

# NATIVE VEGETATION GUIDE FOR THE RIVERINA

NOTES FOR LAND MANAGERS ON ITS MANAGEMENT AND REVEGETATION



SECOND EDITION



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This guide offers practical information on a diverse selection of native plants suitable for revegetation and restoration projects within the Riverina region of New South Wales.

The opinions, advice and recommendations offered in this publication are based on information, research and observations that, to the best of our knowledge, were current at the time of writing and are generally accepted by persons knowledgeable in the subject matter. It is, however, the responsibility of the reader to check all information and apply any relevant management practices to meet their specific needs and circumstances, and in accordance with relevant statutory requirements.

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**NATIVE VEGETATION GUIDE  
FOR THE RIVERINA**

**(NOTES FOR LAND MANAGERS ON ITS  
MANAGEMENT AND REVEGETATION)**

SECOND EDITION

Complied & Edited by Peter Rowland, Kylie Durant & Lou Bull  
Holbrook Landcare Network,  
Holbrook, NSW  
January 2025.

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# FOREWARD

Farmers and land managers, alongside Landcare and natural resource management agencies have been actively revegetating and restoring land for over 30 years now. The development of regionally specific revegetation guides in the late 1990s was critical to the success of the last 25 years of revegetation, and there is now a network of skilled and knowledgeable practitioners who have learned their craft on the back of the hard work of the original authors and contributors of the South West Slopes and Riverina revegetation guides and practical experience with farmers. These guides are still relevant and valued resources in our regions and will always be recognised as the first of their kind in the state.

Bringing together the collective experience of practitioners everywhere has been very rewarding and many people have been very generous in offering up their knowledge and experience to create a resource for the region.

We now approach a new era of revegetation practice. The focus on including and listening to First Nations voices is also increasingly important. Ensuring the voices of First Nations communities is heard is a vital part of creating the abundance and future thinking required to live with challenging and changing landscapes. To restore and sustain what is left requires us to harness the wisdom of the many generations who have cared for Country and who are tuned into nature's rhythms and needs. This careful and gentle management has founded the current ecosystems, it meets their current needs and offers many solutions. A trajectory that squarely includes First Nations' close cultural affinities and practices is the reset that our fragile soils, fine scale vegetation and fauna interactions, and climatic parameters will respond to.

Influenced by global trends, revegetation opportunities are increasingly being driven by farmers and farming businesses to meet the needs of consumers and the industry frameworks for sustainable farm reporting, as well as opportunities for participating in environmental markets.

Further, drought and farm business resilience for the industry is contingent on the need to adapt revegetation practices to the realities of climate change and make sure our recommendations are keeping up with the latest research to ensure plantings will contribute to landscape restoration for the coming decades. Through support from the Australian Government's Future Drought Fund, we have been able to review the content of this revegetation guide, update it to accommodate these changing times and make it more accessible to everyone via an online portal, as well as printed resources.



This Revegetation Guide can help farmers and their advisors understand the complexity of managing and increasing vegetation on the farm, help the planning process and ultimately result in more restored landscapes. The guide doesn't, however, replace getting good, on-site advice from practitioners, ecologists and experts in Landcare and natural resource management agencies, and we hope that farmers continue to use these people in conjunction with the resource.

## **CONTRIBUTORS TO THIS EDITION**

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# ACKNOWLEDGEMENT OF COUNTRY AND PEOPLE

The creators of this book acknowledge the First Nations People of this land as the first Land Carers and the original custodians of this Country.

We acknowledge the deep connections their Ancestors and Ancient ones have to this Country and its many song lines.

We value the knowledge of the Elders who continue to pass down the lessons from Country through the stories of the dreaming.

We respect the present generations who we walk with, hand in hand with a shared responsibility to nurture, heal and protect Country.

We are optimistic for the future generations whom we trust will walk with continued connections to healed lands, water, and sky.

We thank you for nurturing Country since time immemorial and we endeavour to return to some of the ancient practices of caring for Country.

Compiled by Nioka Dupond and Leigh Mathieson

# DEFINITIONS

## COUNTRY

In this Revegetation Guide, we have used the term Country with a capital 'C'. There are many different definitions for the word "country". In the English language typically it describes a region, a nation, a territory, or a state. However, when we use the word Country we are referring to it from a First Nations perspective. Many of our First Nations People use the term "Country" as a way to connect to her as a being, and so is a noun with a capital 'C'. Our First Nations People believe that we belong to her and come from her. It is a connection to a place or area, with family and relationships to the land, water, sky, plants and animals.

*"The term Country to me signifies my traditional lands that I know be Wiradyuri Country. Never seen it any other way. It signals where I am from, where I belong, gives me language, my culture, my heritage and my sense of belonging. I have always been Wiradyuri not aboriginal. I am Narrungdera Narinjeri, lizard people with spear, which encompasses Narrandera, Leeton, Griffith and parts of Darlington Point, one of the largest clan areas of the Wiradyuri." — Uncle James Ingram*

## FIRST NATIONS PEOPLE

Throughout this Revegetation Guide we have used the term First Nations People, which acknowledges Aboriginal and Torres Strait Islander individuals as the first custodians of this land, and we recognise their ongoing sovereign connection to this land with unique language groups and independent nations.

# HOW TO USE THIS GUIDE

Rather than use too many specific website links and terms and names that are likely to change over time, we have kept the information general in this printed version.

Use the terms in your internet browser to find more localised and specific resources and information. This hardcopy guide is also to be used in conjunction with the website <[www.revegetation.org.au](http://www.revegetation.org.au)>, where you will find updates and more specific online information on the topics.

The information in this guide is in three parts.

**Part 1** – Planning, design and practical information about implementing your revegetation

**Part 2** – Find what sub-catchment you are in and consult the vegetation profiles for a list of species recommended for revegetation in your area

**Part 3** – Plant descriptions of the most common species

Throughout we will recommend you contact Landcare and/or the regional delivery agencies for natural resources in your area for advice that is specific to your site and local to your area.

This guide covers the regions of the Murray Landcare Collective and Murrumbidgee Landcare Inc. and the current contacts can be found via the NSW Landcare Gateway website < [www.landcare.nsw.gov.au](http://www.landcare.nsw.gov.au)>.

**Good luck on your journey!**



[www.revegetation.org.au](http://www.revegetation.org.au)



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# PART ONE

## Chapters



Riverina





# CHAPTER ONE

.....

## LEARNING THE STORIES OF WHERE YOU LIVE

.....

*Wherever you stand in the landscape there is an ancient, rich history and culture of First Nations People, and we encourage you to take the time to learn more. If you have picked up this guide, it's likely you are already keen to discover and nurture something more for your farm and the landscape within which it sits. Taking this a step further and being curious about the history, the stories, the belief systems, the landscape practices and the people who walked before you provide an opportunity to connect you to the patch you are on at a deeper level.*

If you have lived where you have for a while, perhaps you know the stories, but maybe you are new to the landscape in which you live or maybe you are living on Country. Whatever it is for you, planning revegetation activities is a chance to pause and look at your landscape through a First Nations lens. The stories and culture intertwine deeply with Country and the land management practices differ greatly to western land management.

Following are prompts that might guide and support your learning about the land you are on, its story and its significance within the broader landscape.

### WALK TOGETHER & CONTRIBUTE

Building relationships with the local First Nations community will open up the opportunities to learn about how you can work together with your local First Nations organisations and community. Walking together on Country assists strengthening connections to Country and place, and build deeper relationships and trust.

Relationships are two-way interactions. Ask how you can contribute to First Nations communities in your area.

### UNDERSTAND

Seek to understand the story of what has happened on the land where you live. This can be confronting, and it can feel uncomfortable, but it provides a compelling catalyst for change. Walk together, but if that is not possible there are often public resources in your



*Sometimes information can be found in unexpected places – this valuable resource is located at the Holbrook Submarine Park in Holbrook. Photos: Peter Rowland.*

community - cultural centres, First Nations collections in local museums and libraries, local First Nations sites with information boards - anything that can help you understand local history and contemporary cultural connections.

## THE STORY OF YOUR COUNTRY

Be curious about what the landscape looked like and the daily living practices of First Nations People as they nurture and live with Country.

Most significant landscape features have names, purpose, and stories. Research the original names of these features (think creeks, rivers, plains, hills, rock formations and mountains) and, if publicly available and culturally appropriate, write these onto your farm maps and start using these names. If culturally appropriate, seek to learn the stories and practices that nurtured or protected these features.

Before beginning revegetation work, it would be best to learn if there are already identified objects or sites of significance close by [there is an Aboriginal Heritage Information Management System (AHIMS) that can be accessed via the government agency responsible for cultural heritage]. Learn more about these, and how your patch might be connected to stories or cultural practices.

If you find a place of significance or a sacred object on your farm, do you know what you can do to protect it and become a guardian for it?

Who do you contact to share this with? What can this object tell you about the place where it was found?

Contact your Local Aboriginal Lands Council (LALC) or other First Nations organisations in your area. If they are unavailable, Landcare or your regional natural resource agency might also be able to help.

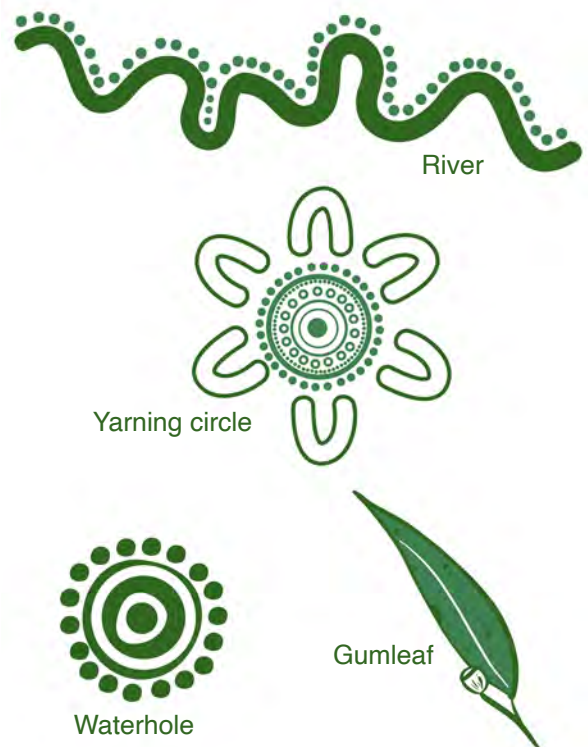
*The resource **Wiradjuri plant use in the Murrumbidgee Catchment (2008)** is a great resource on local plants, their First Nations' names and uses.*

## SPEAKING THE STORIES

By sharing what you are learning you can continue the stories, create connections to places and practices, and build an understanding of new and ancient ways to nurture our land.

However, be aware that some cultural knowledge is not for the public. Understand what cultural knowledge can be shared and what needs to be kept between you and First Nations People.

To acknowledge and keep First Nations culture in front of mind on the revegetation journey, we are using graphic elements created by First Nations designer Shelby Lyons, from Marara Designs, throughout this guide.



*Figure 1. Elements used within graphics (created by Shelby Lyons – Marara Designs)*

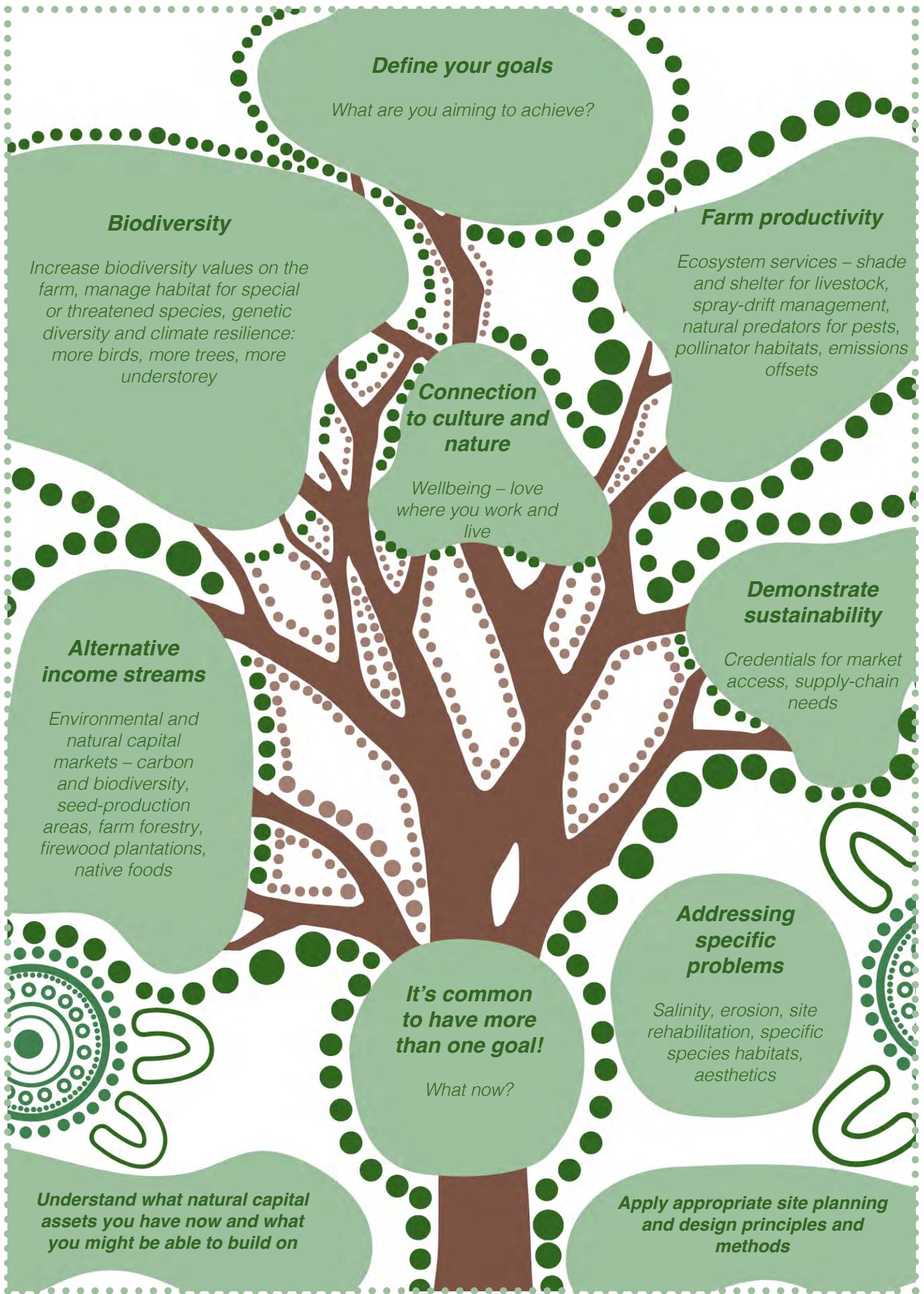


Figure 2. Planning revegetation “Why Tree” (Image Concept Design - Lou Bull / Artwork - Shelby Lyons)

## PLANNING REVEGETATION

### IDENTIFY YOUR NATURAL ASSETS

Knowing your farm's natural assets is key to making good decisions about managing your land. Natural assets include things like existing vegetation, soils, groundcover, and creeks, and natural features like rocky outcrops and native grasslands.

Protecting and connecting these natural assets is the best approach when planting new plants and restoring your land. This also helps protect any First Nations cultural sites that might be there.

Your farm's natural assets provide benefits like shade, shelter, pest control and pollination. All these benefits together are called ecosystem services, and they form part of the natural capital on your land.

Keeping track of your natural assets and their condition over time is called Natural Capital Accounting. This can help you see how your land is doing and communicate the wider environmental benefits (like clean air or water) being generated on your land to others.

### CREATE A WHOLE-FARM VISION

#### 1. Assess your farm

Take a comprehensive look at your entire farm, including its natural resources, assets, and current condition. Consider how it fits into the local farming area and region.

#### 2. Create a vision

Imagine what you want your farm to be like in the next 10, 20 and 50 years. What are your goals and aspirations?

#### 3. Have long-term plans

Identify the outcomes you want in the future. For instance, you might aim to increase vegetation cover and biodiversity for sustainability, address salinity or erosion issues, create habitat for threatened species, or promote carbon sequestration.

#### 4. Be ready to adapt to events

Be prepared when sudden events like fires or floods create opportunities for change. Be prepared to shift priorities like fencing and erosion control when necessary.

## 5. Improve efficiency

Identify less productive areas on your farm and find ways to improve efficiency in the most productive areas.

## 6. Revegetation planning

Consider realigning fencing to optimise productive areas and create revegetation opportunities in sensitive areas like gullies and wet patches. Use the opportunity to adjust paddock configurations, and incorporate laneways, holding paddocks, and new watering points.

## 7. Budget and investment

Having a whole-farm plan and vision allows you to allocate time and resources effectively, and recognise where you might need external investment.

## 8. Collaborate

Engage with others in your district or region. Look for community interests and projects you can contribute to collectively.

## 9. Site-specific considerations

Think about unique features on your land, such as threatened wildlife species, cultural sites, or special land formations (like rocky outcrops, wetlands, or grasslands). Discover any specific opportunities related to environmental markets or private land conservation agreements.

## 10. Seek expert advice

Research and consult local organisations like Landcare and/or regional natural resource management agencies for guidance and support. They can provide valuable insights and help you achieve your farm goals.

The following chapters in Part 1 address the design principles and techniques for revegetation for different purposes and cover the basics, including:

- Chapter 4** – design – size, shape of area (the configuration), fencing and climate considerations, and the specific design principles that apply to different types of revegetation
- Chapter 5** – revegetation methods, and costing considerations
- Chapter 6** – site preparation and planting
- Chapter 7** – longer term management and monitoring needs
- Part 2 & 3** – provide specific plant lists and details.



# RESTORATION OR REVEGETATION?

The landscape was once covered in native vegetation. But now it varies on a continuum from highly degraded (where introduced species have completely replaced native vegetation, such as on farming land with pastures and crops), to patches of good condition with high biodiversity and First Nations cultural values. All sites on any farm are somewhere on this continuum (see Figure 3 below).

The condition of the native vegetation reflects its resilience – its ability to recover and regenerate. Always work first on the good sites that are still resilient and able to improve with low levels of intervention (e.g., grazing management, weed control).

Sites with less resilience or no ability to improve on their own can be targeted for revegetation.

Use the site assessment sheet (**page 11**) to assess the condition of your site and which strategy for restoration best suits its condition.

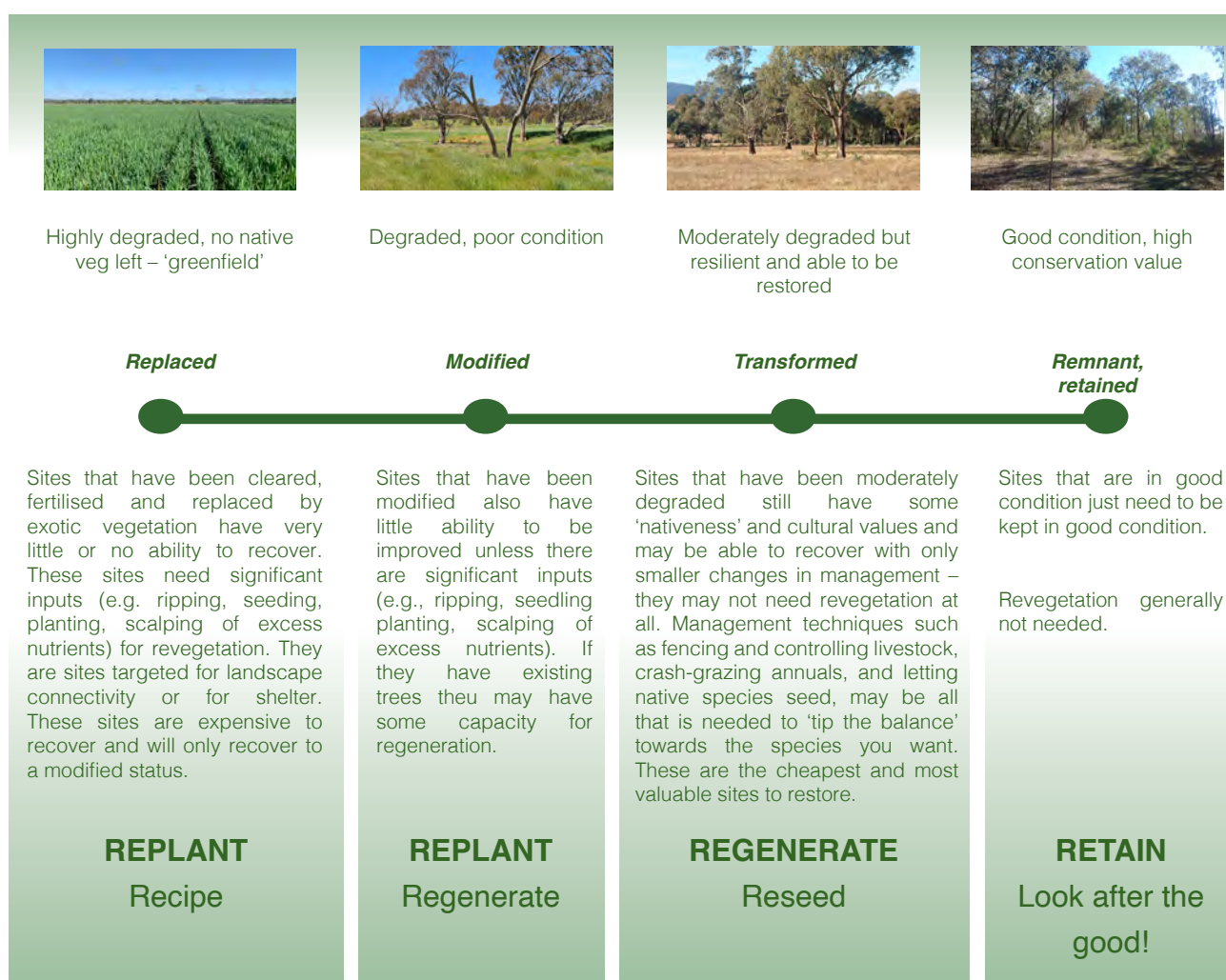


Figure 3: Continuum of vegetation condition and appropriate restoration methods

## THE FIVE RS – PRINCIPLES OF PLANNING

Work through the following five Rs in order on your farm or site.

- **Retain** and improve existing vegetation and natural assets first (e.g., wetlands, rocky outcrops, creek-lines, swampy areas, native grasslands, culturally significant areas). Look after the good stuff and work out from there. Respect any sites with objects or sites of First Nations cultural significance, and sites with habitat for significant species.
- **Regenerate** from remnant vegetation, either by encouraging natural regeneration from seed or by encouraging suckering of those species that reproduce this way (see Chapter Five - Regeneration). These plants are free! You can do this by reducing or eliminating the grazing pressure on the site to enable young seedlings to germinate and grow naturally, by controlling weeds, and sometimes by disturbing the site to encourage seed germination.
- **Reseed** into remnant vegetation with appropriate species and techniques.
- **Replant** where there is no existing vegetation, such as on a greenfield site, and put back trees and understorey. Seedlings may also be appropriate in remnant areas to replace plant species that cannot grow through direct seeding and suckering, or to reintroduce special or rare species.
- **Revisit** your site regularly to monitor changes, check results and decide what other necessary work is needed to achieve your goal.

# SITE ASSESSMENT SHEET

## ASSESSING WOODY VEGETATION

Place a tick (this is true) or a cross (this is not true) in the box for each area		Area 1	Area 2	Area 3
There are large mature trees, maybe with hollows that are important habitat for hollow dependent mammals and birds				
Trees of all ages are present (seedlings, saplings, trees of moderate and old age)				
Standing and/or fallen timber is common				
Trees are healthy with no signs of dieback				
Native shrubs are present in the understorey, even if they don't form a dense layer				
The groundlayer is mostly native grasses and herbs. There may still be patches of exotic grasses, but the native cover is above 50%				
Few weeds are present, or they are only on the edges				
The area is connected by woody vegetation to other areas of native vegetation, or the gap between them is within 100m				
The area is larger than 5 ha				
Total number of ticks				
Native Vegetation Score				
<b>No. of Ticks (True)</b>				
<b>Native Vegetation Condition</b>		<b>5 R's?</b>		
8-9	Near Natural (Remnant)	Retain		
6-8	Little Disturbed (Transformed)	Retain and Regenerate		
4-6	Moderately Disturbed (Transformed)	Regenerate and Reseed		
3-4	Degraded (Modified)	Regenerate and Revegetation		
0-3	Highly Degraded	Revegetation		

## ASSESSING GRASSY ECOSYSTEMS

Ecosystem description	Area 1	Area 2	Area 3	5 R's?
Very few weeds, 75% of grasses are native species, diversity of native plants and wildflowers, orchids, lilies, spaces between the tussocks with moss and lichens				Retain
Sparse weeds, over 50% of grasses are native species, some tough native plants and wildflowers present (1-3 sp) e.g. Everlasting daisy, <i>Vittadinia</i> sp.				Retain, Regenerate
Weeds or non-native species abundant, native grass less than 50%, few or no other small native plants and wildflowers				Regenerate, Reseed

# LEARNING THE VEGETATION WHERE YOU LIVE

The vegetation profiles in this guide are location based – built on local knowledge of places with existing native vegetation, and the expert knowledge of ecologists and practitioners from the region. The vegetation profiles can assist in identification of the plants still in the landscape, but also help identify what is missing and needs to be included in revegetation.

Why does this matter? If you put back the naturally occurring species for your site, you increase the chances of successful planting and benefit the wildlife that relies on those species in the landscape.

While climate change adaptations will shape future decisions, for now, our choices are still based on the existing vegetation communities.

Remember, these profiles aren't exhaustive lists. Sometimes you need more details about the vegetation type in your area to help with planning, native vegetation rules and regulations, and identifying biodiversity programs and funding that is available. Many environmental programs refer to the State Vegetation Type classifications.

There is now a State Vegetation Type map available for most of NSW based on the 'NSW vegetation classification framework' that classifies from broad to specific plant-community types.

Every plant-community type has benchmarks for numbers of species, hollow-bearing trees and woody debris that should be there, and can be useful to set goals for restoration.

*Knowing what your plant-community types are helps you manage remnant vegetation and plan for restoration and your eligibility for potential funding programs or financial rewards.*

## - THE NSW VEGETATION CLASSIFICATION - HIERARCHY

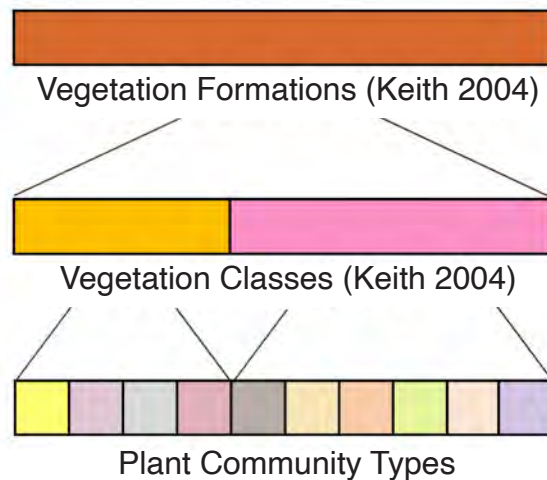


Figure 4: The NSW vegetation condition hierarchy Credit D Keith

In this guide, the ‘vegetation-type’ descriptions in the profiles are more general, as specific descriptions and classifications have and will change over time. You can view the current State Vegetation Types map on the public website ‘**NSW SEED portal**’ and determine what the vegetation class and plant community type is on your site.

It is also accessible via the app ‘**Trees near me NSW**’ (downloadable from your app store), and this can be a good way to start to learn in the paddock about the vegetation community types that are expected where you are. The ‘**Trees near me NSW**’ app will give a couple of options for the plant-community type you might have – it is made from a model, so read the more detailed description of the options provided to confirm what is actually there.

# SPECIFIC REVEGETATION DESIGN PRINCIPLES

When designing and planning a revegetation site, the details depend on your specific goals. It might be tempting to believe there's a universal 'recipe' for revegetation that works everywhere, but it actually varies based on what you're trying to achieve and the unique features of each site.

There are a couple of principles that apply to all revegetation – fencing design, size and shape, fire and climate readiness. The rest of the chapter addresses different revegetation types and principles of design for those different goals.

## FENCING DESIGN

Fencing is the tool we use to exclude grazing animals from revegetation areas. It is the most expensive part of a revegetation project, but also the most important for success. Fencing style is a personal preference based on your landscape, livestock, stocking rates and budget. Revegetation takes at least five years to establish, so the fence must remain stock-proof for at least that time.

Funded projects may have minimum or specific criteria and require permanent fencing, and wildlife-friendly fencing is best practice for biodiversity plantings.

### *Permanent vs. temporary fencing*

- Permanent: uses strainer posts driven into or cemented in the ground plus wires or mesh. It should be stock-proof without electricity.
- Temporary: often relies on electricity to keep animals out.

### *Wildlife-friendly fencing*

Wildlife-friendly fencing removes the risk of wildlife being injured or killed in a fence that is put up to protect them, and allows for free movement of wildlife in the landscape.

A wildlife-friendly fence will:

- have no top barbed wire
- avoid barbed wire altogether, if possible
- avoid buried netting or low electric wires at the base of the fence (look after echidnas and wombats)
- be standard height.

Exclusion fencing is only appropriate for revegetation and remnant-protection fencing on farms in specific circumstances, such as exclusion of pest animals for wildlife reintroduction.

### *Other considerations*

- Larger blocks are cost-effective – fewer strainers, greater value for money.
- Always include gates for access, and to manage fire risks.
- Consider preparing the site before fencing.

## SITE DESIGN

### SIZE AND SHAPE – CONFIGURATION

All revegetation is good in the landscape, but research shows that the width, length and the way blocks connect matter for biodiversity outcomes.

In small plantings there is an 'edge effect', which means the outside of the planting is more influenced by wind, heat and what's going on in the paddock (e.g., spray and fertiliser drift). The edges are favoured by some wildlife species, avoided by others, and are areas where predators are more prevalent. Accordingly, very narrow plantings may not have as much biodiversity value as wider sites. There are also cost efficiencies in bigger block plantings.

There is some great data available on the effectiveness of revegetation for birds, reptiles and arboreal mammals, and an insight into what size, shape and characteristics of revegetation are most effective, thanks to the Australian National University's long-term monitoring. Figure 5 (page 16) has been adapted from a great resource, **Managing natural assets: shelterbelts**, Sustainable Farms, an initiative of Australian National University, 2023.

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 SIZE AND SHAPE GUIDE  
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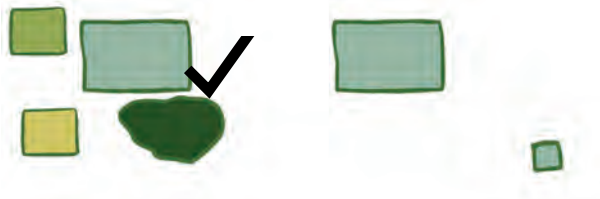
Bigger is always better – but the reality is usually about the balance with production on a farm. Go as big as you can.



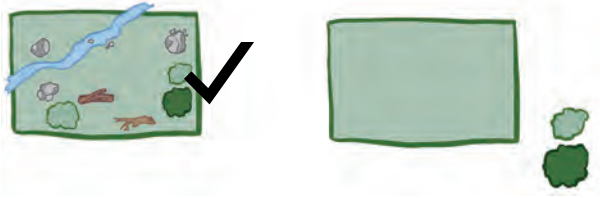
Blocks are better than skinny strips – less edge effect. Funding programs may have minimum widths but a rule of thumb with any planting is making sure there is space for at least three rows of plants to fit.



