information Centre, call (03) 9637 8080.

Low rainfall alley farming systems

If you are a farmer in the 300-450mm rainfall zone of the Murray Darling Basin this guide is for you. *Low rainfall alley farming systems* is a step-by-step guide to planning and implementing an alley project. It will help farmers better understand the principles behind the key establishment and design decisions to be made.

An alley farming system involves growing crops and grazing livestock in alleys between belts of trees and shrubs. Alley farming has benefits in providing shelter, lowering watertables, controlling erosion and increasing biodiversity.



However, there are also many potential problems – competition with the crop and pasture, access, spray drift and pest harbour are just a few.

The authors, Alex Knight, Darren McGrath and Roger Laws, admit the guide may create more questions than answers for some readers. They recommend it is used alongside other reliable sources of information which are listed in the extensive further reading section.

Low rainfall alley farming systems is available from the NRE Information Centre on (03) 9637 8080 for $10 + $4 postage and handling.

Beating Dryland Salinity

Dryland salinity is a threat to both rural and urban Australia. It degrades land and water resources, reduces productivity and damages infrastructure. And it is spreading. Difficult to predict, prevent and manage, we must learn to beat it or live with it.

Assessing the causes, impacts, costs and management of dryland salinity is a new manual prepared by the National Dryland Salinity Program (NDSP).

The manual integrates research results and NDSP progress by responding to four questions: Where is the groundwater and salt in my catchment coming from? What are the options for mapping the current extent and risk of dryland salinity? What are the land use options for managing recharge? And what are the costs of salinity and who bears them?

The manual is aimed at helping advisors, catchment and landcare groups to choose techniques, assess and map dryland salinity, determine costs and evaluate results.

Rid-a-Rabbit

Woof! No more bunnies!

A new Australian invention is designed to help farmers beat the rabbit problem in an easy, safe and cost-effective manner.

Using only LP gas, the operator releases a charge of gas down the burrow and ignites it with an electronic probe. The ignition of the gas produces a rush of hot air or bleve through the burrow and burns up all the oxygen.

The rabbits in the burrows die within 45 seconds to two minutes. An autopsy performed by the University of Melbourne Veterinary Science Department following trials of the device showed cause of death to be primarily from hypoxia (that is, a sudden loss of oxygen.)

The small portable unit makes access to difficult sites, such as under fences, trees or rocky areas very easy. Using LP gas makes the system one of the quickest, safest and most cost-effective rabbit control mechanisms available.

In summary, Rid-a-Rabbit:

- kills rabbits quickly and humanely;
- has no effect on the operator;
- is environmentally friendly as it does not affect other birds of prey or other animals such as dogs;
- is safer to use than other fumigation methods;
- is portable; and
- cost-effective at about two cents a hole.

Some feedback from the users . . .
Peter Cook of Yanac saw the portability of the unit a big plus. “Eighty percent of my rabbits have been killed, and I will keep using the Rid-a-Rabbit unit until they are all gone.”

Ian Lang of Barongarook, near Colac, is a rabbiting contractor who has used the unit for over eight months. “One transect count of 134 rabbits was reduced to seven after two applications of the Rid-a-Rabbit unit.”

For more information contact:
John Hardiman, Rid-a-Rabbit Marketing, on (03) 9841 4507 or 018 533 432 or drop a line to PO Box 423, Bulleen, Victoria 3105.

Junior Landcare

What are junior landcarers in the Yarriambiack Shire up to?

By Tracey Delbridge

Yarriambiack junior landcarers are set to brighten up the Mallee by transforming townships with the colourful message of landcare throughout the Yarriambiack Shire.

Action stations in the Mallee as Patchewollock Primary School kids undertake a project to establish a bush tucker garden in the school grounds. In Hopetoun, the secondary college has a project called 'Mallee seed to a tree', focusing on propagation and seed collection and the scout group is looking at re-establishing a vegetation corridor. In the Wimmera, Rupanyup scout group is undertaking a project to rehabilitate a wetland environment.

What's the common thread? All of these projects will involve brightening things up by transforming old sheds into landcare murals carrying the themes of their different projects.

