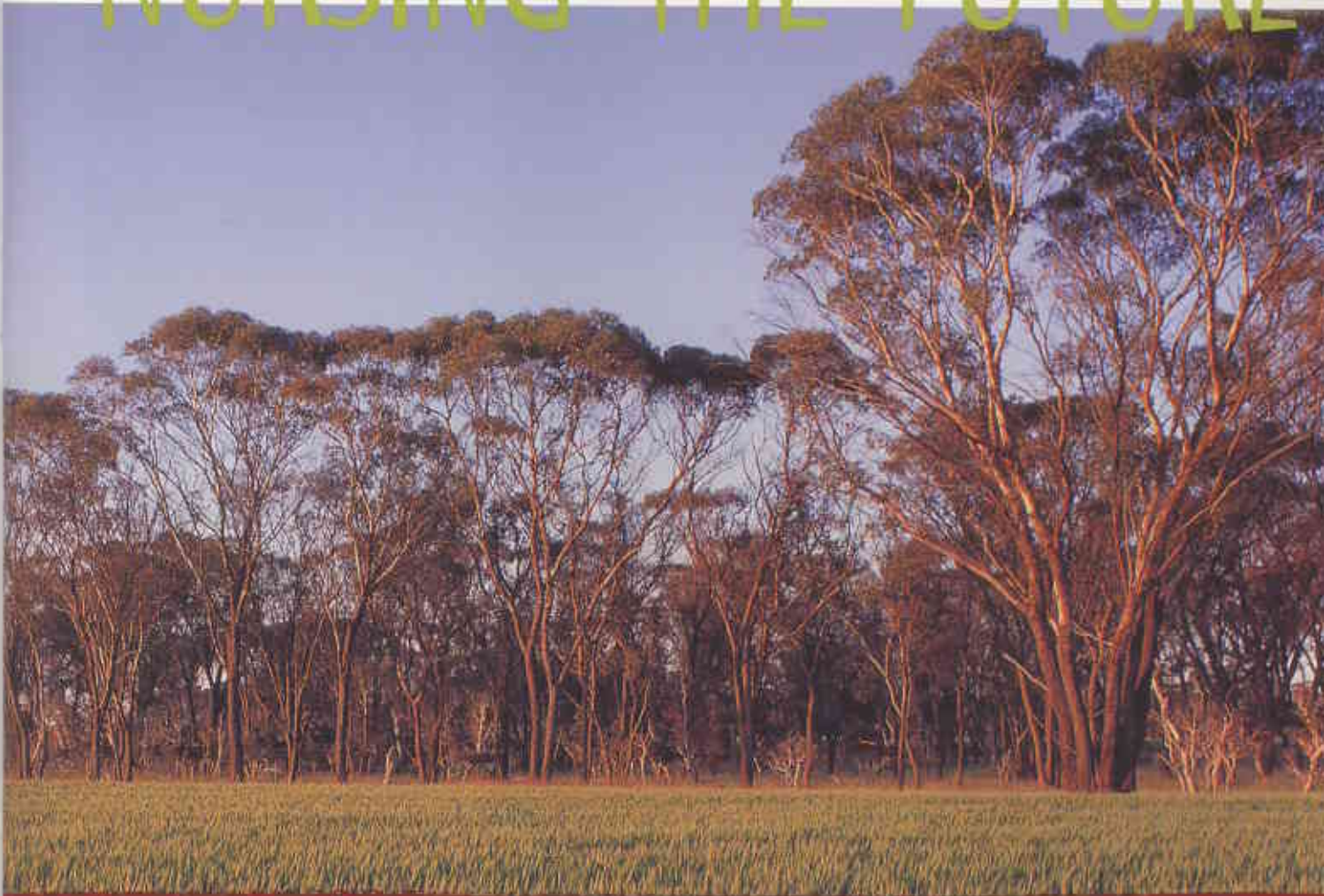


NURSING THE FUTURE



The Narrogin Plant Nursery is at the cutting edge of the nursery industry. By growing local species no other nursery has grown or popularised before, and by making the seedlings widely available for agriculture, landcare, production and most importantly, conservation, the nursery plays a major role in the revegetation of farmland in the Wheatbelt and elsewhere in the south-west.

BY STEPHEN WHITE AND MANDY CLEWS

Nowadays it's a well-known fact: farming and conservation go together. But developing the raw material and the expertise to make the partnership work is an ongoing challenge. Farms need trees to protect the soil from salinity and erosion, to provide shelter from the wind, and to maintain habitat for wildlife. But figuring out which particular trees or shrubs will do the job—in the hundreds of different permutations of environmental conditions that prevail in Western Australia's farming country—is not so straight forward. Through its plant nursery at Narrogin, the Department of Conservation and Land Management (CALM) has invested substantial effort into the complex area of revegetation.