Revegetation areas that are near other revegetation areas or remnants are better for biodiversity.



Revegetation areas that have different habitat elements in them – creeks, rocky areas, hollow-bearing trees, lots of logs and litter on the ground – have more biodiversity potential.



Revegetation that connects to other patches or makes remnant vegetation bigger has better value. The intersecting corners and complexity of shapes can provide refuge from Noisy Miners.



Figure 5: Size and shape (configuration) and biodiversity outcomes [Adapted with permission: ANU Sustainable Farms]



## FIRE READINESS

Fire readiness in design is all about access in an emergency.

- **Always include gates** – for gaining access to fires, or getting stock out in an emergency.
- **Plan breaks** - avoid long continuous linear revegetation areas without breaks – make sure paddock gates are still accessible.
- **Wider plots** are easier to get stock in and out of. Stock may head to wet gullies or creek areas in a fire for refuge, and may need to be quickly moved to safety so they don't become trapped.

Revegetation areas can be placed strategically to reduce wind speeds and therefore the speed of fire spread.

Individual fire behaviour varies widely depending on the conditions at the time, and in a catastrophic fire event, no level of 'design' is going to help. The most important thing is to have a realistic view of fuel hazard and risk in your revegetation areas and a fire plan for your property. The NSW Rural Fire Service (RFS) provides many resources for this.

*Fire as a tool for management of vegetation is covered in Chapter 7.*

## CLIMATE READINESS

Use some plant species and sources that match expected future climate conditions.

The steps for designing climate ready plantings are:

1. Understand climate projections for your region and site.
2. Identify the climate analogue – find the region your area will resemble climatically in the future (e.g., 2030, 2050, etc.).
3. Use the revegetation guide to choose 5 to 10 species that occur in both areas.
4. Get some of your plants and/or seeds from the analogue area.

In general, seed or plant stock in a planting for climate resilience should be 70 per cent local and 30 per cent from climate analogue areas.

There are webtools that can help you find your climate analogue area – consult the <[www.revegetation.org.au](http://www.revegetation.org.au)> website or search online for more details and the latest links.

## SOURCING SEED AND PLANTS

In general, using locally sourced plants or seed for revegetation is important to ensure plants are adapted to local conditions and maintain local genetic diversity as well. However, there are some exceptions to this – for example:

- adaptation for climate resilience (see **Climate Resilience**), or
- if local populations of plants have become isolated and you need to introduce more genetic diversity.

But even then the majority of revegetation should still be based on local species and local plants and seed where possible. 'Local' really means collected from the closest remnant populations. Sometimes this is possible, but if it is not, then choose plants grown from a similar landscape or climate analogue region. The latest best practice in seed and plant sourcing can be researched in the **Florabank Guidelines** (accessible online).

## TYPES OF PLANTINGS

### BIODIVERSITY PLANTINGS

Biodiversity is a term for the diversity of life – the soil organisms, plants and plant communities, and the range of insects, birds and animals that may live in a certain place. Once we have protected the good stuff (near-natural and less degraded sites) then we may want to improve other sites or plant new sites.

Biodiversity plantings aim to improve biodiversity in the landscape by:

- adding plants and structure to existing patches in poor condition
- connecting patches so fauna can move around
- creating new patches.

For biodiversity restoration and revegetation in general:

- **use wildlife-friendly fencing** to control livestock access
- **exclude livestock** – grazing impacts the quality of remnant vegetation and the success of revegetation (Lindenmeyer et al., 2018)
- **bigger is better** – use the 'size and shape' principles mentioned in Figure 5
- **maximise diversity** – plant a range of trees, tall, medium and small shrubs, groundcovers and grasses (if the site is suitable), and include plants that are nectar sources for small birds, insects and other pollinators
- **mix it up** – you don't have to plant in lines; clumps of shrubs and habitat patchiness is good for many species
- **keep or add habitat features**, such as fallen timber, and maintain any standing dead plants - including shrubs

*Environmental Markets may provide an opportunity for income from biodiversity plantings. Credits may be available for existing native vegetation that is being protected and improved in condition through the NSW Biodiversity Conservation Trust. Keep up to date on opportunities through your Landcare group or regional and/or natural resource management agencies.*

- **control weeds** – environmental and invasive weeds can take over plantings
- **control pests** – implement pest-control programs to reduce the impact of animals (rabbits, hares, deer, goats, pigs) on the plants and the wildlife
- **encourage cultural connection** – research and encourage traditional cultural practices and connection with Country, including the use of cultural and ecological burning (see **Fire as a Management Tool** in Chapter 7).

To maximise the biodiversity benefit on your farm you need a wide variety of habitat types, including protected remnant vegetation and revegetation areas of varying ages.

It is possible for revegetation to have negative impacts on species if they need a specialised habitat that does not include not trees and shrubs – for example, many grassland species. In general, this will only be relevant in very specific local areas. Speak with your Landcare and/or local regional natural resource management agency for more guidance if you are worried.

## **ROCKY OUTCROPS**

Rocky outcrops can be:

- refuge areas for many species, e.g., hilltopping butterflies
- specific habitat for some species, e.g., Carpet Pythons and many other reptiles
- significant for First Nations People, and so provide an opportunity to learn more about the stories of your place.

To protect and enhance rocky outcrops consider the following:

- **use wildlife-friendly fencing** to protect from livestock
- **prevent any rock removal**
- **protect from fire** – keep prescribed burning out of the area to prevent damage to rocks and animals that take refuge there
- **control pest animals** that also use it as refuge; if you rip rabbit warrens aim to do this in the cooler months when Carpet Pythons and other reptiles are less likely to be sheltering in warrens.

If you are doing any revegetation at all:

- **don't overplant** – aim for a plant density of 20–30 trees per hectare, and include shrubs, native grasses and herbs
- **maintain basking sites for reptiles** – if outcrops are domed or conical shaped, consider planting on the southern aspect
- **keep habitat features**, such as fallen timber, and maintain any standing dead plants, including shrubs.

## Paddock Tree Protection and Plantings

The South West Slopes and Riverina is a landscape scattered with large old trees. These trees may be hundreds of years old and provide critical elements in our landscape for livestock and wildlife that cannot be provided by revegetation. Protecting and replacing these assets does take effort.

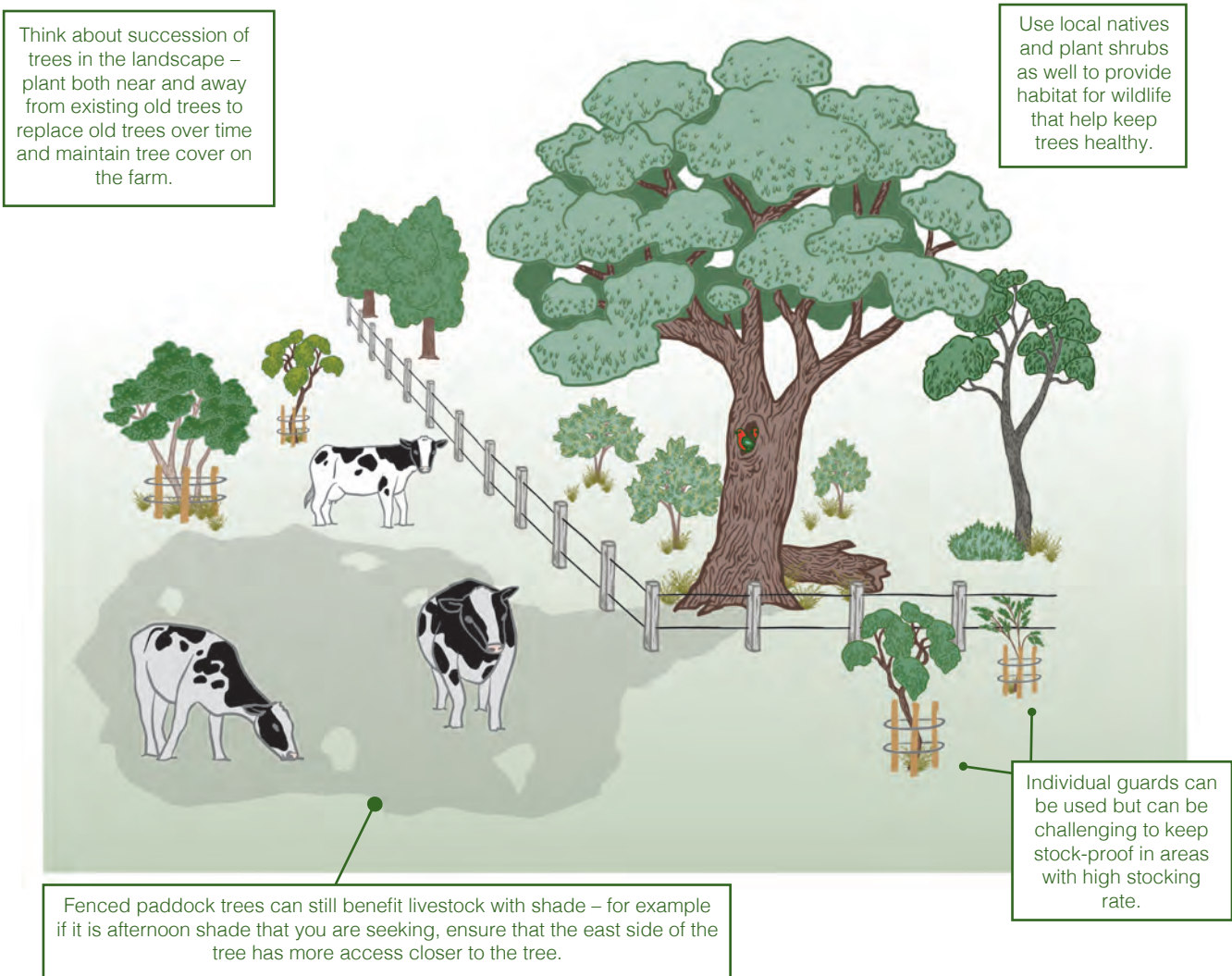


Figure 6: Paddock tree protection and planting [Adapted with permission: ANU Sustainable Farms]



*Figure 7: Taking advantage of a natural regeneration event to protect and increase paddock trees. Photo: Darren Grigg*

To protect and grow more paddock trees:

- **protect individual trees** from livestock chewing the bark and damaging them – use yard panels or gates around the trunk
- **fence around paddock trees** to exclude livestock; this helps improve the tree's health by reducing nutrient loads and compaction caused by stock camps
- **allow natural regeneration** – fence wide and outside the drip zone of existing trees to allow natural regeneration; most regeneration occurs at a distance approximately twice the tree's height away from the trunk
- **plant new trees in fenced areas** – you can use individual guards, although they are less cost-efficient.

## WATERWAYS AND RIPARIAN ZONES

The buffer around waterways is known as the 'riparian zone'. These are the most productive areas in the landscape for farming, but are also for wildlife – they have higher productivity for biodiversity than the hilly areas with poorer, drier soils.

### *Benefits of well-vegetated riparian zones*

- **buffering:** riparian zones catch debris and nutrients flowing from nearby land, watercourses and catchment areas
- **stabilising:** riparian vegetation helps stabilise the waterway bed and banks, preventing erosion
- **landscape connectivity:** vegetated riparian zones are like highways for wildlife – they are long and linear and allow animals to move
- **cultural connections:** riparian zones are often rich in historical objects and resources essential for First Nations cultural practices such as weaving and food gathering.

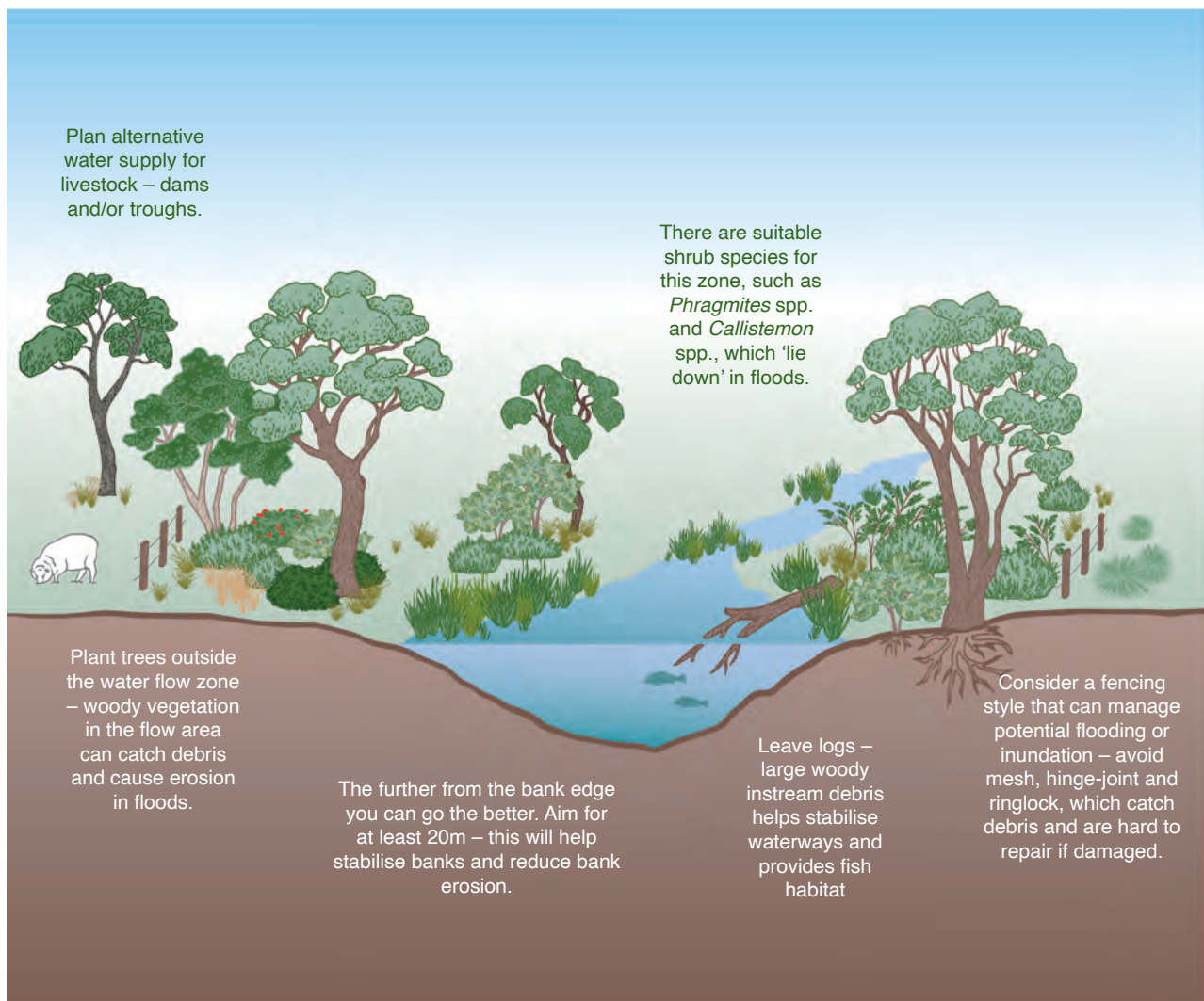


Figure 8: Making a healthy riparian area [Adapted with permission: ANU Sustainable Farms]

Fencing waterways can be tricky, especially if the stream has multiple channels or lots of bends, active erosion points, and there is potential for flooding.

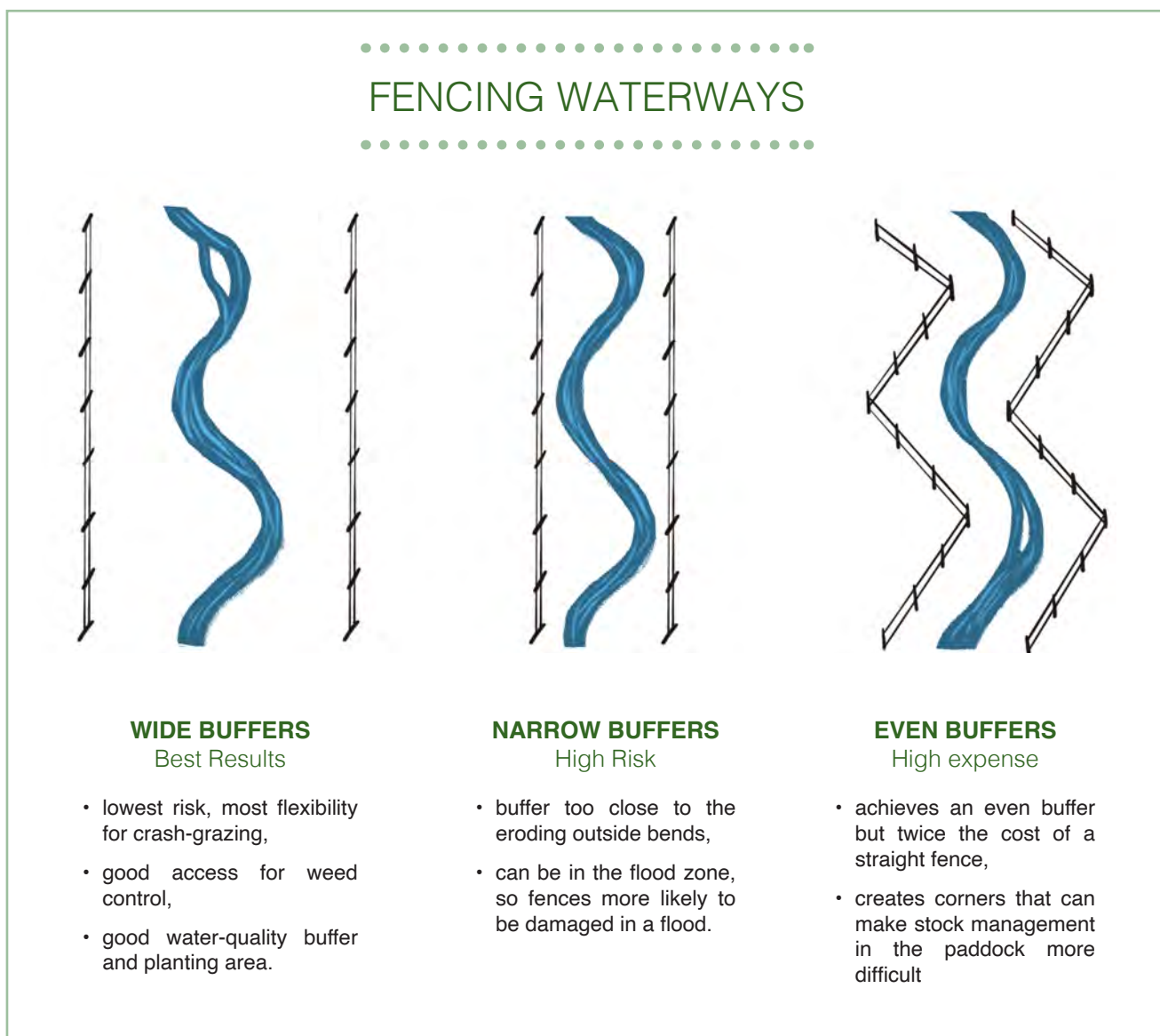


Figure 9: Fencing strategies on waterways

## SITE PREPARATION ON WATERWAYS

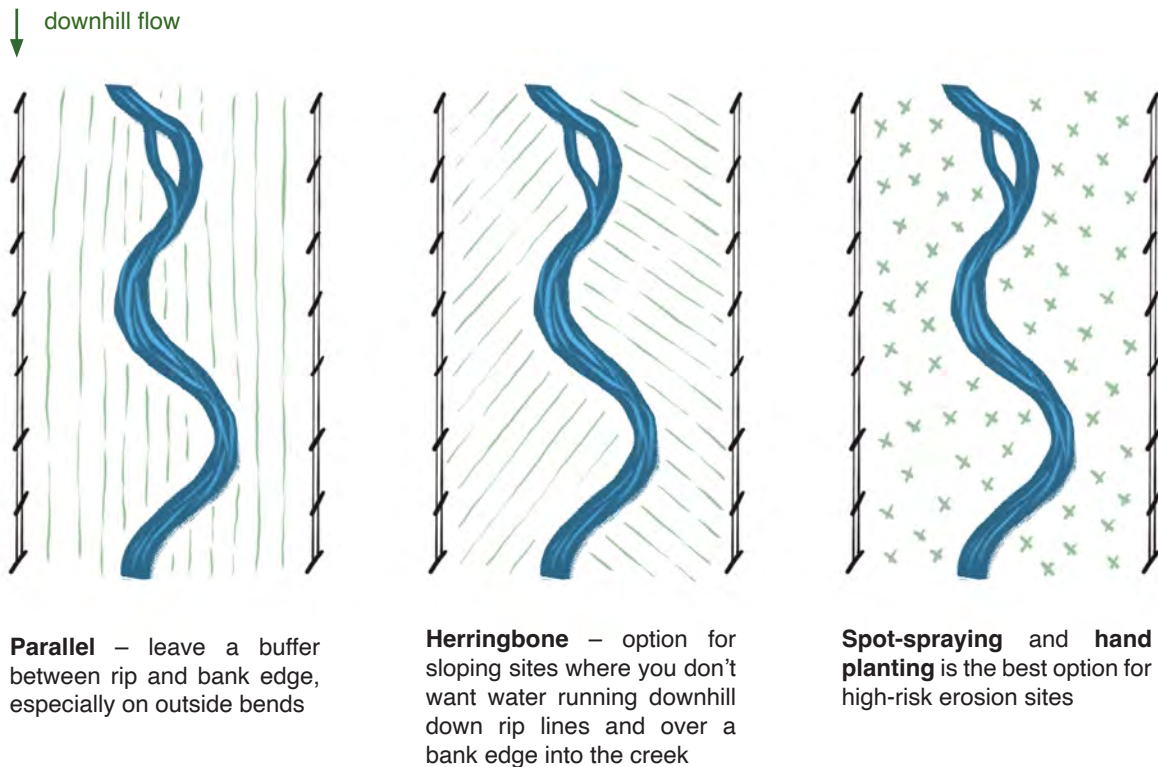


Figure 10: Site preparation options on waterways

Seek advice before ripping and spraying complex planting sites to avoid potential erosion and impact on cultural values. Spot spray, or spray rip lines only to maintain maximum groundcover in these sites.

There are requirements for permits for major disturbance and vegetation removal within 40m of a stream in NSW under the Water Management Act 2000, so check with your regional natural resource management agency if unsure.

We often concentrate on the top of banks for replanting and rely on livestock exclusion to allow the instream environment to recover by itself. Sometimes they may need active reintroduction. (See **Establishing Aquatic Plants**, page 32).

Planting overhanging shrubs and fringing plants along instream features (e.g. in the bank, toe of bank) is important to be able to restore all the processes necessary for a healthy waterway. These need to be planted by hand, and long-stem planting may be used in sandy banks. (See Figure 12: **Planting aquatic and fringing vegetation**, and Figure 28: **Long-stem planting**.)



## WETLANDS AND DAMS

Small wetlands, springs and soaks are common refuges on farms for aquatic species, but they are becoming less common and more degraded.

Farm dams can also be a refuge in the landscape, if livestock access is controlled or removed. Fencing off and planting farm dams, and providing water for livestock with pipes and troughs, has benefits for production by improving both water quality and livestock health.

### FARM DAMS AS HABITAT

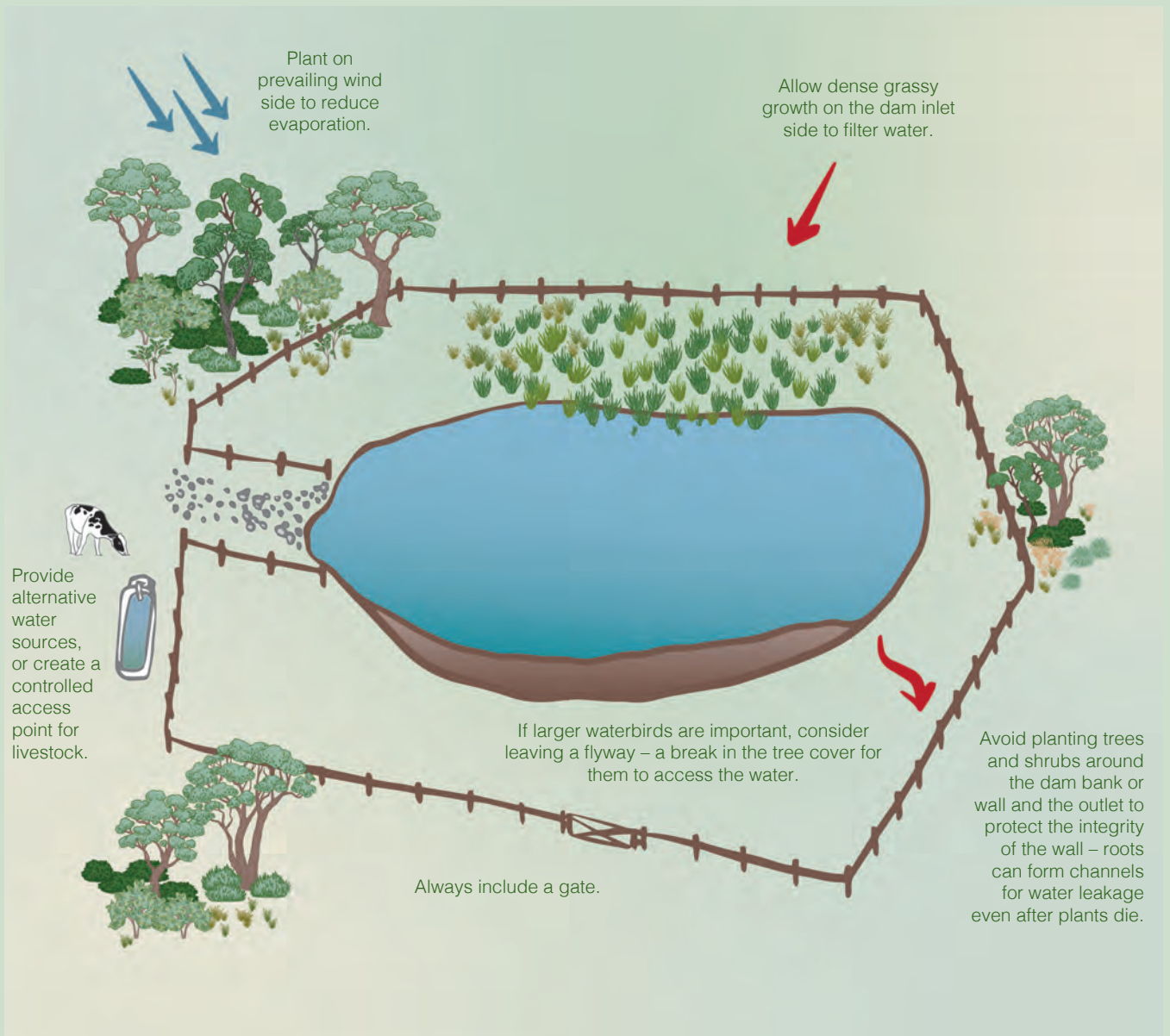


Figure 11: Farm dams as habitat [Adapted with permission: ANU Sustainable Farms]

## NATURAL WETLANDS

For natural wetlands the principles are the same as for farm dams, but often the aim for wetlands is restoration, rather than revegetation.

- **Fence to control livestock;** access and grazing should be limited to when the wetland is completely dry, if at all.
- **Assess condition** to see if it has the capacity to recover by itself.
- **Seek advice before revegetation** about what plants are appropriate. Trees and shrubs do not grow naturally in some types of wetlands.

Like waterways, wetlands can be rich in cultural objects and resources essential for First Nations cultural practices, such as weaving and food gathering. Research and encourage the plants that support these practices and support a healthy wetland.

## ESTABLISHING AQUATIC PLANTS

Aquatic plants growing on the edge and in the water are critical habitat for many aquatic invertebrates, frogs and fish, and are also important for erosion control and traditional cultural practices such as weaving and traditional food gathering for First Nations People.

Aquatic revegetation of waterways, wetlands and dams can be challenging if they are highly degraded. For free-floating plants, sometimes a means to anchor the plants is needed, such as weighting with bricks or rocks. They may also need protection from grazing by carp, yabbies, turtles and ducks.

Excluding stock and allowing access for waterbirds can help to bring in some vegetation naturally, but you need the conditions for them to thrive:

- a range of depths and substrates (e.g., mud, sand)
- exclusion or control of livestock that trample and graze on plants.

Many aquatic species spread naturally once introduced, so you may not need to do extensive plantings.

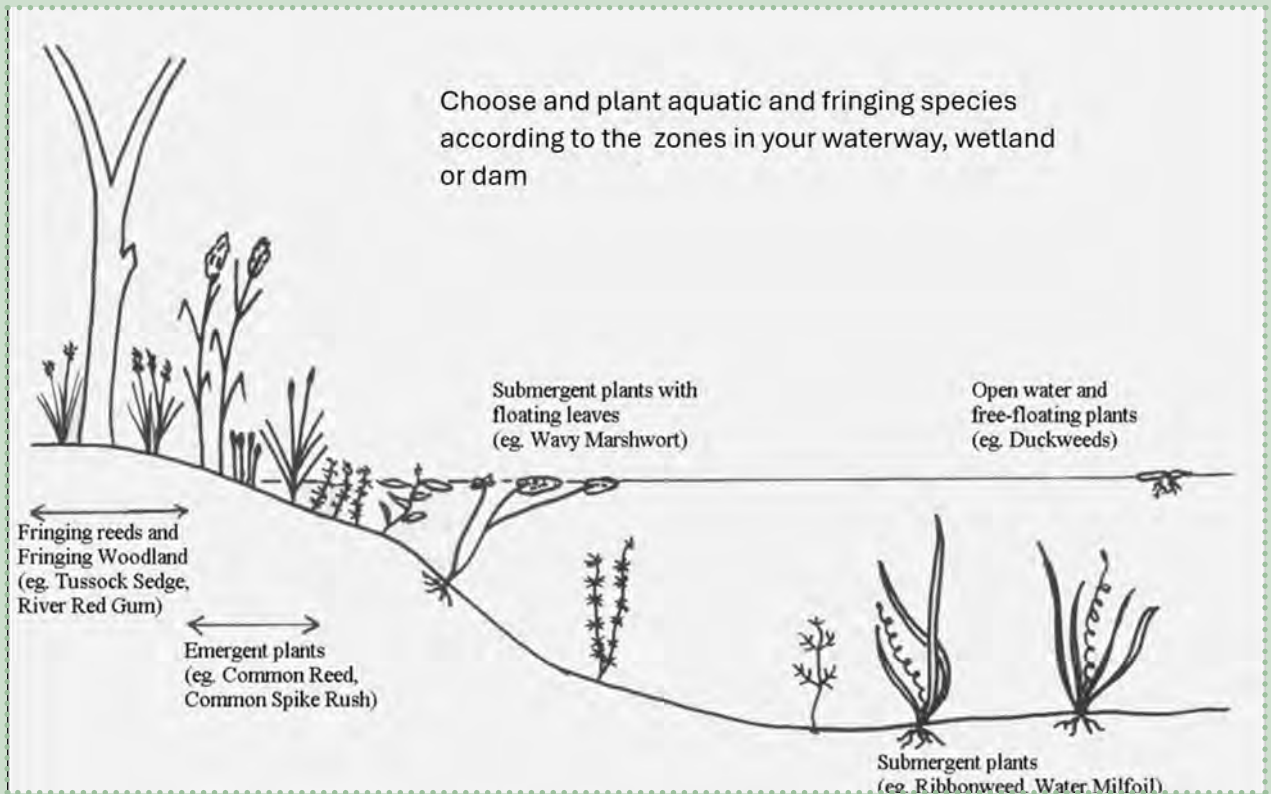


Figure 12: Planting aquatic and fringing plants. [Source: South West Slopes Revegetation Guide 1st ed - Managing Wetlands]

Revegetation can be with:

- **seedlings** – there are specialist nurseries that can supply these species
- **seed, cuttings or corms** – many aquatic plants will grow from corms or fragments of plants
- **transplanting of rootstock from another location** – you have to consider the impact of harvesting, but many rushes and reeds can be quite common and plants can be transferred easily (e.g., *Phragmites australis* – the common reed)
- **transfer of sand or mud with seeds** – again, you need to consider the impact on the harvest site but transferring mud from another site with established plants is possible.