Beulah Primary School in the southern Mallee has started their project called 'Remnants – the living seedbanks'. It was developed to help the youngsters discover the importance of remnant vegetation communities on roadsides and riparian vegetation by exploring Biodiversity. The kids are investigating why it's important to look after what we have left, how to collect native seed and how they can help the environment by planting a 'living seedbank'. The Beulah kids' mural will celebrate 'living seedbanks' and 'biodiversity'.

In Beulah, the junior landcarers are leading the way in landcare, having formed a group, received funding and undertaking projects before their parents!

For more information about the junior landcare program in the Yarriambiack Shire contact Tracey Delbridge, the Landcare Group Co-ordinator, on (03) 5394 1400.

Kids grow trees in the concrete jungle

Glen Waverley Secondary College is in the heart of suburban Melbourne but that hasn't stopped students from growing and planting over 5000 trees in rural Victoria.

In 1994 the school formed a link with Merton Landcare Group as a way of getting city kids involved with planting trees in the country. Now, in 1999, Glen Waverley Secondary College is approaching its sixth annual planting. The project has grown into the formation of a rural-urban link with Alexandra Secondary College students propagating and planting local trees and shrubs.

Teacher Jan Lintott spent some very hot December days filling tubes and planting seeds. Students then take the trees home for regular watering and thinning as they grow larger and stronger for planting in August.

Jan Lintott says the benefits of the project have been far reaching. "Students learn through practical hands-on experience that individuals working together can make a difference to the environment.

The project creates rich links with rural-urban communities that would not otherwise exist, farmers always invite students to return any time they are passing through and check the progress of their trees.

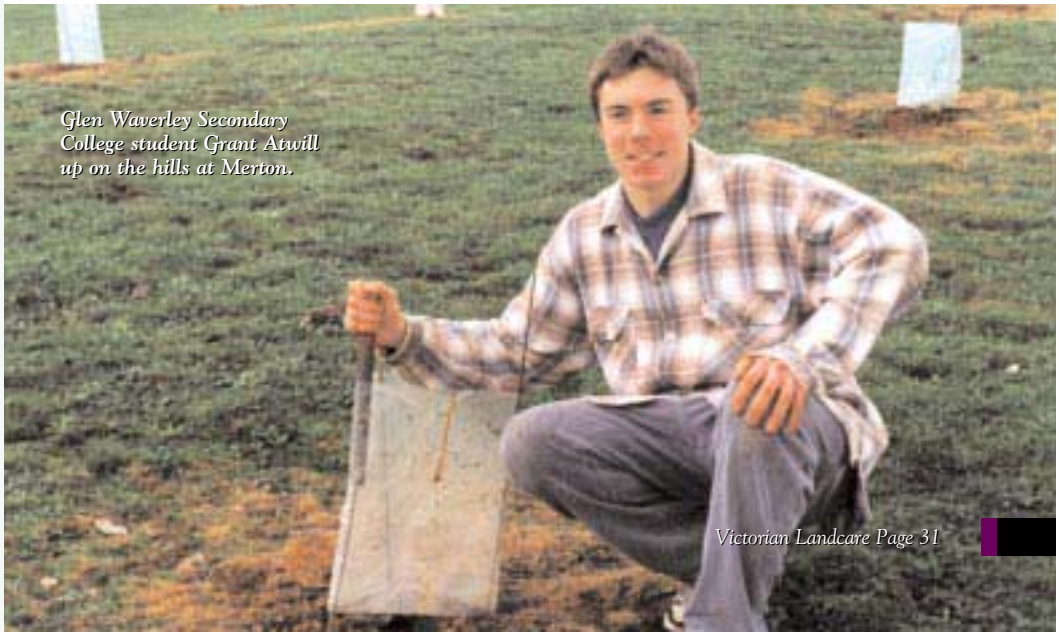
"Planting-out gives non-academic students a chance to improve their self-esteem by completing worthwhile and physically demanding work."

Jan Lintott says some students are very committed to the project. "One year a boy grew four boxes of red gums in the tiny backyard of a unit."

Year 10 student Irene Lee is currently growing wattles. She says it has been very enjoyable looking after the trees.

"I have watched them grow from tiny seed. I watered them daily in summer. Now the lightwood wattles are 20cm. It feels good inside to know that I have helped a few trees to come into this world."

The project has been funded through fundraising from the student representative council and from a Junior Landcare Grant.



Glen Waverley Secondary College student Grant Atwill up on the hills at Merton.