On 1 May 2000, CALM's Narrogin Plant Nursery began its annual dispatch of seedlings for planting on farms in the southern regions of the State. Particularly in the nearby areas, farmers are now familiar with the seasonal products and services provided

Previous page
Main: Wheatfield and remnant bushland near Ambelup.
 Photo – Bill Bachman
Insets: Narrogin Plant Nursery. Oil mallee seedling.
 Photos – Jiri Lochman/CALM

Left: A 1998 planting of flat-topped yate (*Eucalyptus occidentalis*), swamp sheoak (*Casuarina obesa*) and *Melaleuca* species.
 Photos – Tricia Sprigg/CALM

by this facility. However, there was a slight but significant difference. The nursery's new mission statement clearly spells out its role in promoting the integration of conservation and sustainable agriculture. The nursery interacts with a range of agencies, landholders and community groups to deliver this important objective.

A GROWING CONCERN

The Narrogin Plant Nursery developed alongside the post-war mining and agricultural industries that expanded in the Goldfields and the Wheatbelt. The then Forests Department first established the 'inland tree nursery' in the mid-1940s to supply eucalypt and other seedlings to farmers and pastoralists, and to provide trees to help combat dust problems in Kalgoorlie. The nursery operation was shifted from Kalgoorlie to Dryandra, near Narrogin, in the mid-1950s.

By 1966, the operation had moved from Dryandra Settlement to Narrogin to meet the need for water to satisfy increasing demand for high-quality seedlings. Gradually, as the complexity of conservation and landcare issues unfolded, the nursery began to adopt the role of providing both stock and expertise to help establish other nurseries. By the mid-1980s, and the proclamation of the Conservation and Land Management Act, there was a need for the nursery to address conservation



Above left: Supplementary watering of hakea seedlings at the Narrogin Plant Nursery.

Left: Grading seedlings at the Narrogin Plant Nursery.
 Photos – Tricia Sprigg/CALM



issues. That led to a further need to provide local species that were often not available in the standard nursery inventory.

It is now known that the best way to protect the biological integrity of an area is to work with the species that nature put there in the first place. The Narrogin Plant Nursery's purpose is to identify local species to suit local conditions and find ways to cultivate them successfully, in the nursery and on the land. It also provides expert technical advice to other nursery operators and farmers. In this way it has its own niche in the industry. By growing species no other nursery has grown or popularised before, and by making the seedlings widely available, the nursery is an important partner in the revegetation effort in general and the nursery industry in particular.



Above: Revegetation of saline, waterlogged areas requires native species that tolerate these extreme conditions. Such species aren't always readily available from commercial sources.
Photo – Jiri Lochman/CALM

Above right: Revegetation using eucalypt species in the Morbinning catchment area east of Beverley.
Photo – Neville Passmore

Right: Narrakine Gully has been planted with a variety of species.
Photo – Tricia Sprigg/CALM



The nursery now employs nine staff (including casuals) and grows about 843,000 seedlings each year, from 186 different species. This total includes 8,000 single-potted seedlings in root trainers for use on harsh sites in the Goldfields and Midwest, and as ornamentals. The nursery uses stock from CALM's Manjimup Seed Centre, as well as seed collected by other CALM staff from the Narrogin District, with the aim of helping to protect biodiversity in agricultural lands and to maintain genetic variability within species.

BREAKING NEW GROUND

One of the nursery's successes is to develop scale-leaf myrtle (*Melaleuca thyoides*) as a viable nursery species. This species grows naturally in the Avon, the Wheatbelt and the Goldfields. It is valuable for revegetation because of

its ability to grow in sandy and clay soils that are both saline and waterlogged. The species has the potential to revegetate areas where less tolerant species, such as salmon gum (*Eucalyptus salmonophloia*), gimlet (*E. salubris*) and jam (*Acacia acuminata*) have been unable to survive. At the same time, the scale-leaf myrtle acts as a windbreak and provides habitat for birds. The nursery has either pioneered or successfully established and popularised dozens of such local species, and made them available to community and private planting programs around the State.

The nursery provides a seedling base for the Search Project, a Natural Heritage Trust-funded program that is examining species from the lower rainfall agricultural areas to find and develop plants for revegetation that are

productive, viable and diverse. The Search Project is demonstration-planting a range of eucalypt, melaleuca, casuarina, acacia and hakea species that have the potential to unite the goals of conserving nature and enabling sustainable agricultural practices, while meeting farmers' financial needs to earn incomes. The nursery supports this project by growing seedlings as well as assisting with viability tests and developing propagation methods for species not previously used in revegetation.

IN THE FIELD

One example of a revegetation program supported by the nursery is a tree-planting program set up by farmers on the six properties covering the Chuckem Gully catchment, south of Narrogin. With funding from the Natural Heritage Trust, the Chuckem Gully Catchment Group began a catchment recovery program in 1995. The program was designed to reduce salinity and erosion and to conserve remnant vegetation and biodiversity in the area, by rehabilitating creek lines, revegetating recharge areas with suitable plants, and fencing remnant vegetation.