When planting emergents and submergents, ensure at least a third of the plant is out of the water at the high-water mark.

## RESTORATION OF NATIVE GROUND LAYER – GRASSES AND FORBS

For most farm revegetation we tend to concentrate on trees and shrubs, as these are the most available and robust plants – the ‘pioneer’ species, such as wattles (*Acacia* spp.). These species are able to establish in the harsh conditions of revegetation – weed competition, high soil nutrient status and unshaded environments.

Often we ignore the groundlayer, or if we do plant them they don’t survive. Groundlayer restoration can be very challenging in highly degraded and modified sites.

Groundlayer plants are:

- native grasses
- sub-shrubs (small woody plants below 50cm) and tussock plants
- creepers and climbers
- small annual leafy plants and wildflowers (forbs).

The technique for restoration will depend on the site condition.

### *Highly degraded sites (no native vegetation) – Scalping*

This technique physically removes the nutrient and weed-seed rich topsoil with machinery and then uses hand direct seeding or seedling planting to revegetate with native grasses and small groundlayer plants.

Considerations:

- It is high risk and expensive.
- Only suitable at low slopes and small scale due to erosion risk.
- It removes soil from the site, so you have to have somewhere to put the spoil.

### *Less degraded sites*

There are a few options to restore the site with management changes:

- **change the grazing regime**, controlling weeds and allowing regeneration
- **cultural and ecological burning** – research and encourage traditional First Nations practices that support a healthy native groundlayer
- **add missing species** directly with seedlings or seeding
- **reduce nutrients** – there have been experimental techniques that apply carbon (usually sugar) to the site to promote microorganisms to use up the excess nutrients and favour the natives (Smallbone et al., 2007).

Both of these techniques are **only suitable for small-scale sites** due to both risk and cost, and require a lot of planning and advice.

Do your research and seek advice from Landcare and/or your local regional natural resource management agency.

## FARM SHELTERBELTS

Shelterbelts have benefits for livestock and pastures, including:

- wind protection (hot and cold)
- protection of built assets
- sun protection (shade)
- preventing soil erosion
- managing spray drift
- biosecurity.

There are some very comprehensive resources available around shelterbelts, both hardcopy and online, that can help you design for your specific situation.

Here are some general principles for shelterbelts:

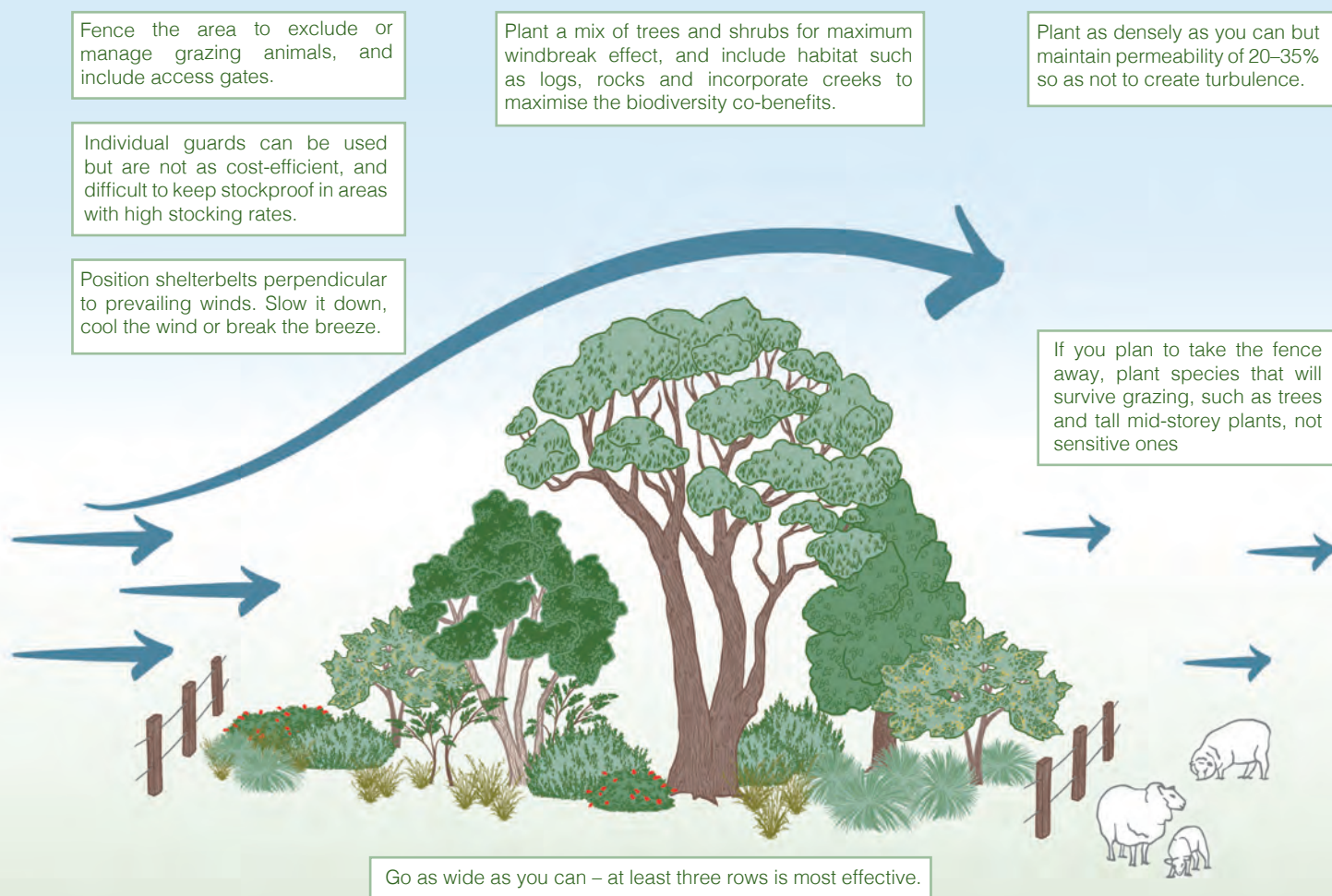


Figure 13: Designing a shelterbelt [Adapted with permission: ANU Sustainable Farms]

## EROSION SITES

Erosion is caused by the energy of water and wind on the soil. As bare ground is more prone to erosion, the initial aim of rehabilitation and revegetation of any erosion site is to stabilise the erosion (address the cause) and then establish perennial groundcover as soon as possible. Consider the following general points about revegetation of these areas:

- **reduce density of woody plants** – heavily planted areas can result in less grass groundcover because of moisture competition
- **consider the risk of ripping** – apply the same principles as for waterways (see Figure 10: **Site preparation options on waterways**, page 24) and if you do rip, leave a wide buffer around active headcuts
- **create moisture and seed microsites** – small banks or shallow disturbances across the contour on the bare ground may be needed where it is compacted and low in organic matter
- **mulch** may also be helpful in severely degraded sites
- **consider a cover crop** for instant groundcover after earthworks and in highly degraded sites – sterile ryecorn, or an annual cereal may be useful to get instant groundcover and some organic matter back while the revegetation is becoming established.

There are many erosion-control products (e.g. jute matting) available that can help with revegetation establishment on highly degraded sites and recovery after earthworks. Do some research to see if there is something suitable for your site.

*Note that in some native ecosystems, it is natural to find patches of ground that appear bare. These micro environments, consisting of mosses, lichens and Cyanobacterium are called 'bio crusts', and they are an important part of the ecosystem. These areas should not be targeted for erosion-control actions.*



*Figure 14: Erosion revegetation using mulch. Photo: Kathie Le Busque*



*Figure 15: Some bare ground and bio crusts (mosses and lichens) are natural in some native ecosystems, and may be a sign of ecosystem health. Photo: Kylie Durant*

## DRYLAND SALINITY MANAGEMENT

Dryland salinity is caused by rising groundwater – more water entering groundwater in ‘recharge’ zones, mobilising salt stores and coming back to the surface in a ‘discharge’ zone.

This system can be from local runoff (especially in granitic landscapes) or from irrigation. It can also be regional over many kilometres (metasedimentary landscapes).

The principle of planting to manage this salinity is to plant to reduce the amount of water entering the groundwater system – plant roots intercepting flow and drawing up water.

Before undertaking plantings for salinity, seek further advice through your local Landcare and/or regional natural resource management agency, or agricultural advice service. Recommendations can be quite specific to local catchments and sites.

For salinity planting in general:

- **Retain cover** – and maximise existing woody vegetation and groundcover.
- **Revegetate recharge areas** with trees and shrubs and/or deep-rooted perennial grasses to reduce the ‘leakage’ into the groundwater.
- **Establish ‘break of slope’ plantings** – above discharge areas and plant 2–4 rows of trees and shrubs with pastures between (see Figure 16)
- **Buffer discharge sites** – fence out the affected area to reduce livestock stock access to allow groundcover to establish and plant woody vegetation around the site. Waterlogged sites may require ripping and mounding.
- **Plant saline tolerant species** – consider salt-tolerant pasture grasses and salt-tolerant trees and shrubs.

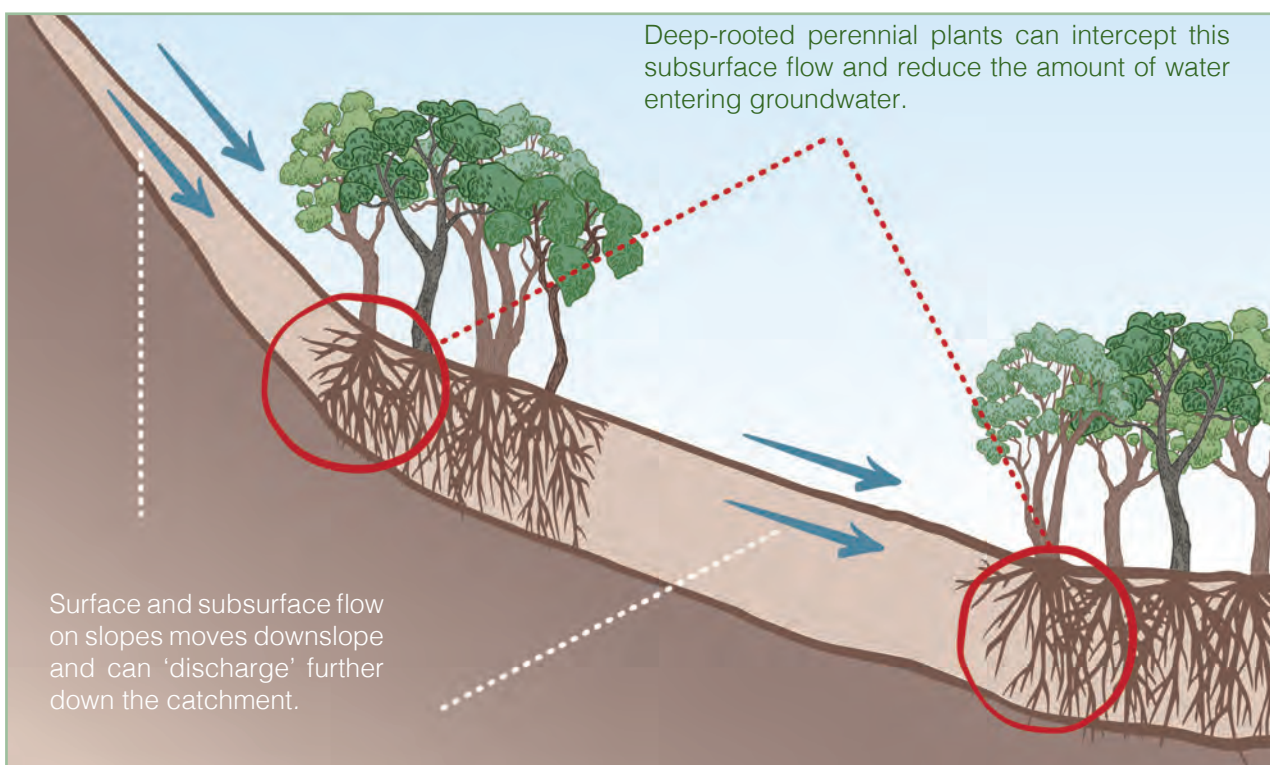


Figure 16: Example of break of slope plantings for salinity management [Adapted from Clifton et al 2006]



## CARBON SEQUESTRATION

Carbon is stored in the stems and roots of woody vegetation and planting it is considered to be a way of storing, or sequestering, carbon in the landscape to offset against the effects of climate change. All revegetation sequesters carbon, but the regulated carbon market has specific methodologies of planting and monitoring that must be followed to be eligible for carbon credits.

In Australia, the regulated market is administered by the Emissions Reduction Fund and the trading units are Australian Carbon Credit Units (ACCUs). To create an ACCU, you must register your project prior to any planting activity and follow the specific methodologies.

Research the planting Emissions Reduction Fund (ERF) methodologies at the Australia Government's Clean Energy Regulator website to get the latest information.

Considerations for planting for carbon sequestration –

- **Understand the opportunity on your farm** – Use tools such as CSIRO LOOC-C and the AgriFutures Carbon Opportunity Support Tool to reality check for your farm. Does your land have potential or is it even suitable for a carbon sequestration planting?
- **Get legal and business advice** – is this appropriate for your farming operation and business? Carbon sequestration projects are important business and management decisions.
- **Register before you start** – You cannot claim credit for work prior to registering a project, and there may be design specifications for the methodology you register it under.

Secondary markets are not government regulated and so methods and credit units may differ. This market works by direct negotiation with an investor, and they determine the criteria for planting.

Seek independent advice, talk with your production networks and seek trusted experts for specific property evaluations.

## PLANTATION FARM FORESTRY

Plantation farm forestry is a different type of revegetation where the objective is to harvest timber from the plantation in the short or long term.

In NSW timber and non-timber plantations are regulated by the Plantations and Reafforestation Act 1999 (the Act) and Plantations and Reafforestation (Code) Regulation 2001 and if the plantation is over 30 hectares it must be authorised under the Act.

Planning a timber plantation for commercial harvest should be done with professional and business advice.

It is a long-term crop, but can provide short to medium term benefits to the farm by:

- using otherwise unproductive land
- adding diversification to the business
- co-benefits to the farm like shade, shelter and biodiversity value
- providing sustainable firewood and timber for use on farm – collecting firewood from paddock trees and native vegetation is unsustainable, and incorporating plantation firewood into the whole-farm plan should be a priority.

There is a specific carbon methodology associated with plantation forestry which means they can be used for carbon sequestration and the generation of ACCUs, although the rate is discounted because they are harvested periodically.

**FOR COMMERCIAL FORESTRY, SEEK SPECIALIST ADVICE FROM AN INDUSTRY PROFESSIONAL IN PLANNING YOUR SITE.**

Important considerations for plantations are:

- **Access** – consider access for plantation management (silviculture), access for machinery (planting, management and harvesting machinery), local permissions for use of local road systems for larger vehicles and increased traffic – think about creek crossings, wet areas and how steep the areas are.
- **Species selection** – Research the most appropriate plant species for the specific plantation purpose, including a reality check on expected growth rates on your site soil type and rainfall zone.
- **Business planning** – Build in business resilience (insurance) to ensure your forestry asset is covered in the event of a natural disaster such as fire. Budget for several thinning's that may be required in the life of the plantation to maximise growth rates.

Because there can be short and medium term benefits to biodiversity in a plantation, design to include managing local biodiversity needs – for example, continual cover forestry or linking and complementary biodiversity plantings.



Figure 17: Plantation forests generally contain single species of the same age designed for timber harvest. Photo: Kylie Durant.

## SALTBUSH AND GRAZING SHRUBS

In lower rainfall areas (<500mm rainfall), shrubs are part of the natural grazing system but active revegetation of species like Old Man Saltbush (*Atriplex nummularia*), especially on saline sites can be done with future grazing in mind.

### Considerations

- **Species selection** – There are different saltbush species and varieties, and it is essential to select the one that suits your site conditions. Some species tolerate waterlogging and salinity better than others.
- **Assess feed value** – Consult with your agronomist to determine how saltbush fits into your farming system and meets your animal nutrition needs. Keep in mind that stock will not thrive on saltbush alone – it must be part of a more diverse pasture.

### Planting methods

- You can either plant saltbush as seedlings or direct seeding.
- If using seedlings, prepare fenced blocks where animals can access the saltbush periodically.
- Filler materials: gypsum and vermiculite can be used as fillers during seeding.

## WHOLE-PADDOCK REHABILITATION

Whole of paddock rehabilitation is a technique developed by Greening Australia, and is designed to integrate large-scale revegetation into commercial grazing or mixed grazing enterprises.

The objective is to revegetate at a paddock scale in a way that can fit with a rotational grazing system. The paddock is taken out of the production system for three to five years and a proportion of the paddock planted with tree and shrub species. It can coincide with pasture renovation or erosion rehabilitation.

When the revegetation is large enough to withstand browsing, a sympathetic grazing rotation reintroduced.

In general:

- The tree belts are not fenced so it is very cost-effective (but you lose grazing for an initial period of time).
- This is most successful in grazing rotations that have a long recovery period (e.g., holistic grazing) or where the paddocks might only be used in certain seasons or for certain classes of stock for one or two rotations per year.
- Revegetation can be by direct seeding or seedling planting.

Contact Greening Australia or talk to Landcare and/or your local regional natural resource management agency.

## SEED PRODUCTION AREAS (SPAS)

Seed-production areas are plantings specifically designed and planted for seed collection. As the quantity and quality of native vegetation remnants declines, the need for specific seed-production areas to supply the seed for restoration grows.

In general SPAs:

- plant particular species and genetic provenance that are deliberately planned and documented to target seed requirements, and to manage any potential inbreeding issues.
- are designed for easy access for collection i.e. In rows, and often mounded to aid collection.
- require fencing, regular weed and browsing pest control and pruning.
- need replacement of aging plants when their production drops off (can be seven to ten years).

If you are interested in seed-production areas, do your research, consult local and regional seed supply users and the Florabank guidelines for seed-production (accessible online).

## MANAGING NATIVE GRASSLANDS – RESTORATION NOT REVEGETATION

Grasslands naturally have minimal woody vegetation and should not be the focus of woody species revegetation. If you're dealing with true native grasslands in the South West Slopes and Riverina regions, keep in mind that they are likely to be highly modified. While intact examples are rare, they do exist and typically feature a mix of native grasses, small leafy plants (forbs), and wildflowers.

These areas should be safeguarded from disturbance and changes in fertility. If a grassland has over 50 per cent native species cover, it's considered protected vegetation. Clearing or altering such areas can lead to compliance actions.

### *For high quality native grassland:*

- **Define your goals** and create a straightforward management plan with monitoring
- **Don't plant woody species** (like shrubs and trees) – focus on managing existing vegetation
- **Control biomass** to favour forb and wildflower diversity, and consider reintroducing specific grassland species that are missing. Techniques like slashing, controlled grazing, and prescribed burns can help maintain an appropriate biomass level and prevent loss of diversity.

### *For a modified, lower quality grassland (e.g., some native species persisting alongside annual weeds):*

- **Manage weeds** – don't let annuals set seed – crash-graze in spring.
- **Reduce grazing pressure** during summer when native grasses are setting seed.
- **Reintroduce** key subshrubs and forb species if necessary.

### *For management of grasslands in general:*

- **Spread windrows** or clumps of grass clippings when mowing or slashing
- **Control weeds** that threaten to spread and out-compete or smother native plants
- **Avoid compaction** – minimise unnecessary physical disturbance or compaction of the soil – e.g. ploughing, rip lines or trenching
- **No fertiliser** – avoid any change to the fertility of the soil – e.g. fertiliser or lime
- **Control pest animals** (grazers and predators) or keep out of native grassland
- **Encourage traditional cultural practices** that support healthy native grasslands like cultural and ecological burning.

If the goal at the site is based on species conservation, there may be very specific management requirements. For example, Plains-wanderers (*Pedionomus torquatus*) need at least 35 per cent bare ground, so managers may increase grazing pressure when the grassland habitat becomes too dense. Seek advice from local experts, Landcare and/or your regional natural resource management agencies if you are worried.



Figure 18: Examples of various native grassland. Photos: Martin Driver

## RESTORATION OF WILDLIFE HABITAT TO REVEGETATION

It is possible to value-add other structural habitat features to your revegetation with:

- nest boxes or artificial hollows (cored into the existing trees) for arboreal mammals and birds
- logs and rocks on the ground for birds, mammals and especially reptiles
- water resources – ponds and wetlands for frogs, aquatic insects and turtles
- floating islands for wildlife – turtles, waterbirds.

The more habitat features that are in a site, the more diversity you may attract.

It is important to know what species are in your area and what resources they need before you start – do your research and seek advice from Landcare and/or your local natural resource agency.

Some general considerations:

- **Target actions** – e.g. nest-box dimensions and hole size are specific for different animals and there are many different designs for different species – do your research
- **Be responsible** – do not source material from other biodiversity conservation sites
- **Be aware of unintended consequences** – e.g. adding water can attract more grazing pressure from kangaroos
- **Cost** – even if materials are free, transporting them to the site and installing them can be very expensive – get some quotes before you commit.

It is important to know what species are in your area and what resources they need before you start – do your research and seek advice from Landcare and/or your regional natural resource agency.

## OTHER TYPES OF PLANTING

Some examples of other types of plantings that are not covered here include native gardens, bush food gardens, commercial flower and foliage plantings and screening plantings. These need to be specifically designed for the purpose and for the site. Do your research and seek advice from specialists in the area of interest.

## SITE PLANNING

Once you have determined what condition your site is in and if and what type of revegetation is appropriate, it is time to get down to the detail of the site.

The next steps are:

- What species do I need?
- What revegetation method should I use?
- How many plants do I need? Or how much seed?
- What type of seedlings? What about tree guards, fertiliser, etc.?
- What do I need to do when?
- What's it all going to cost?

Please remember that sites in good condition that have intact and healthy native groundcover (native grasses, herbs, forbs), native grassland, some wetlands and cultural sites may not be suitable for revegetation at all, or only low-intervention methods. Make sure you understand the condition of your site.

### WHAT SPECIES?

Part 2 of this guide has localised vegetation profiles for revegetation. Firstly, determine what sub-catchment you are in and then go to the corresponding profile to see the species of plants you should be considering.

Not all plants are readily available for revegetation – seed may not be available or readily germinated in the nursery. In a highly degraded site, planting should reflect natural succession – a higher number of tough pioneer species (like *Eucalyptus* spp. and *Acacia* spp.) initially to create the microclimates for small understorey shrubs and more sensitive species that can be introduced later on.

Planting groundlayer plants into a highly degraded site is often disappointing – plan ahead to introduce those later if you want them (see **Medium term: twelve months to three years after planting**).



## REVEGETATION METHOD

The method you choose will depend largely on the condition of the site – where is it on the vegetation condition continuum? (See **Figure 3**, Page 9)








METHOD	WHEN TO USE THIS METHOD
<p><b>Seedling hand planting</b></p> 	<ul style="list-style-type: none"> <li>highly degraded ('greenfield') sites or modified with no remnant vegetation and with high fertility from fertilizer and grazing history</li> <li>Large scale plantings</li> <li>Spot planting into remnant vegetation sites or established areas with understorey and specialty species</li> <li>planting sites with set density and spacing requirements such as farm forestry or carbon planting</li> <li>adding plant species that do not direct seed well.</li> </ul>
<p><b>Seedling machine planting</b></p> 	<ul style="list-style-type: none"> <li>highly degraded with no remnant vegetation ('greenfield') sites and with high fertility from fertilizer and grazing history</li> <li>large scale uniform sites such as forestry, fodder plantations.</li> </ul>
<p><b>Direct seeding by machine or by hand (direct broadcast, hand seeder, seed clay balls)</b></p> 	<ul style="list-style-type: none"> <li>moderately degraded sites where competition from annual and perennial plants is low and the soil fertility is not high (minimal fertiliser history)</li> <li>planting understorey into medium to good condition sites</li> <li>where a random and natural look for a site is being sought</li> <li>hand broadcasting into small sites</li> <li>can be considered for highly degraded ('greenfield') sites where follow up planting can be an option for species that don't respond well to being direct seeded E.g Eucalypts.</li> </ul>
<p><b>Natural regeneration</b></p> 	<ul style="list-style-type: none"> <li>sites with existing native species that can be allowed to naturally seed</li> <li>can occur in all types of sites but more degraded sites may need some minor disturbance to trigger germination</li> <li>check for opportunistic seasonal periods (usually wetter summers) when regeneration events occur.</li> </ul>
<p><b>Laying down seed bearing branches</b></p> 	<ul style="list-style-type: none"> <li>small sites or sites with high regular management opportunities e.g. a passion project site or community space where labour and commitment to micromanagement is high</li> <li>not suitable for large scale sites.</li> </ul>
<p><b>Leaf litter or soil transfer</b></p> 	<ul style="list-style-type: none"> <li>small, specialised sites only</li> <li>soil transfer can be a technique for wetland restoration.</li> </ul>
<p><b>Encouraging root suckering</b></p> 	<ul style="list-style-type: none"> <li>use for species that do not germinate or produce seed readily.</li> </ul>

Figure 19. Revegetation methods and when to use them

## REGENERATION

Plants will readily naturally regenerate when conditions are optimal, this includes seasons with higher-than-average rainfall years, ground that has less competition from weeds and lower grazing pressure.

Minor disturbance (raking, shallow ripping, weed & biomass control, burning) may be used to encourage seed germination.

It is common for trees (*Eucalyptus* spp.) to come up from seed in revegetation rip lines in highly modified sites where there are still remnant trees.

In some ecosystems (especially in the drier rangelands) plants do not readily set seed and rely on vegetative growth, or suckering to spread. The following table identifies plants that can be encouraged to regenerate through suckering when roots are carefully manually disturbed.

COMMON NAME	BOTANICAL NAME
Rosewood	<i>Alectryon oleifolius</i>
Emubush	<i>Eremophila longifolia</i>
Sandalwood	<i>Santalum lanceolatum</i>
Cooba/Native Willow	<i>Acacia salicina</i>
Hooked Needlewood	<i>Hakea tephrosperma</i>
Butterbush	<i>Pittosporum angustifolium</i>
Native Jasmine	<i>Jasminum lineare</i>
Boree	<i>Acacia pendula</i>
River Cooba	<i>Acacia stenophylla</i>
Yarran	<i>Acacia homalophylla</i>
Bulloak	<i>Allocasuarina luehmannii</i>
Sugarwood	<i>Myoporum platycarpum</i>

Figure 20. Species that respond to stimulation for root regeneration (suckering) in descending order of success, according to landholder experience

Other species that are known to sucker include: Deane's Wattle (*Acacia deanei*), Drooping Wattle (*Acacia difformis*) and Silver Wattle (*Acacia dealbata*).

To stimulate root suckering the following methods are recommended:

- Use a tractor with a single tine ripper
- Break or disturb the surface roots (10–30cm from soil surface)
- Disturb roots in a single pass at a distance outside of the drip zone where its roots can still be seen
- Avoid disturbing roots on all sides in one season (this can compromise stability and health)
- Results are usually best when this is done in the spring.



Figure 21. Example of root suckering of Rosewood (*Alectryon oleifolius*). Photo: Michael Bull.

## RESEEDING

### 'PASSIVE' RESEEDING

This is a low-intervention, targeted method for sites in good condition where you want to reintroduce species or achieve small, targeted revegetation. It involves laying down seed-bearing branches or transferring soil or leaf litter from a better site.

#### General tips

- Ensure this does not adversely impact the site that is the source of material
- Minor disturbance (raking, shallow ripping, weed control, burning) may be needed to encourage seed germination.

The outcome is not guaranteed so this method is generally not suitable for sites where a broadscale outcome is required, and is suited to sites where people are very committed to ongoing management.

## DIRECT SEEDING

Direct seeding involves applying seed (including pre-treated seed) to the site either by hand, through transfer of seed-bearing material or by machine. It is most successful for less degraded sites with more resilience and less fertiliser history. Seedlings are less likely to be swamped by introduced weeds, and it is a low disturbance option where there is already native groundcover.

Direct seeding can take up to five years for full germination, but the result is a more 'natural' look rather than straight lines of evenly aged seedlings.

Agricultural air seeders may be used for very large scale direct seeding when scale, access, soil and seed availability are appropriate.



Figure 22: Hand seeding might mean broadcasting seed by hand or using a hand-held spreader such as a fertiliser spreader.



Figure 23: Direct-seeding machine. Photo: Judy Kirk



Figure 24: Seed may also be distributed in specially prepared clay balls.. Photo: Kylie Durant

There are a number of different direct-seeding machines – speak to the contractor about what might be best suited to your site.

In general:

- **Pre-treating seed** increases germination success.
- **Soil disturbance** using tools like fire rakes, or ripping may increase germination.
- **Be prepared to add seedlings** of species that don't generally germinate well as direct seeding. *Eucalyptus* spp. fall into this category.
- **Be patient** – direct seeding can take up to five years for full germination. Regular monitoring for germination and weed and pest control is recommended.

### *Calculating amount of seed*

Contact your direct seeding contractor for specific recommendations but in general for woodland restoration in a degraded site you need approximately 600–800g of seed per hectare.

To calculate the amounts you can work on approximately 3km of seeding per hectare and the amount of seed required per km can in the range of 200–500g/km, depending on what vegetation might already be on the site and what you are trying to achieve.

## REVEGETATION WITH SEEDLINGS

Replanting involves revegetation with seedlings and they can be hand planted or machine planted.

Most highly degraded (no native vegetation or 'greenfield') sites benefit from ripping and spraying of the rip lines to improve ease of planting (see **Chapter 6 Site preparation and planting**) whether planting by hand or machine.

Machine planting is generally done by a contractor and certain machines require particular seedling growing systems to suit them. Seedlings must be well advanced and site preparation needs to be very particular. Take advice from your contractor. (See **Planting** section.)

## PLANTING DENSITIES

The density of your planting will depend on:

- your planting goal
- the vegetation type for your area (is it forest or woodland?, plant community type, condition of your site)
- where your site is (soil type, aspect, landscape type).

The figure below gives recommended ranges of plants per ha and the tree:shrub ratio.

Broad Recommendations	Plant density	Spacing	Tree: Shrub %
<b>Wetlands</b> Plant edges only	Depend on site	10m between trees, 1m between tussock grasses and smaller plants	At most 15% trees (1: 5)
<b>Waterways – Riparian</b> If you have not calculated the plantable area use this figure for the whole site	50-100/ha	15m between trees, 1m between tussock grasses and smaller plants	At most 15% trees (1: 5)
<b>Grasslands</b> Do <b>NOT</b> plant trees	Very high. Not a broadscale method	Plant grasses 30cm apart, other forbs in between	No trees - All grasses and groundlayer plants
<b>Grassy Woodlands</b> Aiming for 30-40 trees per ha at maturity	300-500/ha	Trees 15-20m apart, 1m between tussock grasses and smaller plants	20% trees ideally 30% trees in more modified sites
<b>Shrubby Woodlands – Sandhills, Inland floodplain Woodlands</b>			
<b>Dry Sclerophyll Forests – Shrubby</b>	250-350/ha	Trees 14m apart, 5-20 shrubs in clumps in between	20% trees
<b>Dry Sclerophyll Forests – Grassy</b>	250-350/ha	Trees 10m apart, 5-20 shrubs in clumps in between	30% trees
<b>Moist sclerophyll forest</b>	250-350/ha	Trees 10m apart, 5-20 shrubs in clumps in between	30% trees
<b>Shelterbelts</b>	250-350/ha	Plants 3-4m	At least 30% trees
<b>Firewood Plantation</b>	500/ha	Trees only	-
<b>Timber Plantation</b> Seek professional advice	Up to 1000/ha	Trees only	-
<b>Saltbush/grazing shrubs</b>	345/ha	-	-

Figure 25: Recommended ranges of plants per ha and tree:shrub % guide (N.B. This is a guide only, every site is different).

Consider the following:

- **Reality check** your site characteristics – are you in a high or low rainfall zone, shallow or deep soils, a south or north facing site? In sites with lower rainfall and poorer soil, go for the lower end of the range; sites with higher rainfall and better soils can support the upper end of the range.
- **Account for regeneration** – if there are remnant trees present, site preparation can sometimes stimulate regeneration, so be aware of that when doing your numbers. You can have too many trees!
- If you do go off recommendation, **start with the tree density** you want and add shrubs and understorey to make up the numbers. Remember the size of the plant once it is mature.
- **Consider future management** – denser plantings can be useful for outcompeting weeds initially, but you may have to remove some later to get a good outcome for biodiversity and growth.

Groundlayer plants can be additional to the recommended density of trees and shrubs, and planted in between the others. If it is a scalped site, plantings should follow the grassland recommendation.

Planting for carbon sequestration, shelterbelts and forestry may have their own specific recommendations (see **Chapter 4**). Check any contractual requirements.

And remember – leave gaps for flyways around wetlands, and basking habitat around rocky outcrops.

Refer to the **Design Principles** in **Chapter 4** for more detail on what is suitable for your site.

### *Calculate number of seedlings*

Numbers per hectare (ha) translate into grid spacing – this can be used to get a rip line spacing, and then a plant spacing on the rip line or spacing for spot planting.

For some sites the whole fenced area may not be able to be planted, so estimate the plantable area either by:

- direct measure on a map
- a percentage of the total area, or
- metres of rip line.

Here are some examples:

Plants per ha	Plant spacing
800	3m X 4m
625	4m X 4m
500	4m X 5m
400	5m X 5 m
300	5m X 6 m
200	6m x 8m

To get the number for your site:

- estimate the plantable area in the site – exclude all the waterways, areas you want left open, areas you can't get to or that already have vegetation
- multiply the plantable area by the desired density and divide by the desired plant spacing
- if ripping, you can use the length of rip lines and divide the total by the desired plant spacing
- for remnant enhancement planting you might only require understory plants, and they can be planted in patches rather than filling the whole site – it will be a site-specific estimate.

## SELECTING AND ORDERING SEEDLINGS

Order plants from the nursery at least six or seven months before planting, usually by October /November the year before planting.

Plants can of course be ordered later than this but numbers and the choice of species and provenance might be limited.

For specific and unusual species you need to order at least twelve months ahead, in case the seed isn't available and needs to be collected.

1. Determine the number of plants you will require (see **Calculate numbers of seedlings**).
2. Choose the species you would like from your area profile in **Part 3** of this guide.
3. Get a quote from the nursery.
4. Once you have ripped, review the numbers and update the nursery if it's changed significantly.

Consider being climate ready and including some plants from an alternative seed source in your climate analogue area or an alternative nursery that uses local seed from that area (see **Climate readiness**).

For your quote be sure to ask the nursery:

- **which growing system** they will use for the plant species you have ordered (see **What type of seedling?**)
- **cost per plant** – are there any specialty species that may cost more because of special growing conditions or growing from cuttings
- **costs and timing for delivery**
- **substitution policy** if there are any changes to availability (disease or germination failures). You may want to provide alternative suggestions.

## RECOGNISING A QUALITY SEEDLING

The quality of the seedling when it is planted can have a huge influence on success.

Size doesn't necessarily matter – generally smaller, healthy plants can cope with the stress of planting out just as well as larger plants..

What does matter is:

- **root to shoot ratio** no greater than 1:2
- **no weeds** in the pot
- **healthy growing tips** on foliage
- **healthy roots** that can hold potting mix together when taken out, have white growing tips, and are not pot-bound with yellow or woody roots.



## COLLECTING YOUR OWN SEED

Seed collection needs its own manual and, if you are interested in this, there are specific *Florabank Guidelines* for the collection of seed. Here are a few general considerations:

- **timing** – seed collection season is generally from November to February, although some species retain seed for longer and can be collected at any time of the year
- **legal requirements** – seed collection from rare species might require permits, as will collection from some public land reserves
- **ethical collection** – collect from multiple plants and collect only a proportion of the available seed from any individual plant – see *Florabank guidelines*
- **correct storage** is required to maintain seed viability
- **seed treatment** may be required before seed being used for propagation or direct seeding – this might include hot or cold or smoke treatment, or abrasion.

Some key references are the books by Murray Ralph – **Seed collection of native plants**, 1993, and **Growing Australian native plants from seed**, 1997

*Another key to success is to plant as soon as possible after seedlings leave the nursery. It may be a perfect plant when you pick it up from the nursery, but three weeks forgotten on the veranda before planting can make a big difference to plant survival!*

## WHAT TYPE OF SEEDLING?

When you order plants from a nursery, check how the nursery is growing the plants.

### *Forestry tubes*

Single, longer narrow plastic tubes with one plant per tube.

*Pros* – can be less prone to drying out, ideal if you are giving away small numbers of plants, or your planting method involves individual distribution of plants. Can use with Hamilton tree planter or a larger pottiputki.

*Cons* – more expensive, bulkier transport – how many depends on holding tray system used.



Figure 26: Forestry tube. Photo: HLN

### *Hiko trays*

A cell system most often with 40 plants per Hiko, but can be more.

*Pros* – cheaper per plant and efficient for storage and transport (standard single cab ute tray can transport 2000); work really well with the pottiputki planting system – very efficient.

*Cons* – minimum of 40 plants, although sometimes you can order mixed or half trays from the nursery.



Figure 27: Hiko tray-growing system. Photo: HLN

### *Long-stem tube stock*

Specific plants grown in forestry tubes to produce a longer stem:root ratio; designed to be planted deeper and for roots to grow from stem nodes.

*Pros* – possibly quicker establishment & drought resilience; used for riparian bank repair.

*Cons* – only specific species suitable (with stem nodes that will root), ideally planted with a high pressure water tube to get them down to depth. Best in sandy soils.

### *Other*

There are a variety of different-sized cells that are sometimes used for specific plants or purposes– the important thing is being able to recognise a healthy seedling – see **Recognising a quality seedling**.



Figure 28: Long-stem planting system Photo: Leigh Mathieson.

# PROTECTING YOUR SEEDLINGS

## WEED MAT, MULCH AND OTHER GROUNDCOVERINGS

Weed mat or mulch is not generally recommended for broadscale plantings, but it may be used in specific situations like landscaping works in parks and gardens, erosion treatments, seed-production areas and in organic production systems.

There are many products available for rehabilitation sites (e.g., embankments) where erosion is a risk – these are very site specific.

*Pros* – can hasten groundcover and help establish plants on difficult slopes.

*Cons* – very expensive, waste issues – non-biodegradable products are generally not recyclable.

## TREE GUARDS

Why you would consider tree guards?

- reduce pest animal impact on new plantings – rabbits, deer, kangaroos
- moisture retention, frost protection and shading effects
- easy assessment of survival rates
- visual impact – to remind others the plantings are there.

Here are a few things to take into consideration when deciding whether to use tree guards:

- **Cost** – can add up quickly when you include the guard itself, two to three stakes and the labour to install the guard
- **Removal** – budget time and labour to maintain the guards and take them off two to five years after planting
- **Plastic pollution** – biodegradable cardboard guards have become available as an option in more recent years but are expensive.

Investing in control of grazing pest animals such as rabbits, hares and deer has a far greater long-term result and can be more cost-effective, plus it has other benefits for the farm.

Consider other ways to manage grazing impact in designing the site – avoid long sprayed rows in favour of random spot-spraying, or maintain fallen timber and debris to shelter seedlings.

If you do use tree guards, consider investing in biodegradable guards to avoid plastic litter.

## SUPPLEMENTARY WATERING

Ideally, the need for watering is managed with the timing of planting and good site preparation, which ensures that the plant goes in with maximum moisture and gets the benefit of at least some further rainfall. Ripping and weed control before planting can improve moisture retention and reduce weed competition and the need for supplementary watering. However, we know this doesn't always work out and the need for watering is highly dependent on seasonal conditions. In more arid environments where rainfall is very unpredictable, automated watering systems can be considered to ensure establishment, but this is expensive and requires access to a water source.

Planting in winter with good preparation should negate the need for watering at planting. If you do think you need to water plants – plan it for late spring as the soil is warming, which may be of greatest benefit in a tight season.

## FERTILISER

Seedlings usually contain a slow-release fertiliser that may still have residual effect when they are planted. Generally fertiliser is not recommended for most revegetation types.

*Pros* – it may be useful in some circumstances where soil is limited, e.g., a quarry rehabilitation or extreme erosion sites; it's common practice in commercial forestry.

*Cons* – cost of fertiliser and extra time at planting – fertiliser must not have direct contact with the root ball, which makes planting more complicated.

Fertilising at a winter planting can be a waste as the plants are not actively growing, and if they are forced it can create unwanted growth making them vulnerable to frost damage. Fertilising may be more beneficial after planting in spring.

## BROWSING DETERRENTS

Grazing animals such as rabbits, hares, goats, deer, kangaroos, wallabies and wombats can kill young seedlings.

In recent years products have been developed that can be sprayed onto seedlings to deter browsing and offer an alternative to guarding seedlings. The theory is grazers try the seedlings initially and experience the unpleasant taste and grittiness which stops them trying again. Seedlings are sprayed with the product before planting, usually in the nursery.

*Pros* – may be cheaper with less waste than guards.

*Cons* – there is an additional cost per plant, effectiveness is not guaranteed. It does wash off, so best practice is to reapply the product a few times during early growth phases, which is not easily achieved in a large-scale planting.

## SITE PREPARATION AND PLANTING

This chapter describes the process of site preparation, both what needs doing and when it needs doing.

Preparing a site well for revegetation will improve plant survival and mean less work in the first six to twelve months after planting a site.

There are local resources available for some areas – ask the nursery, Landcare and/or your local regional natural resource management organisation.

### CULTURAL HERITAGE VALUES

If your site has, or is likely to have cultural values – objects, features like ovens, middens, scar trees – or it is a special place that is important to First Nations People, talking to First Nations People about your plans for that site is very important. Start with your local Local Aboriginal Lands Council (LALC). Looking after these sites is the most important thing you can do, and usually that means fencing it from livestock and restoring it. This may include planting of native vegetation but generally means using low-intervention methods.

These sites **should not** be ripped or highly disturbed for any reason, and disturbance of sites or removal of cultural objects could result in compliance actions. There is nothing to fear about identifying sites or objects on your land – recording them helps contribute to cultural knowledge for the whole community and connection with local First Nations People. It does **not** mean that there can be ‘land claims’ or interference with your routine land management. In most cases, First Nations People will want any objects left on site and protected in restoration or revegetation areas, and it is an opportunity to learn stories and make connections.

### GRASS CONTROL

If there is a lot of grassy trash (biomass) on the site, you may need to reduce it before site preparation. Heavily graze the site if possible or slash/mow the lines before you start your site preparation – knockdown sprays work better on fresh growth and ripping is more effective.

This is necessary especially for direct-seeding sites as the seeder tine can't go through high biomass easily and seeding is less efficient and effective.

## RIPPING

Check first to see if you need to deep rip or disturb your site. The more compacted the soil and the more modified (farmed) the site the greater the need to deep rip planting areas. Deep ripping breaks compaction layers and allows moisture and roots to move down into the soil profile.

The decision on whether or not to rip depends on the site. Deep ripping may **not** be appropriate if your site has existing native vegetation, cultural values, erosion prone soil types or is a riparian area. If you are unsure, seek advice from Landcare and/or your regional natural resource management agency before heading out with the tractor.

In general:

- **rip on the contour**
- **be aware of erosion risk** – where there is any risk of water running along a rip line, lifting the tines periodically on a rip line run can help to stop this
- **rip when the profile is relatively dry** so it shatters the soil rather than leaves a groove – in some soil types ripping when it's wet results in compaction and air pockets that can stop seedling growth.

In drier areas with less reliable rainfall, some tractor implements can create furrows along the rip line to retain further moisture.

*Pros* – creates a bed for planting with a moisture profile that enables planting using planter tools, breaks compaction layers and allows roots to penetrate deeper, creates disturbance that stimulates weed growth for spraying.

*Cons* –generally detrimental to soil health; if you don't plan to use chemical spray, it will create disturbance that may encourage weed growth; ripping when too wet can cause problems with plant growth; it is detrimental in sites with already good native groundlayer and cultural heritage values.

## MOUNDING

Mounding is a practice that is suitable for revegetation of waterlogged sites and specific site remediation. It is not recommended for revegetation for biodiversity – the level of soil disturbance is not appropriate, and these wet areas might in fact have wetland values and shouldn't be planted at all.

Mounding may be recommended for specific sites such as planting for salinity management, remediation of mining/quarry sites and forestry plantings. It is achieved with specialist machinery that has a set of discs as well as a ripping tine. Seek specialist advice from Landcare and/or your local regional natural resource management agency, or the Soil Conservation Service.

*Any site with existing native grass and forb ground layer or potential cultural heritage values should NOT be ripped..*



*Figure 29: Rip lines that have been sprayed with a knockdown chemical.*  
Photo: Kylie Durant



*Figure 30: A ripper-moulder being used to create a mounded planting site in a salinity planting.* Photo: HLN

## SCALPING

Scalping involves the removal of the layers of soil that contain high nutrient loads and weed seeds in order to establish native species. It is generally only used in small sites as it has a high risk of erosion, high impact on soil health and is expensive.

The circumstances in which you might consider it are:

- in highly modified or ‘greenfield’ sites with no native vegetation
- landscapes with low slope and low erosion risk
- spot scalping as a non-chemical pre-planting weed control for greenfield sites being hand planted (less risk)
- along rip lines in low-risk sites if you don’t want to use chemicals.

This is a specialist area and a developing technique – do your research and seek advice from Landcare or your regional natural resource management agency before considering it.



*Figure 31: Scalping of a site for groundlayer restoration with the top 10–15cm of soil removed from a highly degraded site. Photo: Sue Rose*



## CULTIVATION OF PLANTING LINE – ROTARY HOE

Rotary hoeing makes the task of planting into the rip lines much easier, particularly with a pottiputki (see **Planting tools**), and may be considered if the soil type means there are large clods and air gaps in the rip line.

Cultivate just ahead of planting, even on the same day. It is not a necessary component on most sites, but for some it may improve success.

*Pros* – creates a tilth that improves the soil-to-root contact and can knockdown weeds just before planting.

*Cons* – expense and logistics with machinery. May stimulate more weed growth.



*Figure 32: Rotary hoe being run over the initial rip line to break up clods in the rip line and create a better planting bed*  
Photo: Janene Whitty



Figure 33: Post-hole digger on a tractor. Photo: B. Chambers



Figure 34: Petrol motor hand augers are an option where ripping is not an option. Photo: Kylie Durant

## AUGERS

A hand or tractor auger may be used to create holes for planting. However, they are designed for post holes, and in some soil types can leave a smooth-sided hole that is not ideal for plant growth. Many contractors modify the auger to prevent this issue.

*Pros* – minimises disturbance to soil and existing vegetation, breaks compaction layers, creates its own weed control, hand augers useful in tight spaces where machinery access is problematic.

*Cons* – only suitable for non-clay soil types, labour intensive, can be expensive.

## PRE-PLANTING WEED CONTROL

Pre-planting weed control is recommended to reduce competition for moisture and light from grass and broadleaf weeds in that first three months of planting. Methods include:

- knockdown (non-residual or contact) chemical
- pre-emergent chemical (residuals)
- non-chemical, e.g. scalping.

Pre-emergent chemicals are *not generally* recommended for revegetation due to their wider impact in the landscape, but it is common practice for people who are experienced in their use. Be aware of the plant-back time for any residual chemicals – you need to allow for at least six weeks from application and before planting for most chemicals. Always check the labels.

Remember that chemicals need green, actively growing plants to be effective. If there is a lot of dry grass and biomass on the site, grazing, mowing or slashing may be needed to stimulate germination and leaf area growth before chemical spraying. If the season is dry, there may be no weed growth until later. Adapt your management to the seasonal conditions.

Site history is an indicator of the level of control that will be required.

### *Highly degraded, greenfield site or modified sites*

- Use a knockdown spray in the spring, and again in the autumn prior to planting. In some seasons a third spray may be needed in the weeks prior to planting.
- Spray planting lines or rip lines only, not the whole site.
- Sites that have lucerne or perennial pastures or significant established perennial weeds (e.g. St John's Wort, Paspalum, Phalaris, Blue Heliotrope) may need a longer term program before and after planting.

### *Less disturbed sites (with some native species)*

- Spot spray or scalp individual planting locations (20cm x 20cm) only with a knockdown a few weeks before planting, if required.

### *For all sites*

- Control woody weeds **before** revegetation begins (e.g. Horehound, Blackberry, and African Boxthorn).
- Annual broadleaf weeds (e.g. Patterson's Curse, Capeweed, thistles, Wireweed and Fleabane) thrive on disturbance and bare ground – in most seasons they will be present after planting, but plants will still survive and the germinations will reduce in subsequent years. After planting, weeds can't easily be chemically controlled without impacting the seedlings, and is not recommended.
- Seek assistance on specific chemicals and rates from an agronomist or your local council weeds officer.

*Remember sites in good condition with native grasses and forbs should not be sprayed at all.*

### *A note on soil health*

Understanding soils and the life they hold and sustain is a rapidly expanding area of science. Soils are full of organisms that support decomposition, growth, nutrient exchange, gas exchange, water-holding capabilities and more. To support soil health, take the approach of minimal disturbance. Don't rip if you don't need to, and maintain diverse plant cover at all times. Avoid blanket applications of fertilisers, pesticides and herbicides. If you are ripping and spraying, only spray the rip lines so the soil biology can recover more quickly.

## **PRE-PLANTING PEST CONTROL**

Controlling grazing pests is more efficient than guarding trees. Controlling pest grazing animals (rabbits, hares, deer) at the revegetation site and in local surrounds will have a positive influence on seedling establishment. Contact Landcare and/or your regional natural resource management agency for advice about pest control programs.

### *A note on native grazing animals*

Native grazing animals (kangaroos, wallabies, wombats and some birds such as ducks) can also damage revegetation sites. This can potentially inadvertently reduce the quality and diversity of a revegetation or remnant site. Before starting a revegetation or conservation program, assess the possible threats from native animal grazing pressure to the site and determine the level of protection or management actions you need to make.

The options are:

- tree guards and browsing deterrents, see **Tree guards** and **Browsing deterrents** above
- adapting planting method (spot-spraying instead of rip lines) see **Tree guards** above
- choosing to plant unpalatable species (i.e. prickly)
- exclusion fencing, although this may not be consistent with biodiversity goals.

(See **Chapter Seven - Managing overabundant native animals**)

## **COST OF REVEGETATION**

Once you have identified the site requirements (preparation, method, density, type of stock, etc.) you can cost your site.

The following worksheet is a guide to the cost items that may be required for a revegetation site. Costs vary widely – get quotes from rural suppliers and contractors and don't forget to cost your own time and machinery.

*There will not be a 'one size fits all', as every site will have different influences, access and desirability for native grazing animals. Designing sites without water sources can help reduce the wildlife traffic, and remember, numbers of these animals vary seasonally and it may not always be a problem at the site.*

## - REVEGETATION COSTS WORKSHEET -

ACTIVITY	NOTES - You should include contractor quotes for activities (hourly rate for machine plus operator and travel and float charges, materials) and/or own machinery and time in hours	ESTIMATED COST
Planning time - Site visits with experts, your or staff time researching, your time pegging possible fencelines - hrs x \$/hr		
Any specialist survey - This could include cultural site surveys (especially for environmental market sites - there may be specific requirements before any work starts)		
Any permits required - e.g. Crown Lands, controlled activity permits if doing anything with 40m of a stream		
Any earthworks required - Erosion control, construction of creek crossings, tracks for access and weed control, taking down old fences, preparation of fencelines		
Fencing materials		
Fencing erection (contractor rates per hr or km - get a quote)		
Alternative watering points required (if fencing off a water source)		
Site preparation - deep ripping (tractor or dozer), scalping, etc.		
Any additional site specific preparation (if required)  <i>Tilling or rotary hoeing of the riplines (if required), Biomass control - mowing, slashing, burning, etc.</i>		
Pest control (if required) - e.g. rabbit baiting, warren ripping		
Weed control prior to planting (either strip spraying or spot spraying) - may need to do twice - labour and chemical		
Seedlings - cost per unit, delivery costs, browsing deterrents		
Direct seeding - seed and contractor cost to seed		
Tree guards (if required). Seek quotes for the guards plus stakes and delivery		
Planting seedlings - contractor quote  <i>Be sure to consider they quote watering, tree guards (if required). Also, site detail - ripped and prepared will be cheaper than random hand planting</i>		
Planting seedlings - yourself <i>Estimate hr and \$/hr</i>		
Follow up weed control (6 months) (contingency)		
Follow up watering (contingency)		
Follow up replanting (contingency)		

Figure 35: Revegetation Costs Worksheet.

## DIRECT SEEDING

Here are the main activities required before direct seeding.

**Groundcover (or biomass) control** - Reduce the groundcover (or biomass) either by grazing, mowing or slashing. Please note, if your site is of high biodiversity value, consider that grazing can have a detrimental effect on the disturbance of the leaf litter. Slashing direct seeding lines would be a better option. Cool burns may also be used as a tool to reduce groundcover levels prior to seeding.

**Knockdown spray** - Spraying along the proposed seeding lines is recommended following the autumn break prior to direct seeding, although some direct-seeding contractors can spray the direct seeding lines as they are sowing. Spraying an insecticide to control red legged earth mites is another consideration. Consult your contractor for localised advice.

**Residual chemicals** - *Do not* use any residual chemicals to control weeds prior to direct seeding as these will have a detrimental impact on seed germination and survival rates.

**Pest control (rabbits and hares)** - Pest control prior to planting is fundamental to the success of direct seeding.

## PLANTING

Planting involves logistics, whether planting yourself, planting with friends or community groups or employing a contractor. The steps are:

- **Finish** site preparation.
- **Site must be stock-proof**, even if the fencing is not finished.
- **Set the date** for your planting team.
- **Organise delivery or pick-up** of the plants must be organised.
- **Have a planting plan**, e.g., the spacing between plants, spacing between trees and shrubs, which species are for different areas of the site. Remember how you calculated your numbers – what density did you use?
- **Tools and equipment** must be on-site.

Planting and direct seeding can be really fun and a great family and community activity. Take time to prepare this as a celebration or event with friends and family participating, great food and periods of rest to socialise.

## PLANTING TOOLS

Use the tool that enables the hole to be deep enough to cover the whole seedling plug.

For sites that are ripped and well prepared, the Pottiputki® or Hamilton tree planters are efficient and highly effective (see images for using these tools). Be careful when using planters in wet soil. You want to avoid creating a smooth impenetrable surface next to the root ball, which can be caused by sliding the beak of the Pottiputki® across wet soil. When the soil dries out it becomes almost impossible for roots to break through this wall.

For sites that are not ripped (e.g., when planting seedlings into sites with good existing native cover and where you wish to have minimal disturbance) shovels and planting spades are best, as you cause minimal disturbance and can create a fine tilth that will also support good root to soil contact.

Mechanical tree/ vegetable planters may be an efficient labour saving option in very large revegetation projects where soil type, seedling size/type are appropriately matched to machinery type, and soil tilth preparation is appropriate. Seek advice from experienced contractors .



Figure 36: Pottiputki® tree planter. Photo: HLN



Figure 37: Hamilton tree planter. Photo: MLI



Figure 38: Planting spade. Photo: HLN

*Whatever the planter used you have to consider the soil type and timing; augering or using a pottaputtki in clay soil or any soil when the soil is too wet can result in a smooth-sided hole that impedes root growth. It must be done when the profile is dry. If in doubt use a shovel!*

### *Deplugging tool*

Hikos need to be pushed out from the bottom with a tool or a blunt stick – a bamboo tree guard stake is good. This homemade tool can loosen whole trays at once, which makes removing plants from Hiko trays very efficient. Your Landcare group may have one you can borrow.



*Figure 39: Example of a homemade 'deplugging tool'. Photo: Lou Bull*

### *Other equipment*

Ask your local Landcare group what equipment they may have for loan:

- kidney trays or buckets for carrying plants
- planting belts are available to carry Hiko trays
- tree guards and stakes on site (if you are using them) and a mallet to tap the stakes into the ground; *if* the site is well prepared you may be able to just push them in with a heavy gloved hand
- water cart if you are watering the seedlings.



*Figure 40: Kidney tray for carrying plants. Photo: HLN*



## SEEDLING PREPARATION PRIOR TO PLANTING

### *Plant as soon as the seedlings arrive on site*

Plants that are already stressed and sub-optimal before being planted – left on the verandah for two weeks – are a common cause of planting failure! Arrange to collect the plants or have them delivered from the nursery as close as possible to the planting date.

### *Water plants*

Water plants very well before planting day and on the day of planting. If you soak them in a bucket, don't leave them longer than an hour or so – you will de-oxygenate the root ball.

### *Loosen or remove tubes from seedlings*

Do *not* pull on the plant to remove it. Hiko seedlings need to be loosened or removed from the tray. Contractors will generally do this themselves, but check with them.

- Hiko seedlings – push up from the bottom with a tool – (see **Depugging tool** opposite)
- Forestry tubes – gently squeeze on the flat edges to loosen the plant, then tip up with the stem between your fingers and remove the tube.

### *Mix trees and shrubs*

Either in the trays (if using Hiko planting belts) or in the bucket or kidney tray. If mixing in the Hiko trays, you can do this before the day yourself or the nursery may offer it for additional cost.

### *Plant your seedlings!*

If you are laying out the plants ahead of the planters or removing them to a bucket or kidney tray, don't get too far ahead of the planters – seedlings dry out quickly.

## CONTRACT PLANTING

Nurseries may offer this service, or there may be contractors in your region. In general, it takes the logistics out of planting for you, but you must have the site well prepared, and very clearly communicate the plant spacing and design you want.

Usually, the plants remain in the nursery and the contractor will bring them on site on the day of planting. Costs are generally at least the same as the cost of the plant.

If the contractor is different to the supplier of the plants, make sure you read **Seedling preparation prior to planting**.

Clearly explain to the contractor how you want the site to look:

- Describe the spacing of plants (see **Plant densities** above) – consider planting a few beforehand as an example, and then check in on progress.
- Pass on any specific instructions, e.g., do you want only shrubs in the outside lines closer to the fence?
- Ensure guards and stakes are on site if you are using them.

*Without guarding, an experienced contractor could be expected to plant up to 2000 plants per day with pottiputkis or special planting shovels, in perfect site conditions. Ask your contractor for a quote.*



*Figure 41: Group plantings make memories and involve your friends and family in your revegetation. Photo: Lou Bull.*

## COMMUNITY OR GROUP PLANTING

Your revegetation site can be planted by yourself, your family, friends, as a community event or using contractors or paid help. Here are some tips for your planting day:

- **prepare seedlings** – read **Seedling preparation prior to planting**
- **demonstrate** how you would like the plants planted, particularly if using the Pottiputkis®, and how to put on guards if required. Consider planting a few seedlings beforehand or laying out the plants or guards ahead of the planters yourself. Make sure planters understand the hole needs to be deep enough so that the seedling plug is completely buried
- **delegate** – often having designated ‘teams’ that follow one another – laying out, digging, planting, guarding, watering – improves efficiency and consistency
- **mix seedlings** in the carrying trays or buckets to reflect where and what you are planting; mix the trees and shrubs in the ratios you are aiming for; or have some people dedicated to planting trees and others shrubs
- **spacing** – clearly communicate what you want (see **Plant densities** above). The number of steps between plants is often easiest (but remember kids and adults are different sizes). You may be able to use fence posts as markers if they are spaced appropriately
- **look after your planters** – have a person designated to organise and prepare catering for the group; schedule breaks and food arrival – hungry people wander off – also consider toilet and handwashing facilities.

*On a well-prepared site, the average person can plant 300 to 400 plants per day with Pottiputkis® or planting shovels - without guarding.*

## TIMING OF PLANTING

Across the guide area, recommended planting times will vary, but *April to September* is the broad planting window in this part of NSW.

With climate change, there is likely increasing variability in seasonal rainfall patterns, but for the Riverina and South West Slopes the season of rainfall is likely to still be in that window. When faced with less predictable rainfall, the inclination is to change to autumn rather than spring planting, but increasingly unpredictable autumns mean that also comes with risk.

Making a decision based on the weather and short-term seasonal predictions is most useful, but keep in mind you may also be constrained by when the plants become available at the nursery. You can order plants for a certain time, but seasonal conditions sometimes determine when exactly they are ready – nurseries generally prefer to harden off plants to frost before they release them, and the timing can be unpredictable.

# GENERALISED REVEGETATION CALENDER

JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Planning																	
		<b>Order Plants</b> - if you have specific species needs that are off-list, need to order in time for seed collection															
							<b>Deep Rip</b> 30-40cm										
									<b>Rip lines</b> Knockdown Spray Slashing or mowing if required			<b>Follow up</b> spray if Req					
									<b>Pest control</b> Harbour and warren destruction								
									<b>Pest Control</b> Rabbit baiting, Hare shooting								
									<b>Fencing</b> – can happen anytime but needs to be up before planting								
														<b>Planting or Direct Seeding</b> earlier start in dry years, later finish in wet years, median planting time is July			
																<b>Follow-up Watering</b> if required	

Figure 42: Generalised revegetation Calender for the Riverina and Southwest slopes in NSW

## REVEGETATION MAINTENANCE

In this chapter we'll take a look at the issues that commonly come up after planting:

- **short term:** six to twelve months
- **medium term:** one to three years
- **long term:** three to five years.

The biggest cause of failure in plantings is accidental livestock access, or thinking it has failed and opening the gate for livestock to access too early. *Keep the gates shut.* Even if you think the site has failed, wait at least twelve months before making a judgement and keep the gate closed in the meantime.