With advice on species selection and using high-quality stock from the nursery, the group has planted more than 300,000 trees over nearly 500 hectares of land. With a high success rate



Above (from left): Seedlings for the Search Project, which aims to find and develop plants for revegetation.

Left: Seedlings grown for use by CALM's Mundaring District.
Photos - Tricia Sprigg/CALM



Above: Keith Parnell with oil mallee seedlings in the Parnell Nursery.



Above right: Helen Wiese with two-year-old saltwater paperbark (*Melaleuca cuticularis*) in the Chuckem Gully Catchment.

in planting swamp sheoak (*Casuarina obesa*), scale-leaf myrtle and eucalypts such as flooded gum (*E. rudis*), salt river gum (*E. sargentii*), swamp mallet (*E. spathulata*) and Kondinin blackbutt (*E. kondininensis*), the group has already achieved its goals of stabilising and rehabilitating the area. It is now looking to revegetate areas upslope from the gully, using productive species, such as oil mallees, to control excess surface water, while providing additional income.

Right: Bill Warren with scale-leaf myrtle, which was developed by the Narrogin Nursery as a viable nursery species. This land was bare salt.



Below right: A 1998 planting of swamp sheoak to reduce salinity and erosion in the Chuckem Gully Catchment. Photos – Tricia Sprigg/CALM

Meanwhile, the nursery also supported the 'Greening Challenge', a joint undertaking by Western Power, Bushcare and Landcare Western Australia to plant a million trees by the year 2000. The focus of the challenge was the Hotham and Williams River catchments. The original goal of one million trees was reached in 1999, one year ahead of schedule, and the program won the 1999 State Landcare Award in the Business category.

Bottom right: Oil mallee seedlings. Photo – Jiri Lochman/CALM



The nursery supports many such projects around the State, as well as private plantings and other nurseries. The Parnell Nursery, for example, was established last year at Tincurrin, 60 kilometres east of Narrogin. With advice, expertise and practical support from the Narrogin Plant Nursery, it set up a commercial operation to supply seedlings to the local oil mallee industry and to the Hotham-Williams Western Power Greening Challenge. This year the Parnell Nursery is growing some 1.2 million trees, having increased its capacity from 100,000 seedlings two years ago. Sheds, water tanks, benches and handling facilities are now being built to support the steady demand.

PUTTING NATURE BACK IN THE GROUND

Although part of the Narrogin Plant Nursery's aim is to be commercially viable, it has the distinction (unlike traditional business enterprises) of not wanting to drive competitors out of business. On the contrary, one of its missions is to make unusual native plant species a successful fixture in other nurseries, by providing information and advice on the best propagation techniques. As an innovator, constantly searching for new and effective ways to revegetate with local native species, the nursery's role will always be there, as a leader in the industry of putting nature back in the ground.

Farmers can act now to set up revegetation programs that will shape their landscape in the 21st century and the third millennium, with the Narrogin Plant Nursery as their guide. Plant now for the new millennium!



Stephen White is the District Manager of CALM's Narrogin District. He can be contacted on: (08) 9881 1113.

Mandy Clews is a freelance journalist who has written and edited numerous LANDSCOPE articles.

Winner of the 1998 Alex Harris Medal for excellence in science and environment reporting.

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Botanists rediscover a presumed extinct grass perched on the mountain tops of the Stirling Range National Park. See page 43.



Discover Perth's eight regional parks and their special features and attractions on page 28.



How can we preserve the Leeuwin-Naturaliste caves while catering for increasing visitation? See page 16.



Salinity Strategy surveys are revealing that salinity threatens more than 850 Wheatbelt plant species. How can managers intervene? See page 36.



Learn about the spineless wonders of the marine world and their clever disguises on page 42.

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COVER

More than 160 different bird species use Cape Arid National Park, which lies on the South Coast about 120 kilometres east of Esperance. The red-eared firetail is one of them. This exotic-looking finch is confined to south-western Australia. It is found in areas of dense heath and undergrowth in thick forest, never too far inland. Cape Arid National Park is the eastern limit of its distribution.

Cover illustration by Philippa Nikulinsky



Executive Editor: Ron Kawallak
Editors: David Gough and Carolyn Thomson-Dans
Bush Telegraph Editor: Verna Costello
Advertising copy and editorial assistance: Caris Bailey
Scientific/technical advice: Andrew Burbidge, Paul Jones and staff of CALMS Science Division
Design and production: Tiffany Aberin, Maria Duthie, Gooitzen van der Meer
Illustration: Gooitzen van der Meer
Marketing: Estelle de San Miguel ☎ (08) 9334 0296 Fax: (08) 9334 0498
Subscription enquiries: ☎ (08) 9334 0481 or (08) 9334 0437
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