Assess whether any obvious replacement is necessary at the twelve month mark. Rabbits, wombats, hares and birds can have an impact on the survival of plants but rarely on the whole site, and it generally happens very soon after planting.

Often plants are not easily visible until the third autumn. This is a good time to take stock. Many plants will survive dry seasons, mild grazing predation and high annual weed competition. Even plants that have been clearly broken or chewed off can reshoot and start to put on leafy growth the next season. In the higher rainfall areas, plants will even survive perennial weeds like *Phalaris*.

Other circumstances that might lead to complete failure include:

- poor plant quality at planting (plants left out for too long, pot-bound, dried out)
- poor or inadequate site preparation (ripping too late and leaving air pockets in the rip lines)
- inundation (flooding) for an extensive period of time.

This is general advice. Plantings may have specific contractual and/or management plan requirements for maintenance (e.g. forestry or environmental market plantings) that require more specific actions within certain timeframes, so make sure you are aware of the obligations.

## SHORT TERM: SIX TO TWELVE MONTHS AFTER PLANTING

Sites can look swamped with weeds and annual plants in the first six to twelve months. This can be confronting. It can take up to five years for the seedlings to out-compete start to suppress the growth of annuals.

In the short term:

- **maintain pest control** of grazing pests like rabbits and hares
- **monitor seedling growth and survival** – walk the site and look for seedlings, and unless you can see plants pulled out or you know the site was accidentally grazed for a period of time, still wait twelve months before assessing it again.
- **consider supplementary watering** if conditions are really dry
- **consider replacement of plants** if there has been an obvious loss.

Broadleaf weeds (e.g., Paterson's Curse, thistles, fleabane) can dominate in the first season after planting because the ground has been disturbed and there is space for weeds. Generally broadleaf weeds drop out of the site in the subsequent years as grasses dominate.

As long as there isn't significant risk (e.g., it's a new weed on your property, there's risk to adjacent crops or pastures, or it's a weed that is required to be controlled by law), we recommend leaving it alone in the first year. As long as there is no bare ground, most broadleaf weeds should reduce and eventually be eliminated just through competition and lack of opportunity.

Weed control is possible. You can slash between rows to reduce annual weeds flowering and seeding; you can spot spray around plants if annual weed growth is excessive, but keep in mind spraying is most effective on fresh, actively growing plants, not where there is a lot of litter.

## MEDIUM TERM: TWELVE MONTHS TO THREE YEARS AFTER PLANTING

Annual grass and broadleaf weed growth slows and may even provide some groundcover (mulch) to improve moisture retention.

- **maintain pest control** of grazing pests like rabbits and hares
- **monitor seedling growth and survival** and replace plants in obvious gaps
- **weed control** is possible – you can slash between rows to reduce annual weeds flowering and seeding; you can spot spray around plants if annual weed growth is excessive, but keep in mind spraying is most effective on fresh, actively growing plants, not where there is a lot of litter. Targeted control of common weeds is hugely time-consuming and it is better to just target the noxious or more invasive ones, such as *Paspalum* and *Phalaris*, and let the revegetation eliminate the others through competition.

## LONG TERM: THREE TO FIVE YEARS AFTER PLANTING

Biodiversity plantings really starts to fill out after five years of growth, and small birds will start using the revegetation site. There may still be a weedy ground layer, but it is reducing. It is possible that some planted wattles might die but you can expect seedlings to germinate and the dead stems are great habitat.

**Avoid the temptation to graze**, as that will knock out regeneration and change the sheltering value for wildlife. Plants may not be strong enough yet to withstand the pressure. It also creates disturbance and allows more weeds to germinate. Unless it was set up for early grazing (e.g., shelterbelts with only trees and large shrubs), keep grazing animals out.

This could be a time to consider adding more understorey and groundlayer plants if the conditions are right.



*Figure 43: (Left: top - 1 yr, bottom - 4 yrs; Right: top - 18 mths, bottom - 5 yrs) Typical revegetation at five years – the broadleaf weeds are reduced although the site may still be dominated by annual or perennial pasture grasses. Photos: Kylie Durant*



## LONG-TERM ANNUAL MAINTENANCE

A revegetation site is a long-term investment from either personal or public funds. Aim to manage it for the purpose it was created, and continue to actively monitor and manage any issues that come up.

Revisit the condition of the site (Chapter 8: **Monitoring**) – has the condition of your site improved?

In the long term:

- **weed control** – continue to remove or manage woody weeds or weeds of significance that grow within the site
- **maintain fences** in good condition
- **consider additional planting** once trees have established and the annual grass is reducing in favour of litter, adding more understorey and groundlayer plants
- **retain fallen timber and dead plant material** – its great habitat
- **consider grazing carefully** – it will impact the integrity of the site, but is sometimes necessary.

If you do need to graze animals in the planting, monitor the grazing closely (See section **When Can I Graze?**, page 75).

- **Use crash-grazing** of many animals for a few hours or days, *not weeks*, especially in small areas.
- **Graze in spring** to stop weeds and introduced plants from setting seed.
- **Avoid summer grazing** to allow any native plants to set seed.
- **Avoid winter grazing on wet or clay soils** to prevent pugging and soil health damage.
- **Graze in autumn** for weed and fire management.
- **Monitor for damage** and remove animals if they start browsing on shrubs - this is a sign that they have been in too long.
- **Animal choice** – Cattle damage young plants less than five years old. Sheep tend to have less impact on plantings but prefer forbs, and can be tough on ground plants.
- **Maintain groundcover** – at least 70% of the ground should be covered with grass or litter.



Figure 44: Ungrazed revegetation site, 20+ years old (left) and similar aged site that has been overgrazed (right) – plants are pruned to grazing height and have been broken by stock. Photos: HLN

## COMMON ISSUES

### MY SITE HAS FAILED – HOW DO I FIX IT?

For seedling plantings, it is often difficult to judge success or failure immediately. Unless there is an obvious disaster (e.g., the gate was open) don't be hasty to call it a failure. At the third autumn, if the outcome is really not what you wanted, consider either supplementary planting or starting again if the survival is very low. This is not easy – there is often a lot of biomass and spraying and re-ripping is really hard. It will often come down to hand planting. This is a good reason to get it right in the first place.

For direct seeding, there may be germination up to five years after the initial seeding, so again, don't be hasty to call it a failure. After five years, if the outcome is not what you hoped for, you can look at reseeded or adding to the site with seedlings.

Remember that it's the outcome that you wanted that's important – 50 per cent survival in a biodiversity site may still provide better biodiversity, but 50 per cent survival in a shelterbelt planting may compromise that outcome, so the decision to replant will be different in each case.

### WATTLES ARE SHORT LIVED – I DON'T WANT TO PLANT THEM

Wattle species are a common plant used in revegetation because they are pioneer plants, and have many benefits after disturbance, from creating fast thick cover for small birds, to nitrogen fixing in the soil. Most wattle species are short lived, they mature early and produce lots of seed that germinates and persists after the original plant has died. When wattles die, they also provide a whole other lot of food resources for birds and animals – resist the urge to 'clean up' dead wood and sticks in plantings for biodiversity. They have an important role and should be part of any biodiversity planting.

*Figure 45: Wattles like Silver Wattle (Acacia dealbata) often die after seven to eight years but their seedlings live on and create amazing bird habitat. Photo: Kylie Durant*



## WHEN CAN I GRAZE?

If your site is funded, there may be rules about when you are able to graze. In general, revegetation sites shouldn't be grazed at all for the first five years. See also discussion above under **Long term annual maintenance**.

Grazing does impact the plants but the key factors are:

- **type of livestock** – sheep are generally softer on revegetation but harder on remnant sites with good groundlayer
- **numbers** – crash-grazing is described as a lot of animals in a small area for a short time with the aim of reducing the weedy biomass in between the plantings
- **time** – crash-grazing means lots of animals for *hours* or *days*, *not* weeks, especially in a small site
- **interval** – once in twelve months is the minimum interval recommended, but push it out as long as you can.

## HOW WILL FIRE AFFECT MY PLANTING? DO I NEED TO REPLANT?

The effects of fire depend on the age of the planting and the severity of the fire.

**Young revegetation sites** (one to two years) will be most affected, as immature plants have less capacity to regrow.

**Mature revegetation sites** (three or more years) will often grow back after a low or moderate intensity fire and seed produced by understorey species will germinate and the site may not need any replanting. It is very dependent on the site condition before the fire and the fire characteristics. Monitor your site and respond as required.

## MANAGING OVERABUNDANT NATIVE ANIMALS – WOMBATS AND KANGAROOS

Agriculture has created landscapes with abundant water and nutritious grass with less natural predation compared to pre-European landscapes, and these native grazers have greater breeding success and move to areas with shelter and abundant resources – including your revegetation areas!

Overabundance of kangaroos can have the same effect as overgrazing by domestic stock, and numbers may have to be controlled from time to time. Permits are issued though the National Parks and Wildlife Service – they will assess the numbers and issue the permit if required.

## MISTLETOE IS TAKING OVER MY TREES

Mistletoes are not necessarily a ‘pest’– they are an important habitat feature of remnant and revegetation. Mistletoe is a good sign that your site is being used by lots of birds, as they are the source of seed dispersal for mistletoes. Overabundant mistletoe may be a sign that your site lacks predators – Brush and Ringtail Possums. Try adding nest boxes or artificial hollows and make sure it is connected to patches with these species in them. Broadscale mistletoe removal is not generally recommended.

## NOISY MINERS ARE DOMINANT

Noisy Miners are native honeyeaters that are aggressive to other birds and can dominate remnant vegetation and revegetation, pushing out smaller birds. In general, they prefer open woodland habitats with simple vegetation structure (e.g., just trees) over more complex structures (e.g., with thick shrubs and mid-storey species).

If your site is dominated by Noisy Miners the general recommendation is to increase the shrub cover, connectivity and diversity – plant thickets that are away from the canopy so they can’t dominate from above. In some cases, it may be recommended to reduce numbers – get help from Landcare and/or your natural resource management agency if you are worried.

## PHALARIS IS TAKING OVER

If your site has a history of fertiliser and grazing, it is very difficult to eliminate *Phalaris* and other invasive perennial grasses from the site; even if the site is perfectly prepared, it can reinvade. Trees tend to cope better than understorey plants. Over time, the competition from the trees for moisture and nutrients generally results in the *Phalaris* decreasing and being replaced by litter layers, but unless you do very active management you may have to accept that it is there to stay. But it can have some habitat value. Selecting better quality sites, with less *Phalaris*, for biodiversity restoration can be more successful in the long term. In shelterbelts and general revegetation sites, *Phalaris* biomass can be managed with crash-grazing until it naturally reduces.

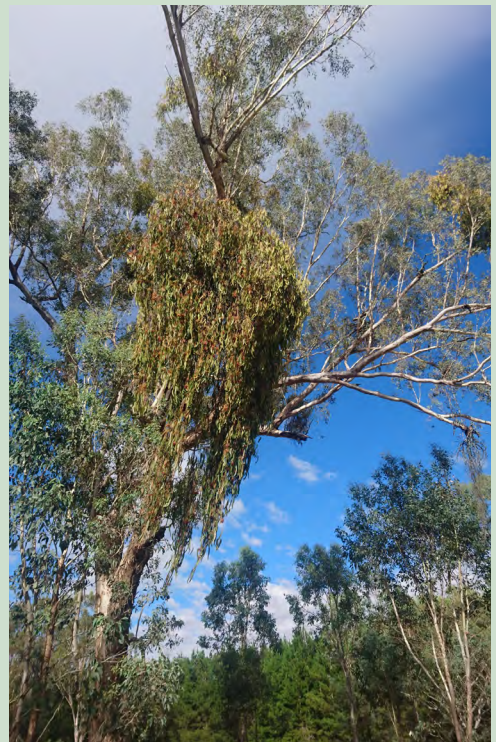


Figure 46: Mistletoe is a habitat feature of revegetation and a sign that your site is being used by birds. Photo: HLN.



Figure 47: Noisy Miners are an aggressive native honeyeater that can dominate woodland sites with no understorey. Photo: Peter Rowland.



Figure 48: Common Mynahs are an introduced pest species and should be controlled. Photo: Peter Rowland.

## FIRE AS A MANAGEMENT TOOL

Fire has been used as a tool for managing vegetation for a long time, both with positive and negative impacts. First Nations People used regular cool burning to keep habitat open for access and to attract prey species. Early settlers in Australia also used burning as a tool to manage vegetation for grazing and to clear for agriculture. It's not a simple remedy for everything and the outcome from a burn depends entirely on the intensity, the season, the history and condition of the vegetation that is there in the first place.

In revegetation and restoration areas fire can be used as a tool for:

- reducing biomass as hazard reduction or as site preparation – the risk to paddock trees and valuable bits of vegetation needs to be managed by creating breaks around them and keeping fire away
- cultural reconnection by including First Nations People in restoration of the landscape
- a tool to trigger an ecological response and enhance restoration.

Hazard reduction and ecological burns require permission from the NSW Rural Fire Service (RFS), whether in the permit season or not, so you need to seek advice from them.

If it's an ecological outcome you are hoping for, also seek advice from Landcare and/or your regional natural resource management agency so you can design a regime for the desired outcome. Burning can sometimes have a negative outcome, especially where there are a lot of weed species that may take advantage.

### *Never burn the whole site*

*If something goes wrong, you haven't compromised the whole site and there is potential for recovery.*

## MONITORING YOUR SITE

As a landholder you should revisit the site often. You will pick up on any problems early and improve the outcome in the longer term and enjoy the progress. Consider these issues:

- Has revegetation on site been successful? The success or failure of a site depends on the outcome you were trying to achieve in the first place – for forestry and carbon sites you may need to maintain a certain number of stems per ha, but for general biodiversity plantings you can expect that survival in the range of 70–90 per cent to be successful. Ultimately you have to make a judgement about whether the site achieves the outcomes you set out to achieve – in some cases 50 per cent survival might still be called a success.
- Do revegetated areas of the site have a mix of species actively growing?
- Do plants appear healthy and undamaged? Is there any evidence of pest species?
- Does there appear to be any natural regeneration of native species occurring?
- Is the fencing in good condition?
- Are there woody weeds that need controlling?

## FORMAL MONITORING

Sites that have been funded or supported may have specific monitoring requirements as part of the contract and have to be done at certain intervals and according to a specific methodology.

If you want to implement site monitoring yourself, there are many resources available and we encourage you to do some research online to find tools that can help you.

To set your monitoring goals, think about (and write down) the things that you want to see happen on the site and check in at six months, twelve months, three years, five years.

The key reasons for monitoring are:

- to see any problems before they become severe (e.g., weed incursion, pest incursion)
- to allow for adaptive management – if a patch has failed you can correct it, if something is working you can encourage it
- to see if you are meeting your goals.

Here's an example of a simple monitoring plan that can trigger you to action:

REVEGETATION GOALS	Can you see this being achieved?			
TIMEFRAME	6 months	12 months	3 years	5 years
Successful revegetation - 80% survival of plants				
Birdlife is getting better				
Blackberries are under control				
Annual grasses are decreasing				
Seeing regeneration of wattles and understorey plants				

Figure 49: Monitoring plan example.

# - PHOTO-POINT MONITORING TEMPLATE -

<b>Landowner Name:</b>	
<b>Property Name:</b>	

<b>Date photos taken:</b>	
<b>Photographer's Name:</b>	
<b>Photopoint photo storage:</b>	

Photopoint locations and descriptions:

Photopoint no.	Latitude (S) GDAA94	Longitude (E) GDA94	Direction Facing (when taking photo)	Describe photopoint location

## PROJECT DETAILS:

**Key project objectives:**

- 
- 
- 

Management action(s) relevant to photopoints:

Photopoint no.	Management Actions

## Map of photopoints:

*<insert map of the photopoint locations (optional)>*

**Photopoint 1**

(insert photo and comments)

**Comments:**



*Figure 50. Photo-point monitoring using a board to identify the date and site details can be a useful way of making sure the photos are identifiable in the future.*

Photo: Lou Bull



## PHOTO-POINT MONITORING

Photo-point monitoring is a simple, effective tool to visually monitor change over time. Typically, photo points are fixed (i.e., photos are taken from precisely the same place, looking in the same direction) and are used to demonstrate change at a site. Photo points help monitor the response to management changes at a site, such as grazing exclusion, tree planting, or wetland watering. Photo points are especially effective in monitoring changes in native vegetation cover and structure over time.

### *Some tips for photo points*

- Locate where you expect to see some change – this may be where you are undertaking weed control, revegetation, ecological burning, or excluding grazing for a while.
- Include a distinctive feature, such as a corner post or large tree, that will enable you to find the location and orientate the photo again in the future.
- Make it easy to access and find again or mark it – (e.g., near the access track or gate into the site or alternatively put in a star post with a cap or flagging tape).
- Take photos looking south to avoid sun glare.
- Take photos in landscape orientation.
- Try and take photos between 9am and 3pm to reduce shadowing.
- Try to minimise the amount of sky in the photo.
- Photos repeated annually should be taken at the same time in the season.
- Include a whiteboard in the photo with date and site name details.
- Take a copy of the previous photographs with you to ensure the new photograph will be framed similarly.

### *Recording photo-point information*

It is essential to collect the following information with each photo point, as it will help to reference each site and provide context for the monitoring:

- date, time and weather conditions
- photo-point location
- the direction of the photo (e.g., looking north, south)
- GPS coordinates, if possible
- reason for taking a photograph (i.e., what is the expected change).

### *How often should photographs be taken?*

How often photographs are taken depends on the change you are trying to show, but generally:

- if you want to show before and after weed removal or planting, take photos over a short timeframe
- if you want to show changes in growth of direct seeding or planting or modifications to a site after removing stock, take photos every twelve months to three years.

### *Storing photo-points*

Store photos in an album or file. When naming the album or file, include the property name and site name or number, and for each image, have the site name or number and date.

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**PART TWO**  
Locality Maps &  
Vegetation Profiles



RIVERINA







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## LOCALITY MAPS & VEGETATION PROFILES

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This section contains maps of localities and corresponding Vegetation Profiles. There is also a map of the entire area covered by the guide, illustrating the 20 districts (see following page). Page 91 contains a table of contents to the individual locality maps pages, which show more detailed information. Locate your area in the contents and turn to the appropriate map. You should be able to pinpoint where your property or site is. Each map has corresponding page numbers in brackets. This refers to the associated Vegetation Profiles for each district, which you can then readily locate.

The vegetation profiles are general pictures of the landscape; the landforms below then show where each locally native plant species occurs, from the hilltops to the lower country. They have been compiled from existing literature and extensive surveys of each area. If you find a species in your area not mentioned in the vegetation profile, please contact your local Landcare Organisation.

You can also head to [www.revegetation.org.au](http://www.revegetation.org.au) for interactive maps and more detailed information for each area.



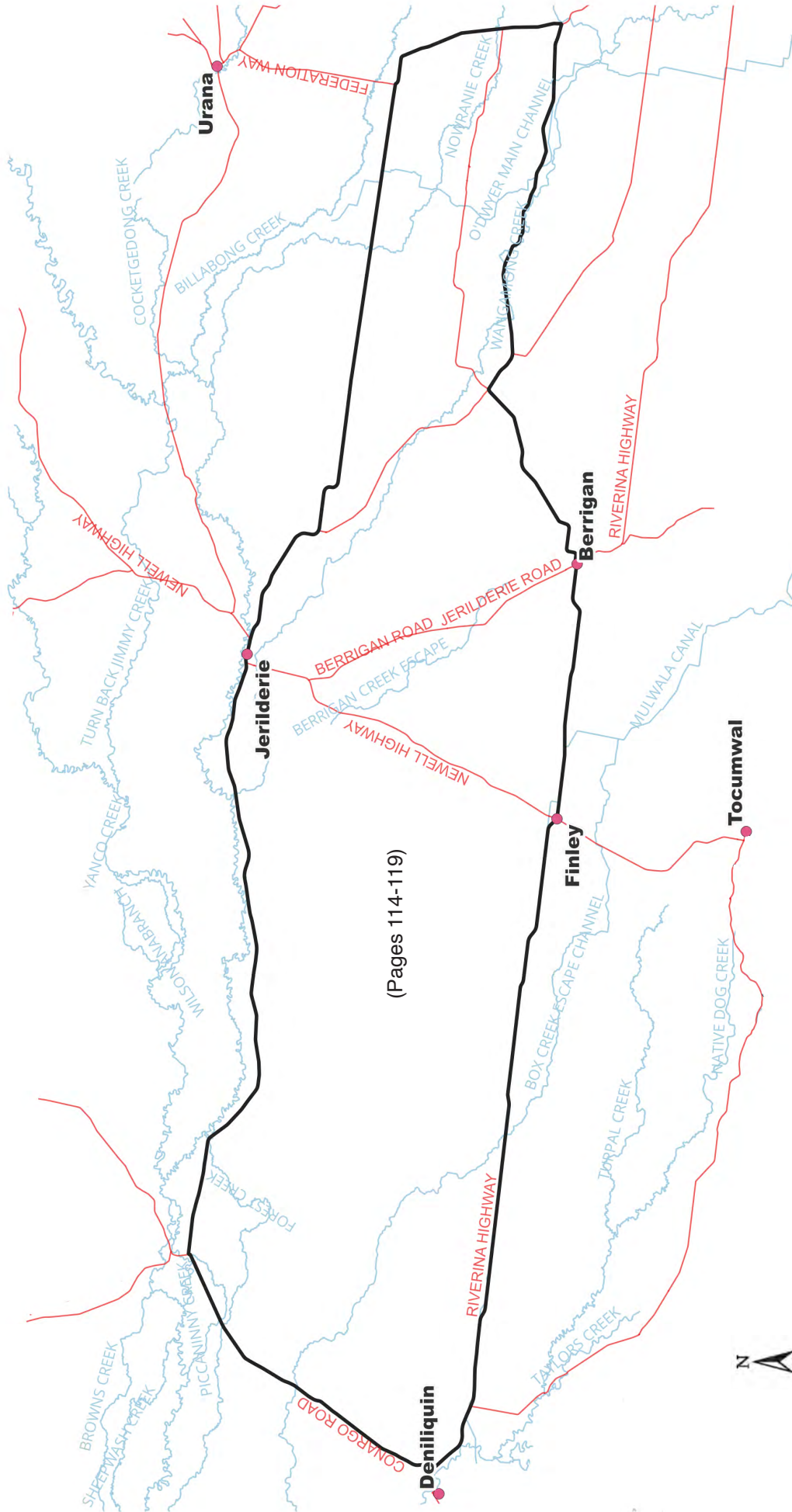


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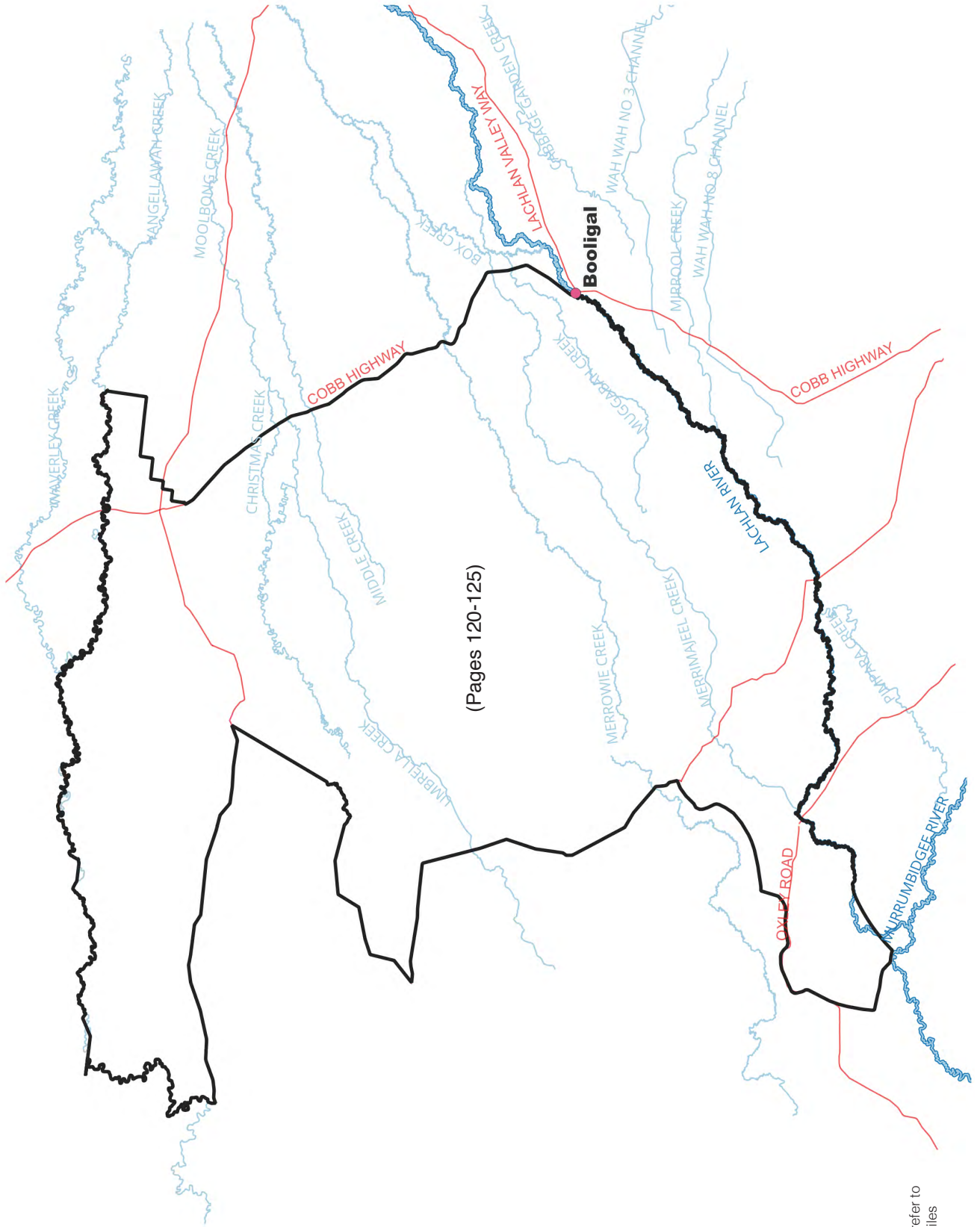
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# BERRIQUIN



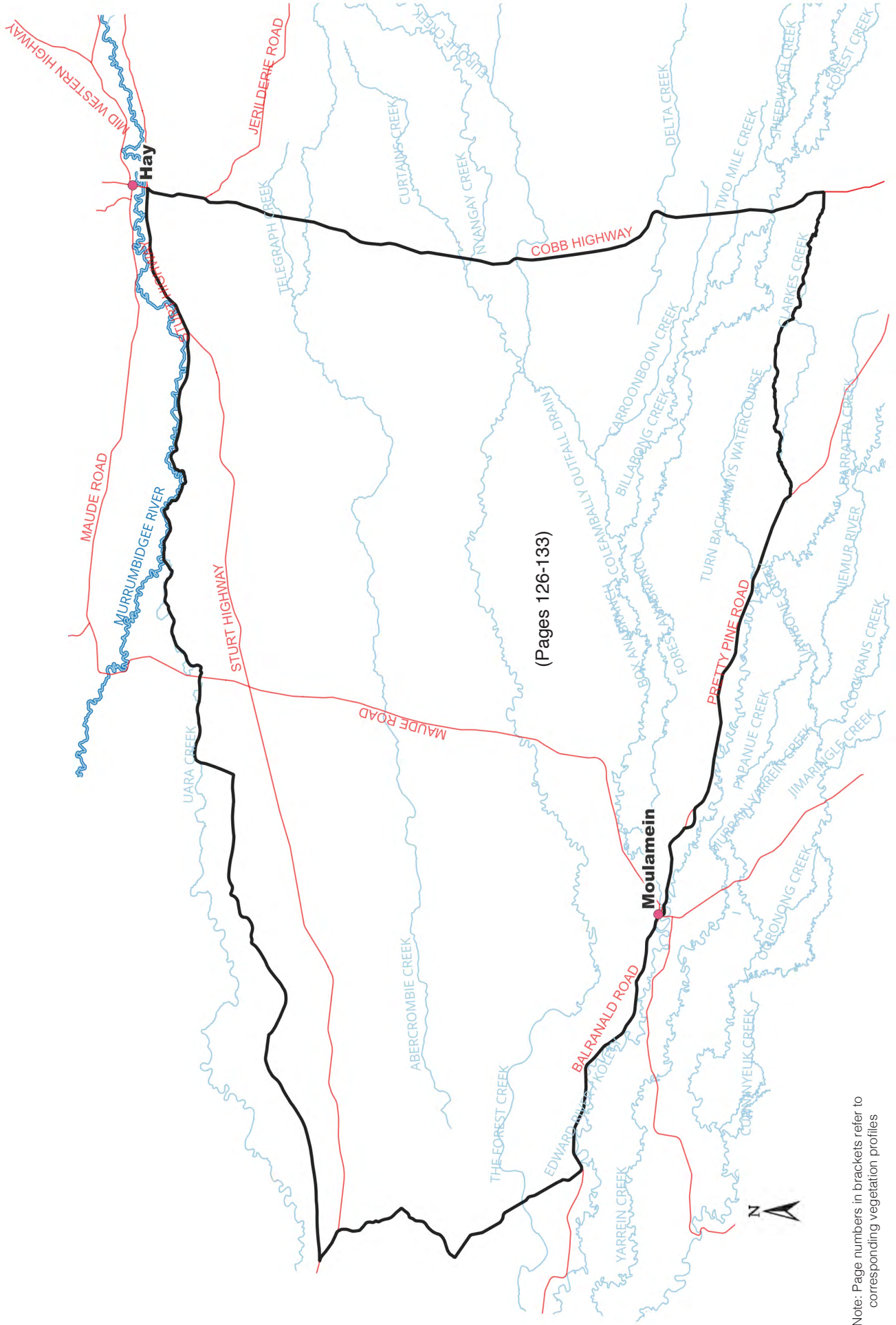
Note: Page numbers in brackets refer to corresponding vegetation profiles

# BOOLIGAL



Note: Page numbers in brackets refer to corresponding vegetation profiles

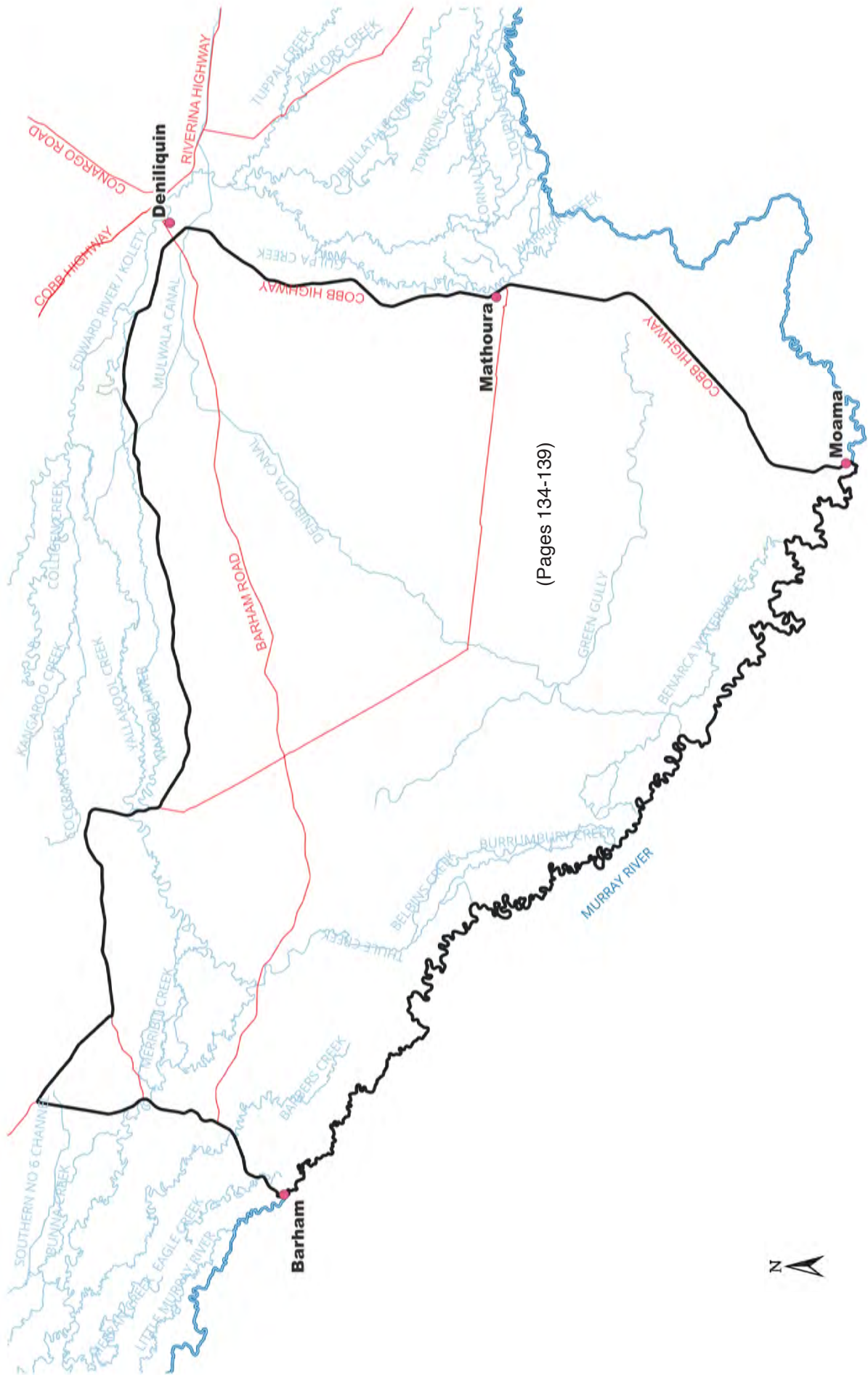
# BOOROORBAN



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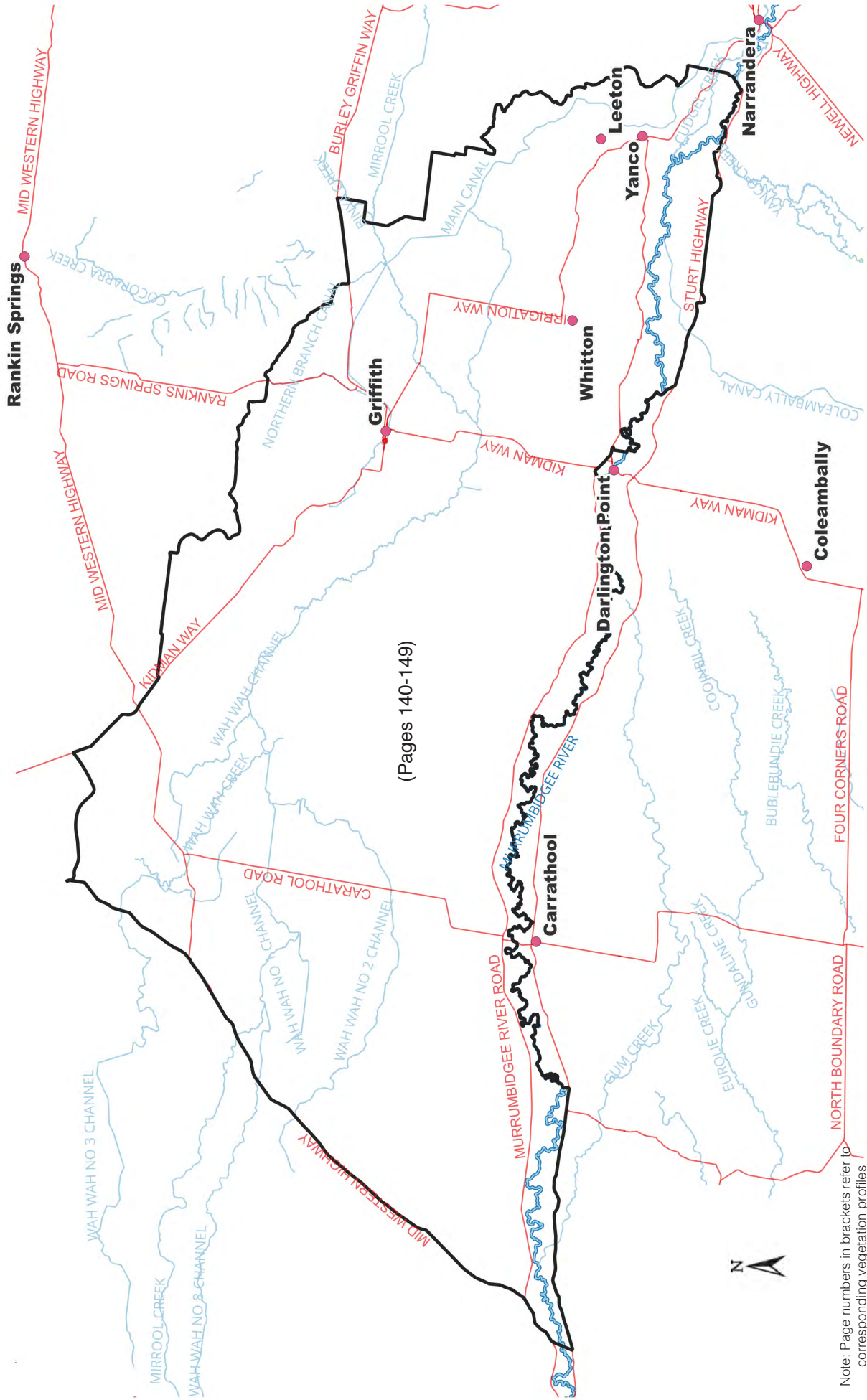
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# CADELL



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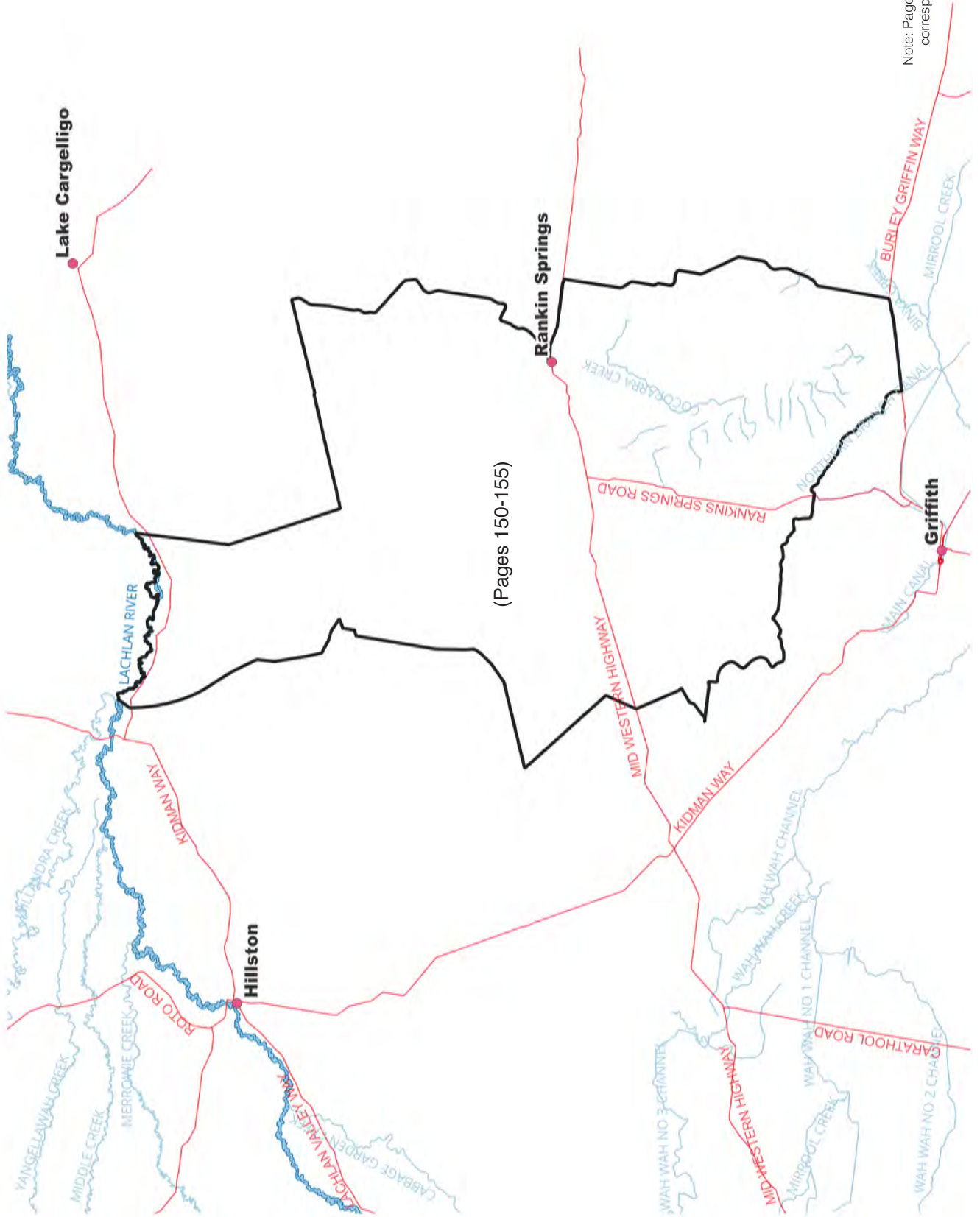
# CARRATHOOL



Note: Page numbers in brackets refer to corresponding vegetation profiles



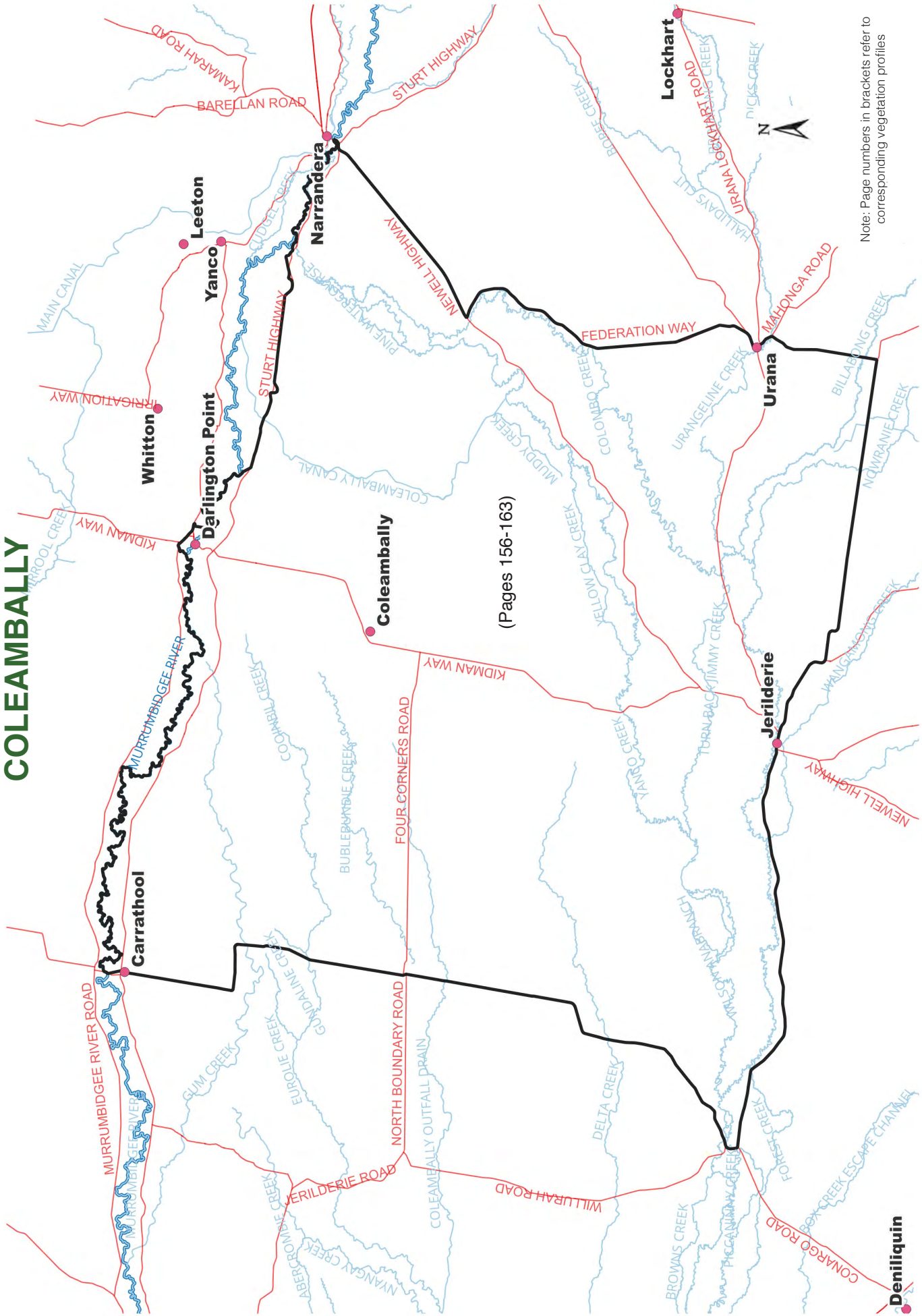
# COCOPARRA



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# COLEAMBALLY

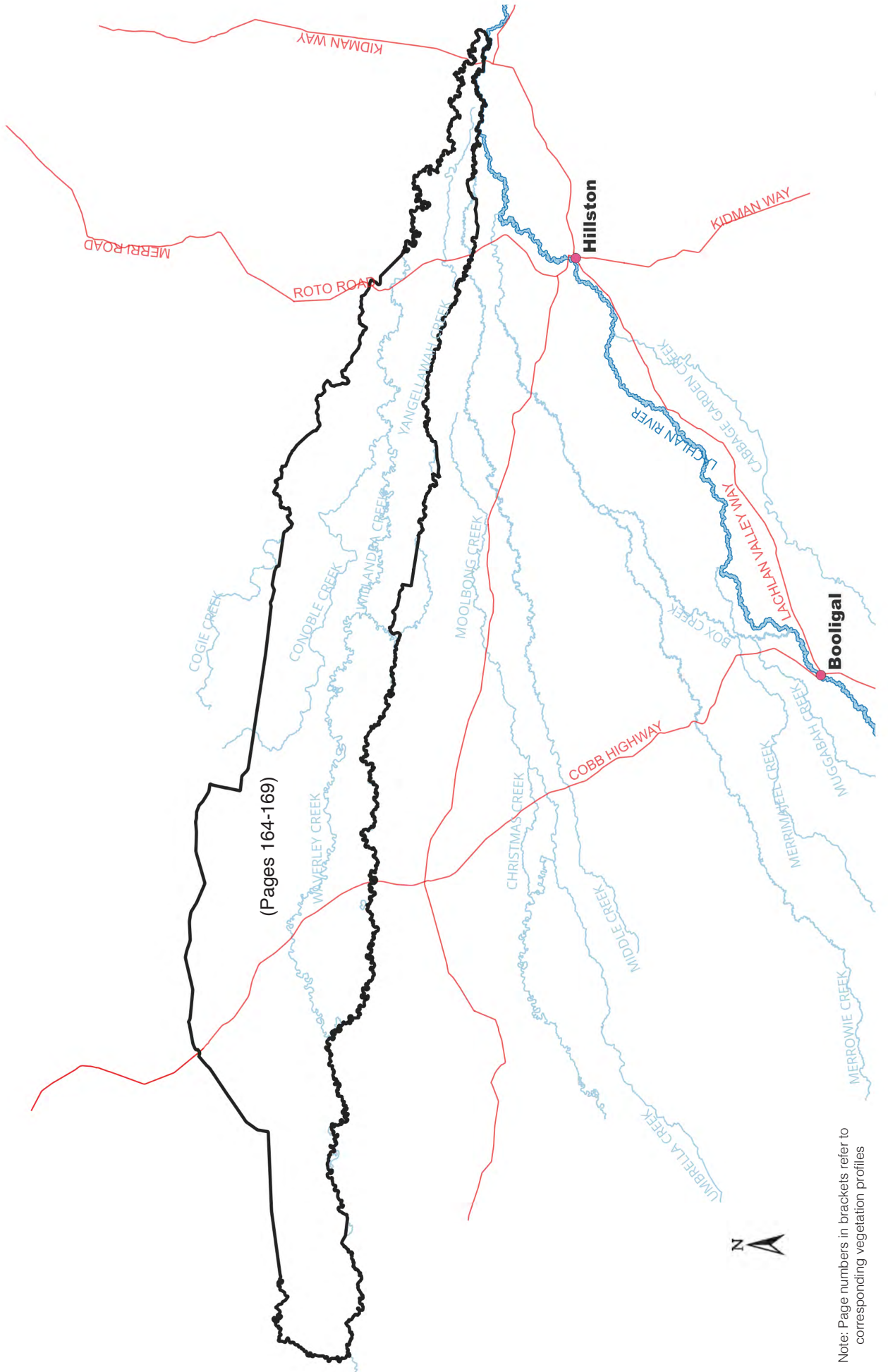


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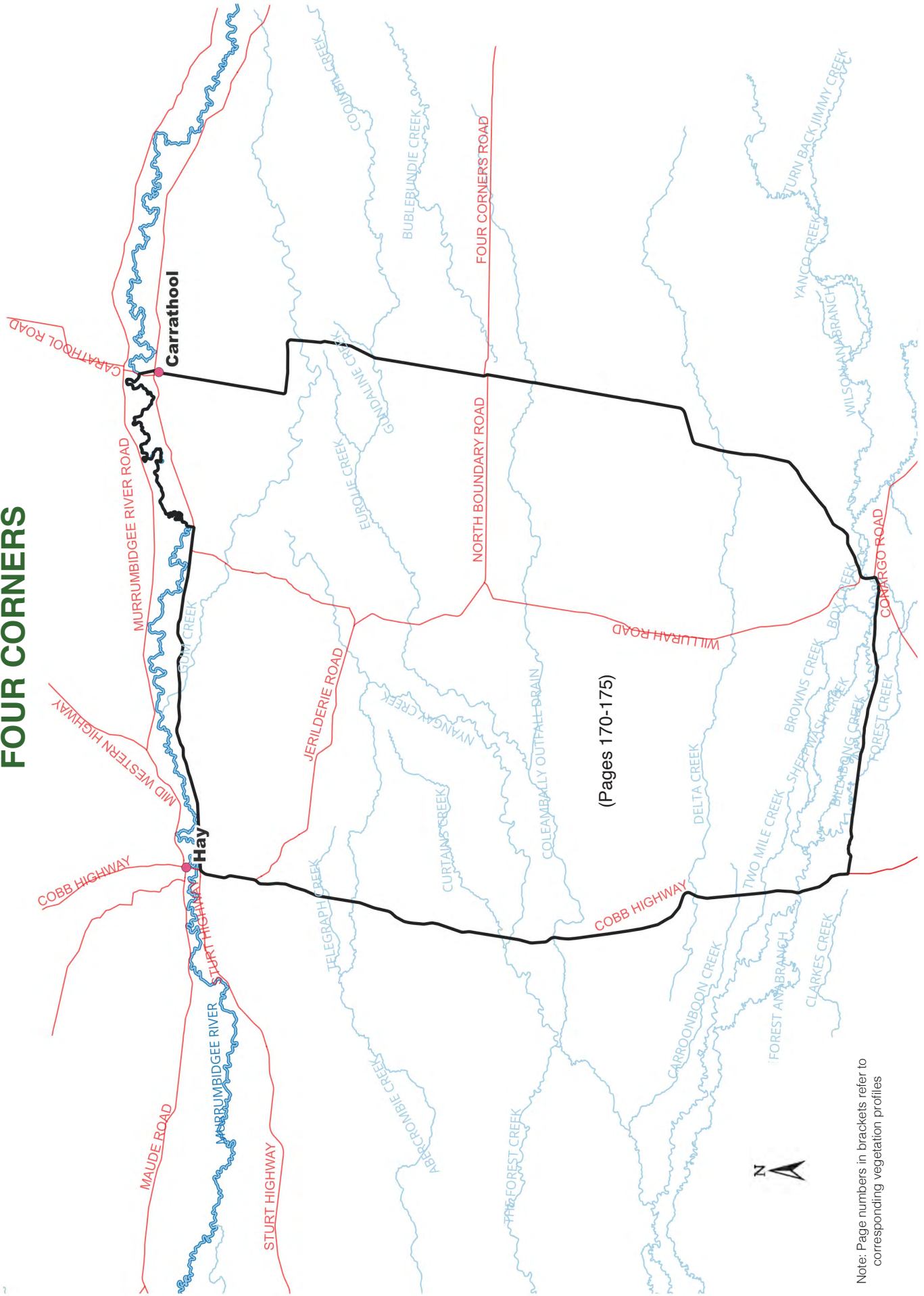
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# CONOBLE



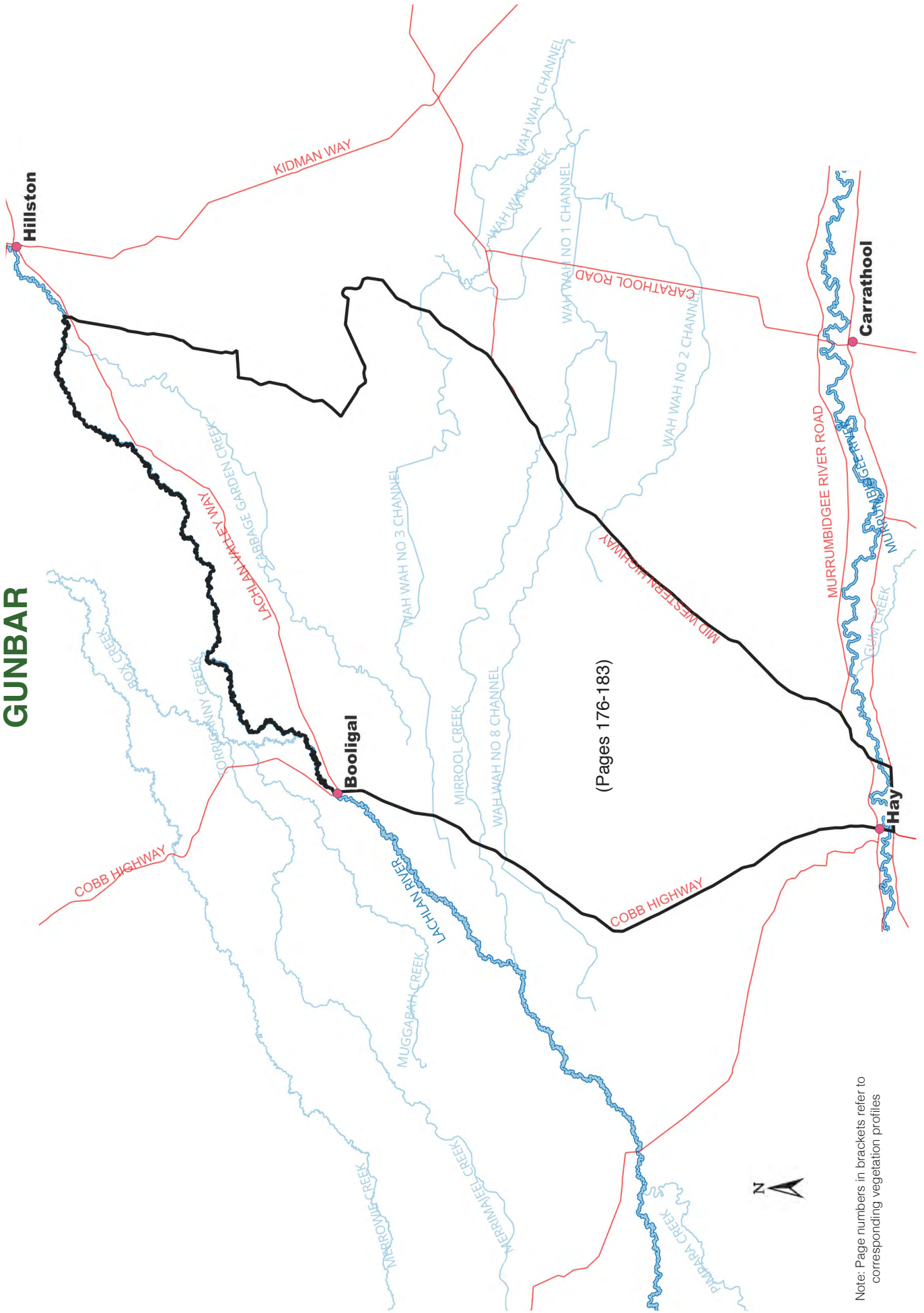
# FOUR CORNERS



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# GUNBAR



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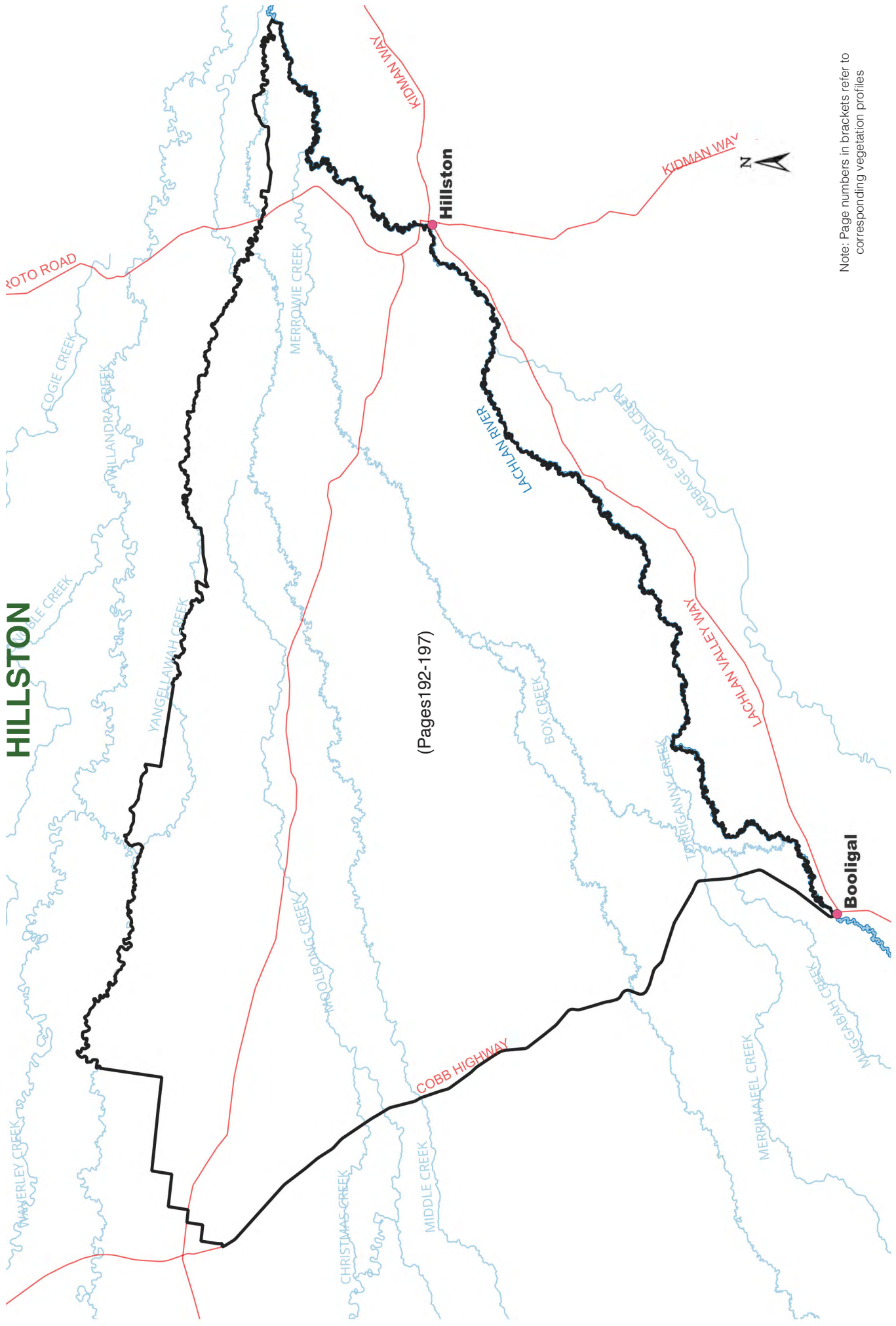
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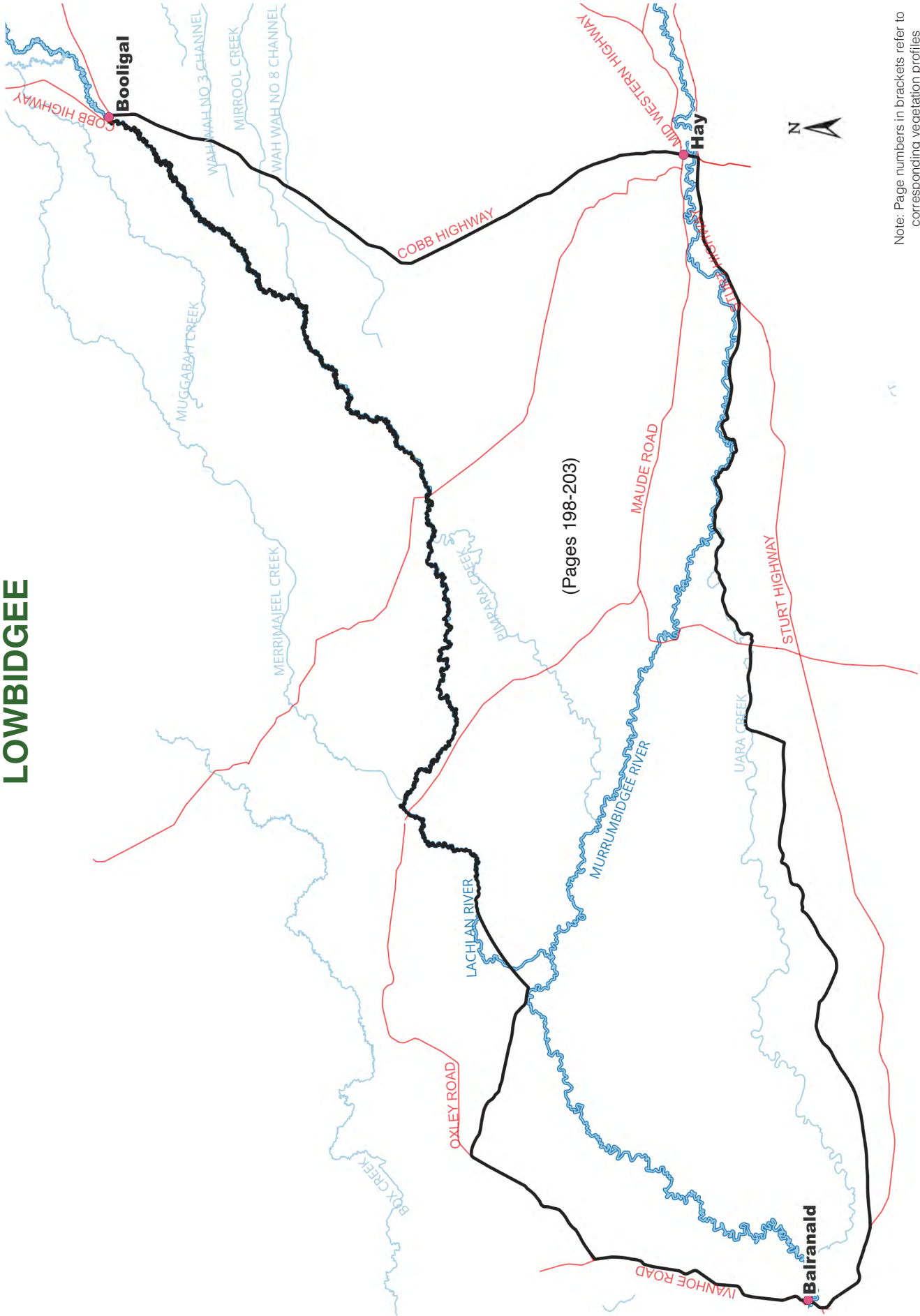


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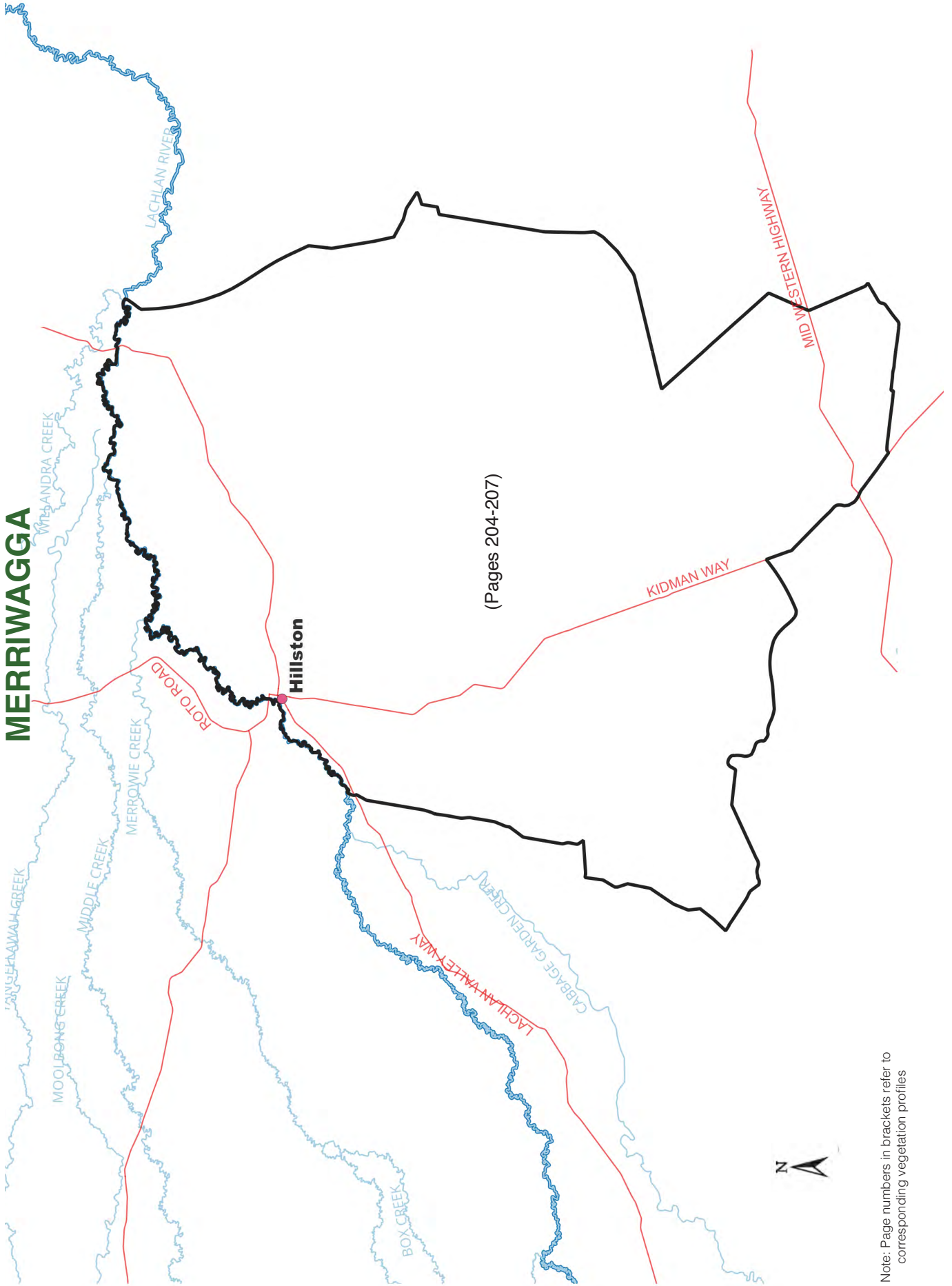
# LOWBIDGE



Note: Page numbers in brackets refer to corresponding vegetation profiles



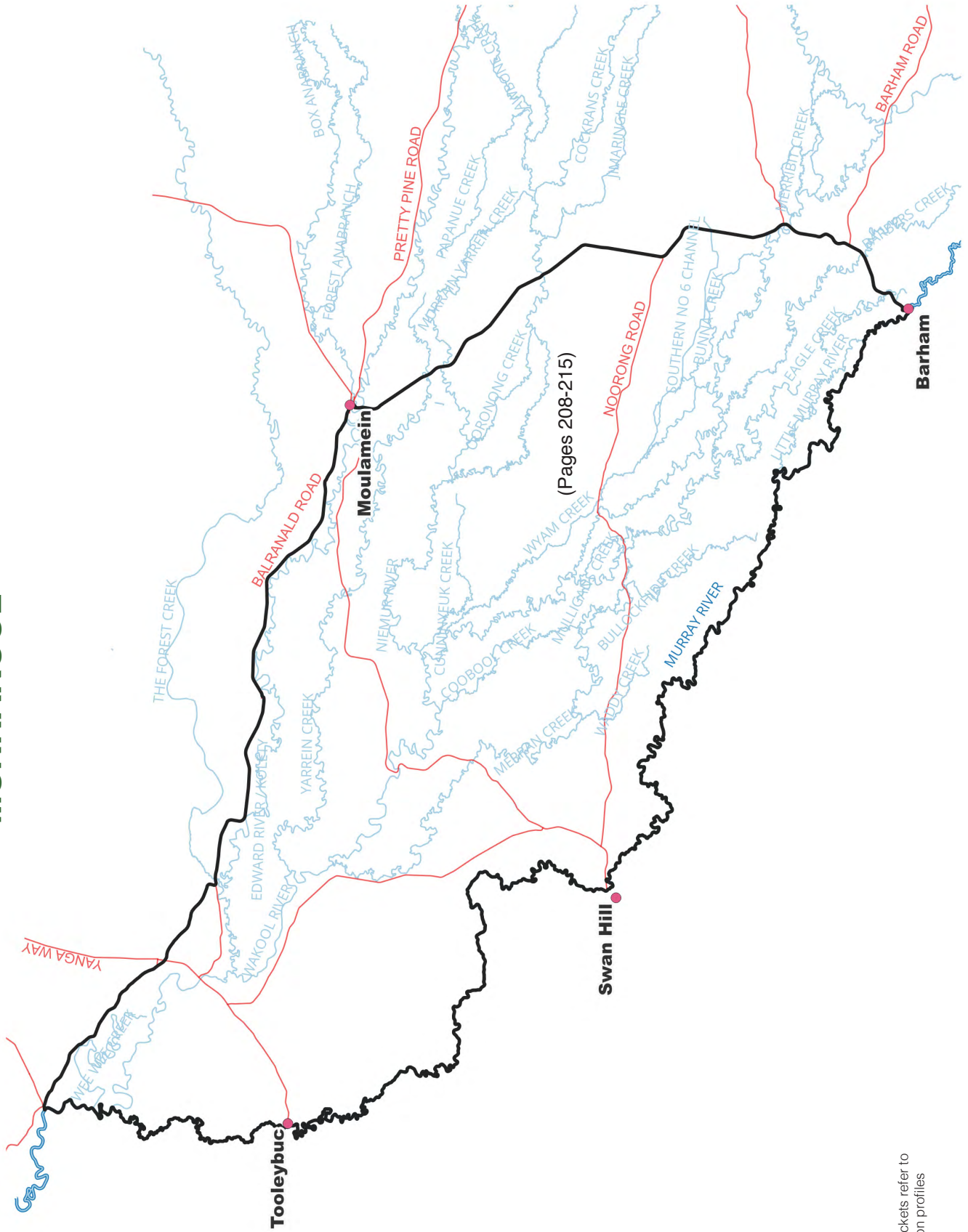
# MERRIWAGGA



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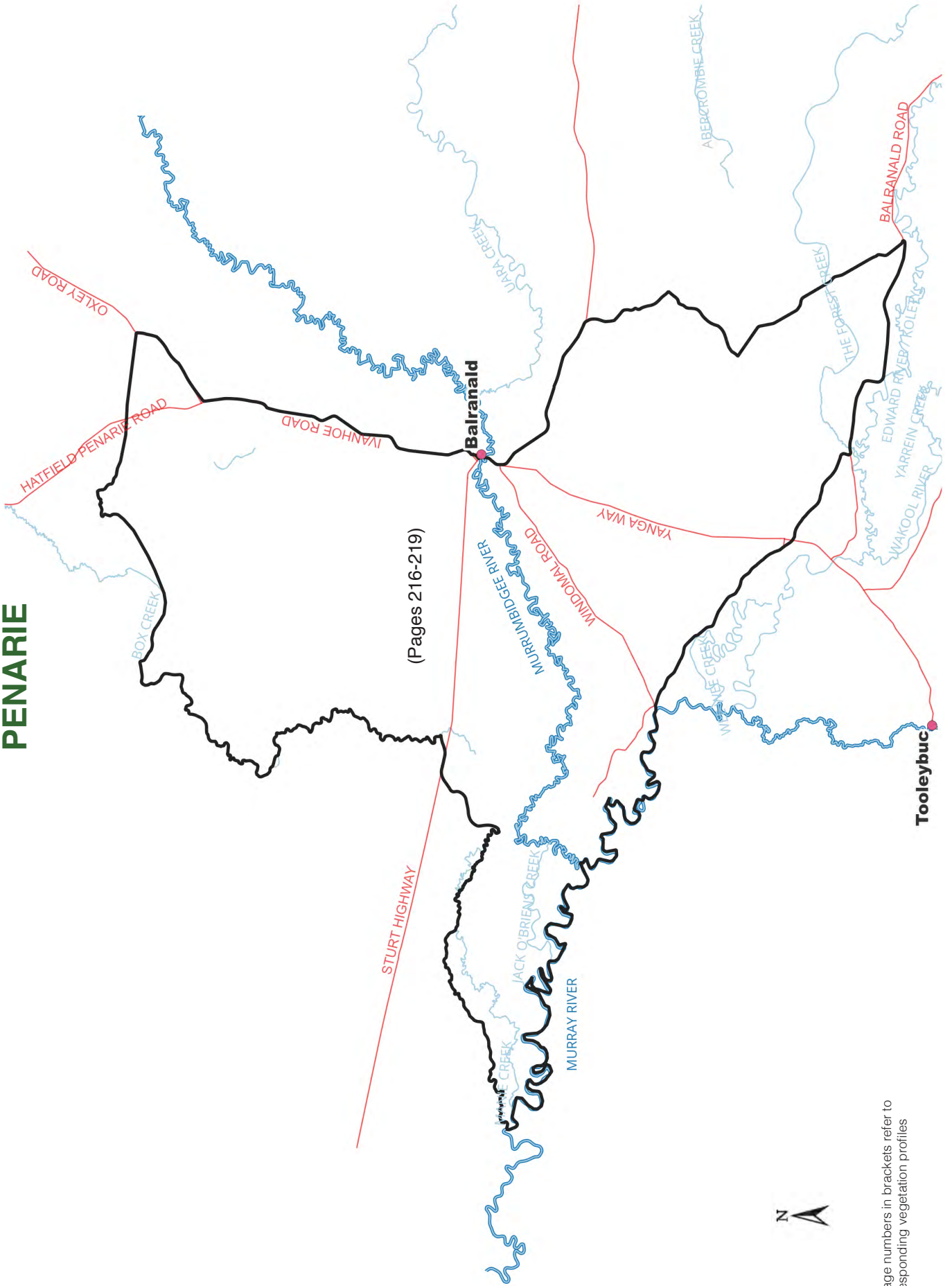
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# MURRAKOOOL



Note: Page numbers in brackets refer to corresponding vegetation profiles

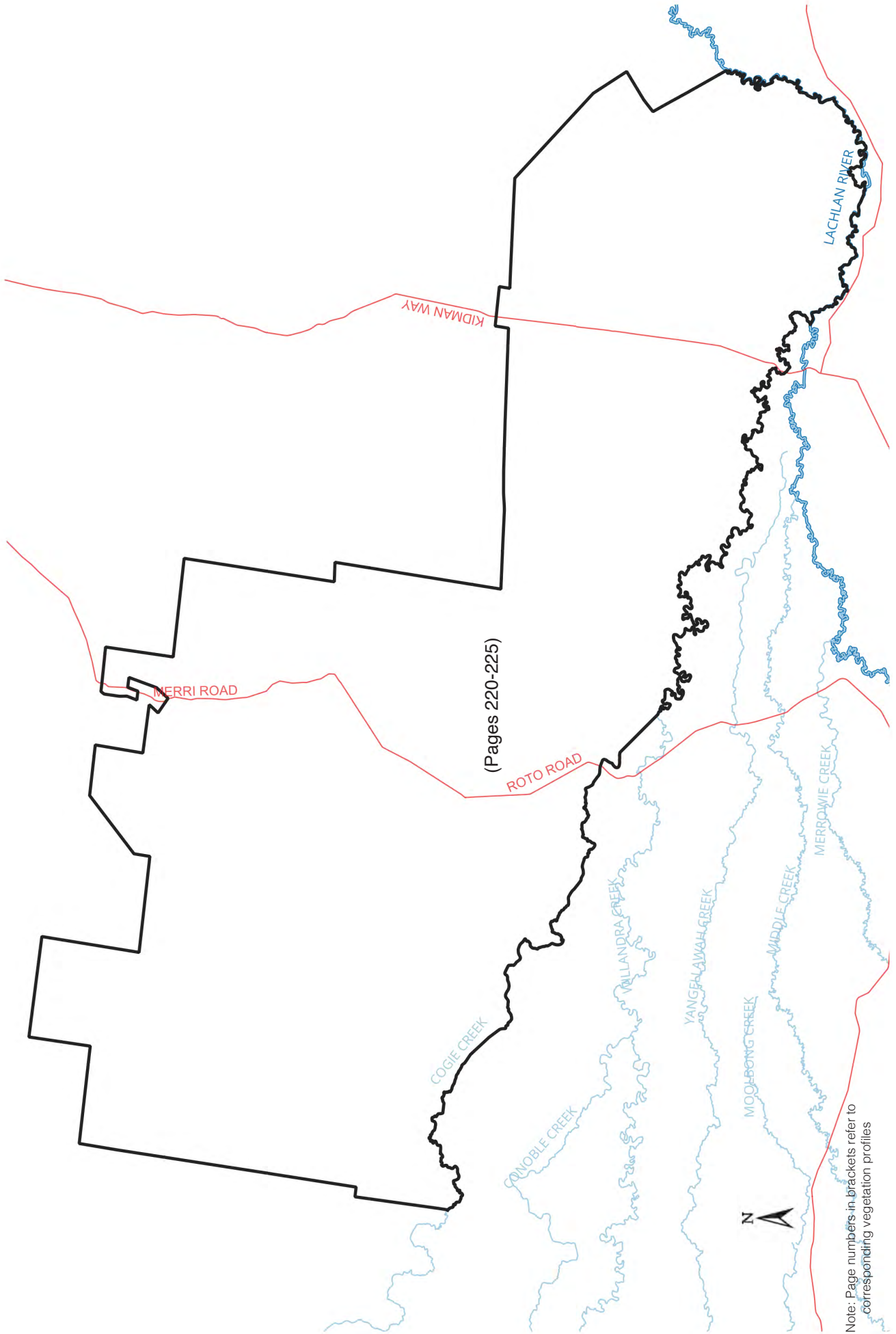
# PENARIE



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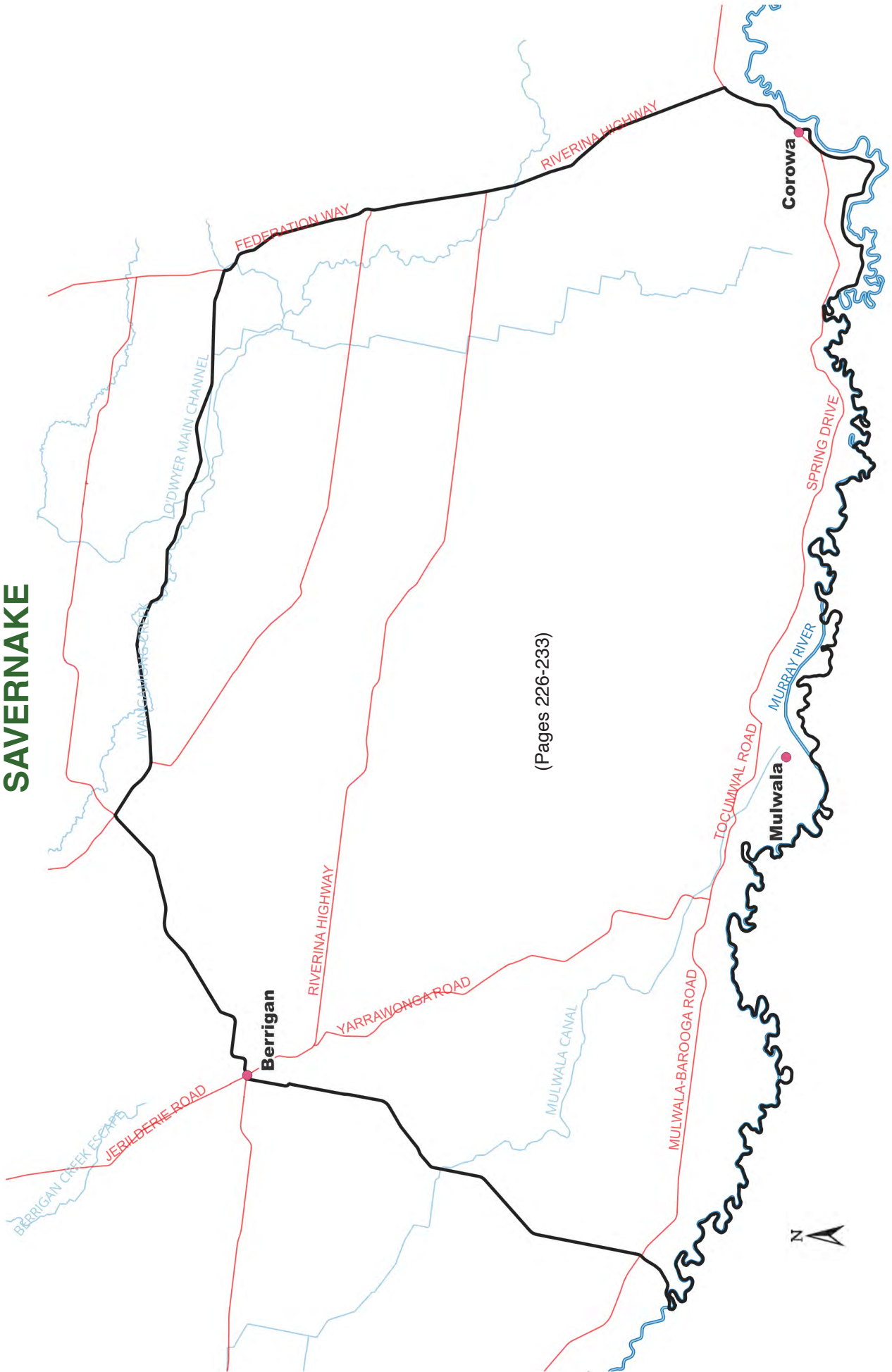
Note: Page numbers in brackets refer to corresponding vegetation profiles

# ROTO



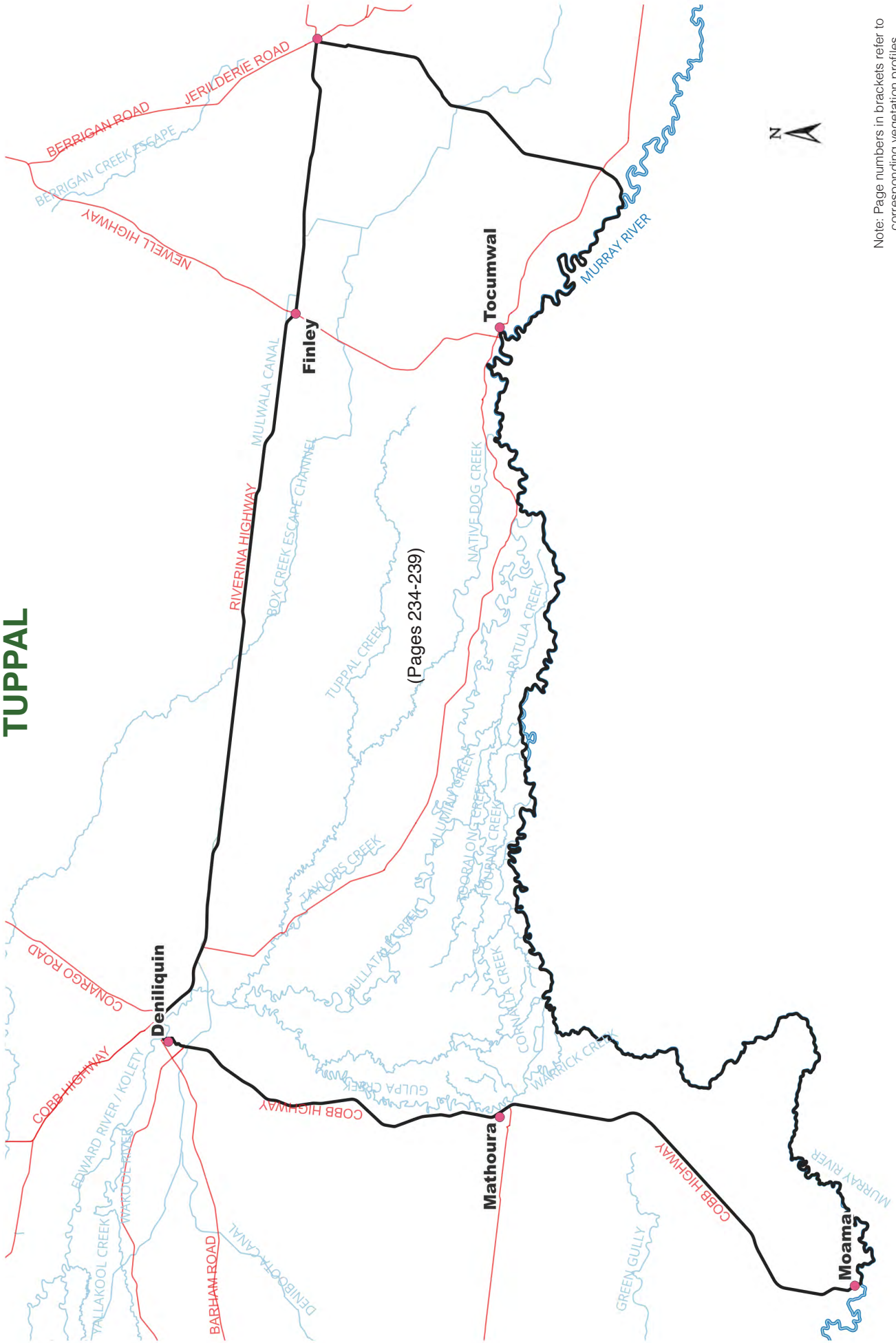
Note: Page numbers in brackets refer to corresponding vegetation profiles

# SAVERNAKE



Note: Page numbers in brackets refer to corresponding vegetation profiles

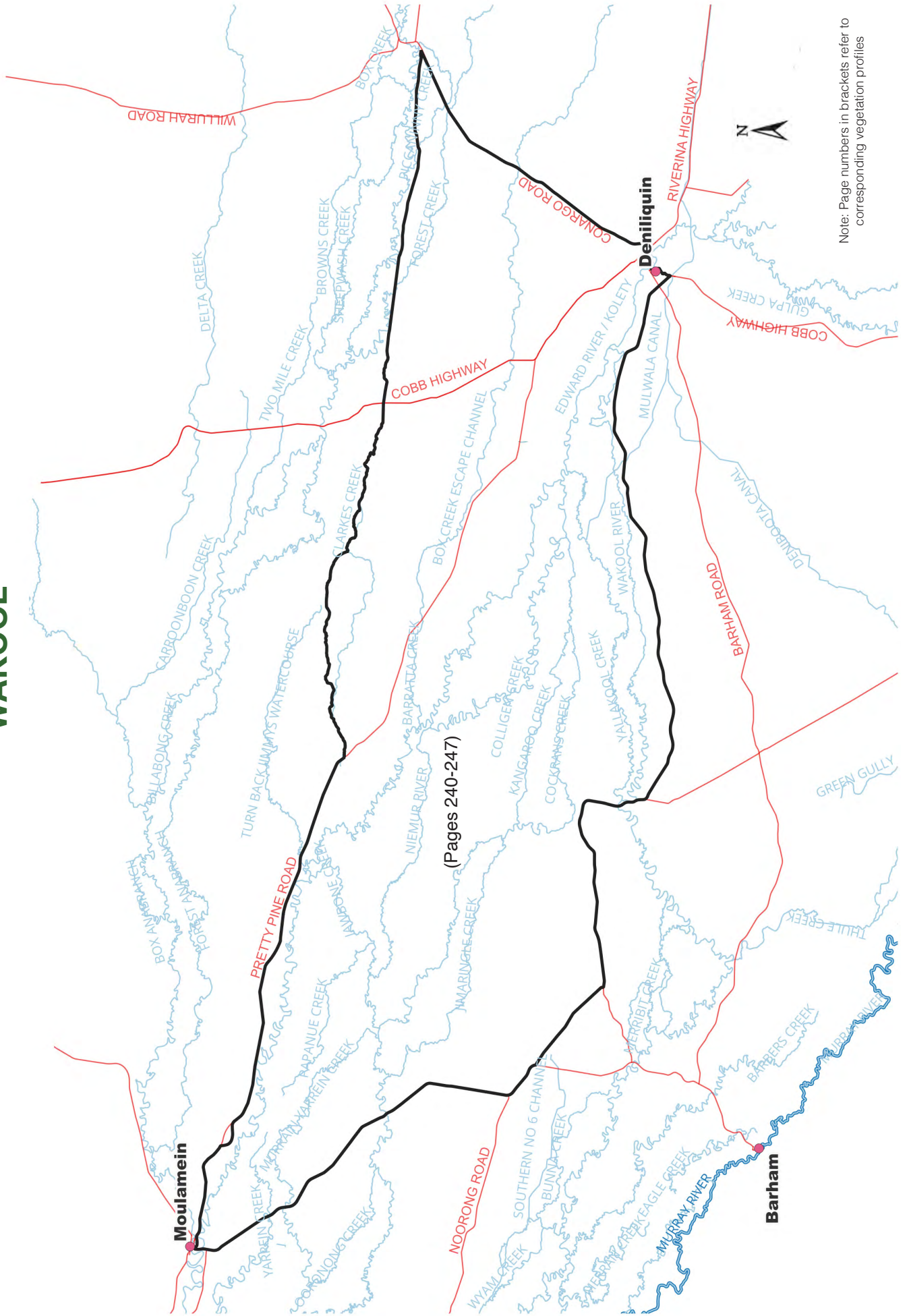
# TUPPAL



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Note: Page numbers in brackets refer to corresponding vegetation profiles

# WAKOOL



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# VEGETATION PROFILES

The following profiles are intended to provide a general impression rather than a precise depiction of the vegetation in the various districts across the Riverina region. They showcase the native plants that would typically be found in various landforms within a region, particularly in undisturbed or successfully restored areas. The species lists included in the profiles highlight key plants that contribute to the overall structure and function of the ecosystem, serving as a valuable reference for revegetation projects and for assessing the success of restoration efforts.

The vegetation profiles incorporate several key elements, each serving a distinct purpose in conveying information about the vegetation and its associated landscape:

## **Landform:**

Specifies the particular part of the landscape to which the profile pertains, such as a ridge top, creekline, or level plain. It is designed to help you to identify the specific terrain and its characteristics.

## **Vegetation Type:**

Typically adheres to established nomenclature for classifying vegetation types (e.g., Riverine Forest, Bladder Saltbush Chenopod Shrubland). It provides insights into the structure of the plant community and the dominant species present.

## **Geology & Soils:**

Offers a concise overview of the geology and soils associated with the vegetation, such as the presence of heavy clays or volcanic sands.

## **Location Example:**

Lists places within a reasonable distance where examples of relatively intact vegetation can be observed (where available). These locations could include nature reserves, roadsides, traveling stock reserves, cemeteries, or other remnant areas, offering opportunities for firsthand observation and comparison.

## **Species Lists:**

The profiles include lists of indigenous species that are representative of the vegetation community. These lists are categorised based on growth forms, namely: Trees (> 8m), Small Trees & Shrubs (2m to 8m), Small Shrubs (< 2m), and Groundcovers. They serve as valuable resources for revegetation projects and can aid in evaluating the progress of vegetation recovery.

## **Illustration:**

The illustration is provided as an example of the general shape of the landforms, and also contains a representation of the vegetation structures within each..



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### Species Habitat Codes (where noted in vegetation profiles)

1. Sandy sites	2. Dune crests	3. Drier sites	5. Wetter sites
6. Saline sites	7. Occasional on heavier soils	8. Scattered	10. Dominant on degraded land
11. Limestone nodules < 1m deep	12. Lachlan River area only	13. Deniliquin & Jerilderie only	15. Ivanhoe area only
16. On summits only	17. On shallow, gravelly soils		

For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

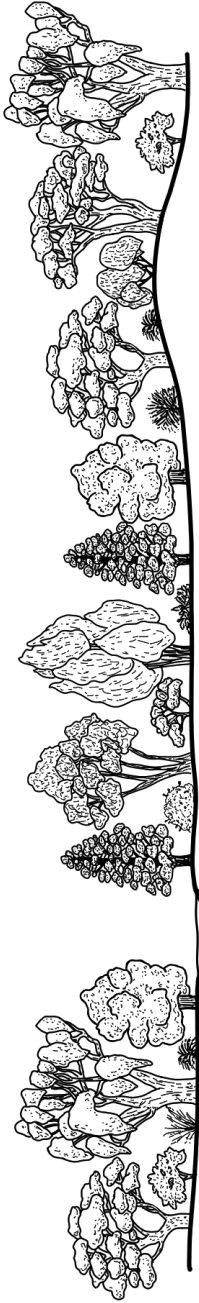
# BERRIQUIN



LANDFORM	Creeklines and Secondary Floodplains	Shallow Depressions	Level to Depressed Plains
<b>VEGETATION TYPE</b>	Black Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.	Boree Woodland.
<b>GEOLOGY &amp; SOILS</b>	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Grey and brown clays, or sometimes on red-brown earths.
<b>LOCATION EXAMPLE</b>	Tholobin State Forest, Mairjimmy State Forest, Maddison Square Travelling Stock Reserve, Crossleys Travelling Stock Reserve.	Nangunia Swamp, Moonee Swamp Rd, South Coree Rd (Nth section), Wangamong Creek.	Conargo – Jerilderie Rd, Travelling Stock Reserve 987 on the Deniliquin-Conargo Rd.
<b>TREES &gt; 8 m</b>	<p><i>Allocasuarina luehmannii</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>3</sup>  <i>Hakea tephrosperma</i><sup>3</sup></p> <p>Bull Oak  White Cypress Pine  River Red Gum  Black Box  Grey Box  Hooked Needlewood</p>	<i>Eucalyptus largiflorens</i>  Black Box	<i>Acacia homalophylla</i>  Yarran
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p><i>Acacia acinacea</i><sup>3</sup>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Chenopodium nitiriacaceum</i>  <i>Duma florulenta</i><sup>5</sup></p> <p>Gold-dust Wattle  Western Black Wattle  Miljee  Boree  Cooba  Nitre Goosefoot  Lignum</p>	<p><i>Atriplex nummularia</i>  <i>Chenopodium nitiriacaceum</i>  <i>Duma florulenta</i></p> <p>Old Man Saltbush  Nitre Goosefoot  Lignum</p>	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Atriplex nummularia</i>  <i>Eremophila longifolia</i></p> <p>Miljee  Boree  Cooba  Old Man Saltbush  Emubush</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>Enchylaena tomentosa Maireana aphylla M. microphylla Rhogodia spinescens</p>	<p>Ruby Saltbush Cottonbush Eastern Cottonbush Thorny Saltbush</p>	<p>Atriplex leptocarpa Enchylaena tomentosa Maireana aphylla M. decalvens Rhogodia spinescens Sclerolaena muricata</p>	<p>Slender-fruited Saltbush Ruby Saltbush Native Liquorice Black Cottonbush Thorny Saltbush Five spined Bassia</p>	
<p><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata Amphibromus nervosus<sup>5</sup> Austrostipa scabra subsp. falcata Calostemma purpureum Carex inversa Centipeda cunninghamii Einadia nutans subsp. nutans Maireana pentagona M. drummondii Rytidosperma caespitosa Sida corrugata</p>	<p>Lesser Joyweed Venied Swamp Wallaby-grass Rough Speargrass Wilcannia Lily Knob Sedge Common Sneezeweed Climbing Saltbush Slender Fissure-weed Common Nardoo White-top Corrugated Sida</p>	<p>Atriplex semibaccata A. suberecta Boerhavia dominii Calocephalus sonderi Chamaesyce drummondii Chenopodium melanocarpum Cressa australis Disphyma crassifolium subsp. clavellatum Dissochilus biflorus var. biflorus Einadia nutans subsp. nutans Eleocharis acuta E. plana Eragrostis australasica Geranium solanderi Juncus aridicola J. flavidus J. radula Limosella australis Maireana ciliata M. enchyloides Marsilea drummondii Sclerolaena brachyptera Senecio cunninghamii Sida corrugata S. fibulifera Solanum esuriale Typha domingensis T. orientalis Vittadinia cuneata</p>	<p>Creeping Saltbush Lagoon Saltbush Tar Vine Pale Beauty-heads Flat Spurge Black Crumbweed Rosinweed Round-leaf Pigface Twin-horned Copperburr Climbing Saltbush Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Australian Cranesbill Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Hairy Fissure weed Wingless Fissure-weed Common Nardoo Short-winged Copperburr Bushy Groundsel Corrugated Sida Pin Sida Quena Cumbungi Cumbungi Fuzzweed</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>

# BERRIQUIN (SOUTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM VEGETATION TYPE	Creeklines and Secondary Floodplains	Plains	Lunettes and Sand Ridges
<b>GEOLOGY &amp; SOILS</b>	Black Box Woodland.  Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Grey Box Woodland.  Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Callitris Mixed Woodland (Prior Streams / Lunettes).  Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian: well drained sandy-loams and loams.
<b>LOCATION EXAMPLE</b>	Tholobin State Forest, Mairjimmy State Forest, Maddison Square Travelling Stock Reserve, Crossleys Travelling Stock Reserve.	Tholobin State Forest, Marjimmy State Forest, Green Swamp Travelling Stock Reserve, Coree Rd.	Tholobin State Forest, Avalon Rd.
<b>TREES &gt; 8 m</b>	<i>Allocasuarina luehmanni</i> <i>Callitris glaucophylla</i> <i>Eucalyptus camaldulensis</i> <sup>5</sup> <i>E. largiflorens</i> <i>E. microcarpa</i> <sup>7</sup> <i>Hakea tephrosperma</i> <sup>2</sup>	<i>Acacia homalophylla</i> <i>Allocasuarina luehmanni</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>E. microcarpa</i> <i>Myoporum platycarpum</i>	<i>Allocasuarina luehmanni</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>E. microcarpa</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<i>Acacia acinacea</i> <sup>3</sup> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Chenopodium nitriaraceum</i> <i>Duma florulenta</i>	<i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>Bursaria spinosa</i> <i>Eremophila longifolia</i> <i>Duma florulenta</i> <i>Myoporum montanum</i> <i>Pittosporum phylliraeoides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>	<i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. salicina</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Hakea leucoptera</i> <i>Pittosporum phylliraeoides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>

<p style="text-align: center;"><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Enchylaena tomentosa Maireana aphylla M. microphylla Rhagodia spinescens</p>	<p>Ruby Saltbush Cottonbush Eastern Cottonbush Thorny Saltbush</p>	<p>Dodonaea viscosa subsp. cuneata Maireana microphylla</p>	<p>Wedge leaf Hopbush Eastern Cottonbush Five spined Bassia</p>	<p>Wedge leaf Hopbush Eastern Cottonbush</p>	
	<p style="text-align: center;"><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata Amphibromus nervosus<sup>s</sup> Austrostipa scabra subsp. falcata Calostemma purpureum Carex inversa Centipeda cunninghamii Einadia nutans subsp. nutans Maireana pentagona M. drummondii Rytidosperma caespitosa Sida corrugata</p>	<p>Lesser Joyweed Veined Swamp Wallaby-grass Rough Speargrass Wilcannia Lily Knob Sedge Common Sneezeweed Climbing Saltbush Slender Fissure-weed Common Nardoo White-top Corrugated Sida</p>	<p>Alternanthera denticulata Anthrosachne scaber Atriplex semibaccata Austrostipa scabra subsp. falcata Einadia nutans subsp. nutans Enteropogon acicularis Pycnosorus globosus Rhodanthe corymbiflora Rytidosperma caespitosa Sida corrugata</p>	<p>Lesser Joyweed Common Wheatgrass Creeping Saltbush Rough Speargrass Climbing Saltbush Spider Grass Drumsticks Grey Sunray White-top Corrugated Sida</p>	<p>Aristida behriana A. jerichoensis Atriplex semibaccata Austrostipa scabra subsp. falcata Boerhavia domini Chrysocephalum apiculatum Clematis microphylla Einadia nutans subsp. nutans Enteropogon nigricans Enteropogon acicularis Eragrostis lacunaria Homopholis proluta Jasminum dictyllum subsp. lineare Lomandra effusa L. leucocephala Rytidosperma caespitosa</p>

# BERRIQUIN (NORTHERN)



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Conargo – Jerilderie Rd, Travelling Stock Reserve 987 on the Deniliquin-Conargo Rd.	South Coree Rd near Jerilderie, Newell Hwy Travelling Stock Reserve 0.5 km south of Jerilderie, Urana – Jerilderie Rd Travelling Stock Reserve.	Newell Highway 8 km south west of Jerilderie.
TREES > 8 m	<i>Acacia homalophylla</i>  Miljee Boree Cooba Old Man Saltbush Emubush	<i>Acacia homalophylla</i>  Yarran	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i>	<i>Acacia pendula</i> <sup>†</sup> <i>Chenopodium nitraticeum</i> <i>Duma florulenta</i>	<i>Acacia pendula</i> <sup>†</sup>  Boree

SMALL SHRUBS < 2 m	Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr	Slender-fruited Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr	Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr	Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhagodia spinescens Sclerolaena muricata S. stelligera
<p>Atriplex semibaccata Austrostipa nodosa A. scabra subsp. falcata Calotis hispidula Chrysocephalum apiculatum Cotula australis Crassula colorata C. decumbens var. decumbens Einadia nutans subsp. nutans Enteropogon acicularis Maireana pentagona Myriocephalus rhizocephalus Plantago turritia Ptilotus erubescens Rhodanthe corymbiflora Rumex tenax Rytidosperma caespitosa R. setaceum Sida corrugata Swainsona murrayana Triptilodiscus pygmaeus Vittadinia cuneata Wahlenbergia gracilis Wurmbea dioica subsp. dioica</p>	<p>Creeping Saltbush Knotty Speargrass Rough Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Climbing Saltbush Spider Grass Slender Fissure-weed Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Australian Bluebell Early Nancy</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium fimbriatum A. minus Atriplex semibaccata Austrostipa aristiglutinis A. nodosa A. scabra subsp. falcata Brachyscome chrysoglossa<sup>4</sup> Bulbine bulbosa Calotis scabiosifolia Chamaesyce drummondii Chloris truncata Chrysocephalum apiculatum Convolvulus erubescens Cotula australis Enteropogon acicularis E. ramosus Goodenia fascicularis G. pusilliflora Homopholis prolata Hyalo sperma glutinosum Leiocarpa leptolepis L. panaetioides L. squamatus<sup>4</sup> Leucochrysum molle<sup>13</sup> Maireana encyphaenoides M. excavata M. pentagona Myriocephalus rhizocephalus Oxalis peremans Ptilotus exaltatus var. exaltatus P. macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Rytidosperma caespitosa R. eriantha Sida corrugata Solanum esuriale Sporobolus caroli Swainsona murrayana S. plagiotropis<sup>14</sup> S. procumbens Teucrium racemosum Triptilodiscus pygmaeus Wahlenbergia luteola</p>	<p>Slender-fruited Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Atriplex leptocarpa Maireana aphylla M. decalvans Rhagodia spinescens Sclerolaena muricata S. stelligera</p>
<p>Alternanthera denticulata Austrostipa aristiglutinis Bulbine semibarbata Calostemma purpureum Calotis scabiosifolia Centrolepis glabra Chloris truncata Convolvulus erubescens Crassula decumbens var. decumbens Eclipta platyglossa Eleocharis pallens Eragrostis australasica Eryngium paludosum Goodenia pusilliflora Homopholis prolata Isoetopsis graminifolia Issolepis hookeriana I. victoriensis Juncus radula Lachnagrostis filiformis Lepidium monoloboides Lepiorhynchus orientale Maireana pentagona Marsilea drummondii Myosurus minimus var. australis Myriocephalus rhizocephalus Myriophyllum crispatum Ptilotus exaltatus var. exaltatus Pycnosorus globosus Ranunculus pentandrus var. platycarpus Rhodanthe corymbiflora Rumex tenax Rytidosperma caespitosa R. duttoniana Sida corrugata Styidium despectum Swainsona procumbens Teucrium racemosum Utricularia dichotoma Wurmbea dioica subsp. dioica</p>	<p>Flannel Cudweed Lesser Joyweed Nodding Chocolate-lily Small Vanilla-lily Creeping Saltbush Plains Grass Knotty Speargrass Rough Speargrass Yellow tongue Daisy Native Leek Pale Beauty-heads Rough Burr-daisy Flat Spurge Windmill Grass Yellow Buttons Australian Bindweed Common Cotula Spider Grass Curly Windmill Grass Silky Goodenia Small-flowered Goodenia Rigid Panic Golden Sunray Stalked Plover-daisy Woolly Buttons Scaly Buttons Hoary Sunray Wingless Fissure-weed Bottle Fissure weed Slender Fissure-weed Woolly-heads Grassland Wood sorrel Showy Foxtail Square headed Foxtail Drumsticks Grey Sunray White-top Hill Wallaby Grass Corrugated Sida Quena Fairy Grass Slender Darling Pea Red Darling Pea Broughton Pea Downy Darling Pea Grey Germander Common Sunray Yellowish Bluebell</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium fimbriatum A. minus Atriplex semibaccata Austrostipa aristiglutinis A. nodosa A. scabra subsp. falcata Brachyscome chrysoglossa<sup>4</sup> Bulbine bulbosa Calotis scabiosifolia Chamaesyce drummondii Chloris truncata Chrysocephalum apiculatum Convolvulus erubescens Cotula australis Enteropogon acicularis E. ramosus Goodenia fascicularis G. pusilliflora Homopholis prolata Hyalo sperma glutinosum Leiocarpa leptolepis L. panaetioides L. squamatus<sup>4</sup> Leucochrysum molle<sup>13</sup> Maireana encyphaenoides M. excavata M. pentagona Myriocephalus rhizocephalus Oxalis peremans Ptilotus exaltatus var. exaltatus P. macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Rytidosperma caespitosa R. eriantha Sida corrugata Solanum esuriale Sporobolus caroli Swainsona murrayana S. plagiotropis<sup>14</sup> S. procumbens Teucrium racemosum Triptilodiscus pygmaeus Wahlenbergia luteola</p>	<p>Slender-fruited Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Atriplex leptocarpa Maireana aphylla M. decalvans Rhagodia spinescens Sclerolaena muricata S. stelligera</p>
<p>SMALL SHRUBS &lt; 2 m</p>	<p>Slender-fruited Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Slender-fruited Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhagodia spinescens Sclerolaena muricata S. stelligera</p>

**GROUND COVERS**

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# BOOLIGAL (SOUTHERN)



LANDFORM	Reed Bed	Rivers, Floodplains and Levees	Shallow Depressions
VEGETATION TYPE	Reed Bed	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.
GEOLOGY & SOILS	Deep wetland dominated by Bulrushes. Alluvial, heavy grey clays.	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.
LOCATION EXAMPLE	Great Cumbung Swamp, Lake Tala, Lake Bunumburt.	Goonawarra Nature Reserve, Oxley State Forest, McFarlands State Forest, Quandong State Forest.	Boxyards Rd, approximately 14km west of Booligal, Goonawarra Nature Reserve.
TREES > 8 m	<i>Eucalyptus camaldulensis</i> <sup>o</sup> River Red Gum	<i>Acacia stenophylla</i> <i>Eucalyptus camaldulensis</i> River Cooba River Red Gum	<i>Eucalyptus largiflorens</i> <sup>o</sup> Black Box
SHRUBS & SMALL TREES 2 - 8 m	nil	<i>Acacia salicina</i> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i> Cooba Nitre Goosefoot Lignum	<i>Chenopodium nitriaceum</i> <i>Duma florulenta</i> Nitre Goosefoot Lignum



<p style="text-align: center;"><b>SMALL SHRUBS &lt; 2 m</b></p>	<p style="text-align: center;">nil</p>	<p style="text-align: center;">nil</p>	<p style="text-align: center;">Plains Lantern bush Eastern Flat-top Saltbush Dillon Bush Five spined Bassia Streaked Poverty-bush</p>
<p style="text-align: center;"><b>GROUND COVERS</b></p>	<p>Azolla filiculoides Brachycome basaltica var. gracilis Centipeda cunninghamii Cotula coronopifolia Cyperus gymnocaulos Damasonium minus Eleocharis acuta Juncus flavidus Lachnagrostis filiformis Lobelia concolor Marsilea drummondii Persicaria decipiens Phragmites australis Potamogeton crispus Senecio cunninghamii Typha domingensis T. orientalis Vallisneria australis</p>	<p>Alternanthera denticulata Amphibromus nervosus<sup>5</sup> Atriplex semibaccata Azolla filiculoides Brachycome basaltica var. gracilis Calostemima purpureum Cardamine paucijuga Carex appressa C. tereticaulis<sup>5</sup> Centipeda cunninghamii Cycnogeton procerum<sup>5</sup> Damasonium minus<sup>5</sup> Eclipta platyglossa Eleocharis acuta<sup>5</sup> E. pusilla E. sphacelata<sup>5</sup> Eragrostis australasica Glinus lotoides Juncus flavidus Lachnagrostis filiformis Lobelia concolor Ludwigia pepioides subsp. montevidensis<sup>5</sup> Marsilea drummondii Mentha australis Mimulus gracilis Myriophyllum papillosum<sup>5</sup> Nymphoides crenata<sup>5</sup> Paspalum jubiflorum Phragmites australis Poa tordeana Ranunculus lappaceus R. pumilio Senecio cunninghamii Typha domingensis<sup>5</sup> T. orientalis<sup>5</sup> Vallisneria australis<sup>5</sup> Wahlenbergia fluminalis W. gracilentia</p>	<p>Atriplex semibaccata A. suberecta Austrostipa scabra subsp. falcata Centipeda cunninghamii Eleocharis acuta E. pallens Eragrostis australasica Juncus flavidus J. radula Malva preissiana Limosella australis Lythrum hyssopifolia Marsilea drummondii Myriocephalus rhizocephalus Phragmites australis Rumex crystallinus Senecio cunninghamii</p>
	<p>Red Azolla Swamp Daisy Common Sneezeweed Waterbuttons Spiny Sedge Starfruit Common Spike-rush Yellow Rush Blown Grass Poison Pratia Common Nardoo Slender Knotweed Common Reed Curly Pondweed Bushy Groundsel Cumbungi Eel-weed</p>	<p>Lesser Joyweed Veined Swamp Wallaby-grass Creeping Saltbush Red Azolla Swamp Daisy Wilcannia Lily Annual Bitter cress Tall Sedge Rush Sedge Common Sneezeweed Water-ribbons Starfruit Yellow Twin heads Common Spike-rush Small Spike-rush Tall Spike-rush Canegrass Hairy Carpet-weed Yellow Rush Blown Grass Poison Pratia Water Primrose Common Nardoo River Mint Slender Monkey flower Water-milfoil Waxy Marshwort Warrego Summer-grass Common Reed Sweet Swamp grass Common Buttercup Ferry Buttercup Bushy Groundsel Cumbungi Cumbungi Eel-weed River Bluebell Annual Bluebell</p>	<p>Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Sneezeweed Common Spike-rush Pale Spike-rush Canegrass Yellow Rush Hoary Rush Australian Hollyhook Australian Mudwort Hyssop Loosestrife Common Nardoo Woolly-heads Common Reed Shiny Dock Bushy Groundsel</p>

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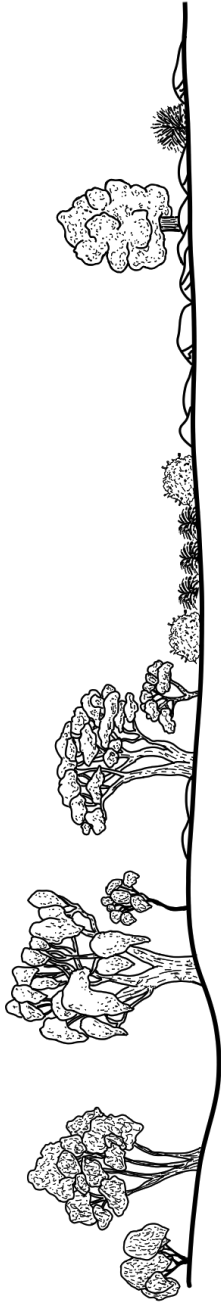
# BOOLIGAL



LANDFORM	Creeklines and Secondary Floodplains	Level to Depressed Plains	Undulating Plains, Low Rises and Levees
VEGETATION TYPE	Black Box Woodland.	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.
LOCATION EXAMPLE	Goonawarra Nature Reserve, Oxley State Forest, Merrowie Ck north of Booligal.	Corrong Rd, approximately 13km west of Cobb Highway, Freshwater Rd, 16km north of Oxley (dieback).	Freshwater Rd, Oxley – Ivanhoe Rd.
TREES > 8 m	<i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i>	<i>Acacia homalophylla</i>	<i>Callitris glaucophylla</i> <sup>8</sup> <i>Haakea tephrosperma</i>
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. salicina</i> <i>A. victoriae</i> <i>Atriplex nummularia</i> <i>Chenopodium nitariaceum</i> <i>Duma florulenta</i> <sup>8</sup> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i>	<i>Atriplex nummularia</i> <sup>4</sup> <i>Eremophila sturtii</i>	<i>Acacia melvillei</i> <i>Alecyon oleifolius</i> subsp. <i>canescens</i> <sup>8</sup> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i>
	Miljee Cooba Prickly Wattle Old Man Saltbush Nitre Goosefoot Lignum Moonah Butterbush	Yarran	White Cypress Pine Hooked Needlewood
	Myall Rosewood Old Man Saltbush Erubush	Old Man Saltbush Turpentine	

<p><b>LOW SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex lindleyi</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i></p>	<p>Eastern Flat-top Saltbush Ruby Saltbush Black Bluebush Dillon Bush Thorny Saltbush</p>	<p><i>Atriplex lindleyi</i> <i>A. stipitata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Frankenia connata</i> <i>Maireana decalvans</i> <i>M. pyramidata</i> <i>M. turbinata</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena tricuspidis</i><sup>6</sup> <i>Tecticornia tenuis</i></p>	<p>Eastern Flat-top Saltbush Bitter Saltbush Bladder Saltbush Ruby Saltbush Clustered Sea-heath Black Cottonbush Black Bluebush Satiny Bluebush Soft-horns Thorny Saltbush Streaked Poverty-bush Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana appressa</i> <i>M. decalvans</i> <i>M. pyramidata</i> <i>M. secifolia</i><sup>11</sup> <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. intricata</i> <i>S. muricata</i> <i>S. tricuspidis</i> <i>Tecticornia tenuis</i></p>	<p>Baldoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Grey Bluebush Black Cottonbush Black Bluebush Pearl Bluebush Soft-horns Dillon Bush Water Weed Thorny Saltbush Pale Poverty-bush Tangled Poverty-bush Five spined Bassia Streaked Poverty-bush Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex suberecta</i> <i>Austrostipa nitida</i> <i>Calandrinia eremaea</i> <i>Centipeda cunninghamii</i> <i>Crassula colorata</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Haloragis aspera</i> <i>Lobelia concolor</i> <i>Mimulus gracilis</i> <i>Stemodia florulenta</i> <i>Tetragonia tetragonioides</i> <i>Vittadinia cervicalis</i></p>	<p>Lesser Joyweed Lagoon Saltbush Balcarra Speargrass Small Purslane Common Sheezweed Dense Stonecrop Cannon-ball Climbing Saltbush Rough Raspwort Poison Pratia Slender Monkey flower Blue Rod New Zealand Spinach Annual New Holland Daisy</p>	<p><i>Calotis cuneifolia</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i><sup>4</sup> <i>Hyalosperma glutinosum</i> <i>Leiocarpa tomentosa</i> <i>Minuria cunninghamii</i> <i>Myriocephalus rhizocephalus</i> <i>Plantago drummondii</i> <i>Podolepis muelleri</i> <i>Pyrorosorus chrysanthes</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio glossanthus</i> <i>Triptilodiscus pygmaeus</i> <i>Velleia paradoxa</i></p>	<p>Purple Burr-daisy Windmill Grass Australian Bindweed Round-leaf Pigface Cannon-ball Climbing Saltbush Canegrass Golden Sunray Woolly Plover daisy Bush Minuria Woolly-heads Dark Sago weed Small Copper wire Daisy Golden Billy-buttons Grey Sunray White-top Short-winged Copperburr Slender Groundsel Common Sunray Spur Velleia</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nitida</i> <i>Calandrinia eremaea</i> <i>Caloccephalus sonderi</i> <i>Crassula colorata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Dysphania pumilio</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis dielsii</i> <i>Homopholis prolata</i> <i>Lachnagrostis filiformis</i> <i>Lepidium monophloides</i> <i>Minuria cunninghamii</i> <i>Panicum decompositum</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>Solanum esuriale</i></p>	<p>Creeping Saltbush Balcarra Speargrass Small Purslane Pale Beauty-heads Dense Stonecrop Round-leaf Pigface Twin-horned Copperburr Small Crumbweed Climbing Saltbush Mulka Rigid Panic Blown Grass Winged Peppergrass Bush Minuria Native Millet Grey Sunray White-top Short-winged Copperburr Corrugated Sida Quena</p>

# BOOLIGAL



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Deep Wetland	Shallow Depressions	Level to Depressed Plains
VEGETATION TYPE	Deep Wetland.	Lignum – Goosefoot / Canegrass Swamp.	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Semi-permanent wetland, billabong, lake or old creek bed often with fringing River Red Gum. Alluvial, heavy grey clays.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Morrowie Creek opposite Alma homestead.	Boxyards Rd, approximately 14km west of Booligal, Goonawarra Nature Reserve.	Corrong Rd, approximately 13km west of Cobb Highway, Freshwater Rd, 16km north of Oxley (dieback).
TREES > 8 m	<i>Acacia stenophylla</i> <i>Eucalyptus camaldulensis</i> <sup>9</sup>  River Cooba River Red Gum	<i>Eucalyptus largiflorens</i> <sup>8</sup>  Black Box	<i>Acacia homalophylla</i>  Yarran
SHRUBS & SMALL TREES < 8 m	nil	<i>Chenopodium nitriaceum</i> <i>Duma florulenta</i>  Nitre Goosefoot Lignum	<i>Atriplex nummularia</i> <sup>4</sup> <i>Eremophila sturtii</i>  Old Man Saltbush Turpentine

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Senecio runcinifolius Verbena officinalis</p> <p>Tall Groundsel Common Verbena</p>	<p>Abutilon halophilum Atriplex lindleyi Nitraria billardierei Scleroalaena muricata S. tricuspsis</p> <p>Plains Lantern bush Eastern Flat-top Saltbush Dillon Bush Five spined Bassia Streaked Poverty-bush</p>	<p>Atriplex lindleyi A. stipitata A. vesicaria Enchylaena tomentosa Frankenia connata Maireana decalvans M. pyramidalata M. turbinata Malacocera tricornis Rhagodia spinescens Scleroalaena tricuspsis Tecticornia tenuis<sup>6</sup></p> <p>Eastern Flat-top Saltbush Bitter Saltbush Bladder Saltbush Ruby Saltbush Clustered Sea-heath Black Cottonbush Black Bluebush Satiny Bluebush Soft-horns Thorny Saltbush Streaked Poverty-bush Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p>Azolla filiculoides Centipeda cunninghamii Damasonium minus Eleocharis acuta E. pallens E. pusilla Juncus flavidus Lobelia concolor Marsilea drummondii Myriophyllum crispatum Ottelia ovalifolia Persicaria decipiens Phragmites australis Vallisneria australis</p> <p>Red Azolla Common Sheezeweed Starfruit Common Spike-rush Pale Spike-rush Small Spike-rush Yellow Rush Poison Pratia Common Nardoo Common Water-milfoil Swamp Lily Slender Knotweed Common Reed Eel-weed</p>	<p>Atriplex semibaccata A. suberecta Austrostipa scabra subsp. falcata Centipeda cunninghamii Eleocharis acuta E. pallens Eragrostis australasica Juncus flavidus J. radula Limosella australis Lythrum hyssopifolia Malva preissiana Marsilea drummondii Myriocephalus rhozocephalus Phragmites australis Rumex crystallinus Senecio cunninghamii</p> <p>Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Sheezeweed Common Spike-rush Pale Spike-rush Canegrass Yellow Rush Hoary Rush Australian Mudwort Hyssop Loosestrife Australian Hollyhock Common Nardoo Woolly-heads Common Reed Shiny Dock Bushy Groundsel</p>	<p>Calotis cuneifolia Chloris truncata Convolvulus erubescens Disphyma crassifolium subsp. clavellatum Dissocarpus paradoxus Einadia nutans subsp. nutans Eragrostis australasica<sup>4</sup> Hyalosperma glutinosum Leiocarpa tomentosa Minuria cunninghamii Myriocephalus rhozocephalus Plantago drummondii Podolepis muelleri Pycnosorus chrysanthes Rhodanthe corymbiflora Ryidosperma caespitosa Scleroalaena brachyptera Senecio glossanthus Triplodiscus pygmaeus Velleia paradoxa</p> <p>Purple Burr-daisy Windmill Grass Australian Bindweed Round-leaf Pigface Camon-ball Climbing Saltbush Canegrass Golden Sunray Woolly Plover daisy Bush Minuria Woolly-heads Dark Sago weed Small Copper wire Daisy Golden Billy-buttons Grey Sunray White-top Short-winged Copperburr Slender Groundsel Common Sunray Spur Velleia</p>

# BOORORBAN (SOUTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

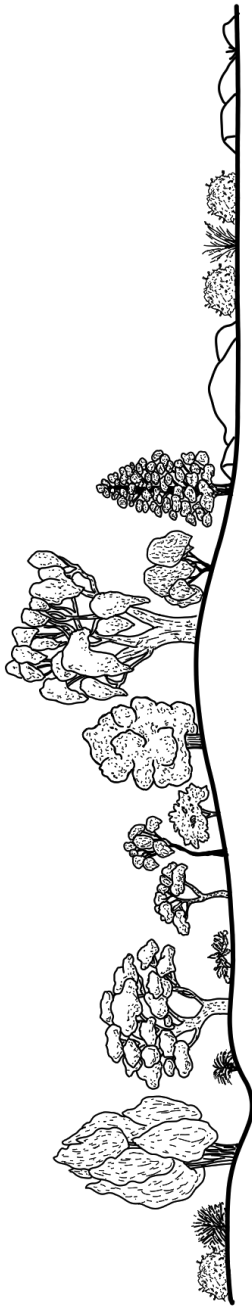
LANDFORM	Rivers, Floodplains and Levees	Shallow Depressions	Creeplines and Secondary Floodplains
<b>VEGETATION TYPE</b>	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.	Black Box Woodland.
<b>GEOLOGY &amp; SOILS</b>	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
<b>LOCATION EXAMPLE</b>	Edward River frontage, Billabong Creek.	Dry Lake on Moulamein Rd, Coopers Swamp and Black Swamp on the Cobb Hwy north of Wanganella.	Floodplains of Coleambally and Billabong Creeks.
<b>TREES &gt; 8 m</b>	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba                      River Red Gum                      Black Box</p>	<p><i>Eucalyptus largiflorens</i><sup>8</sup></p> <p>Black Box</p>	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i><sup>8</sup>  <i>E. largiflorens</i></p> <p>River Cooba                      River Red Gum                      Black Box</p>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p><i>Acacia salicina</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i></p> <p>Cooba                      Nitre Goosefoot                      Lignum</p>	<p><i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i></p> <p>Old Man Saltbush                      Nitre Goosefoot                      Lignum</p>	<p><i>Acacia salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i></p> <p>Cooba                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Lignum</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena divaricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Pale Poverty-bush</p>	<p><i>Atriplex leptocarpa</i> <i>A. lindleyi</i> <i>Enchylaena tomentosa</i> <i>Eremophila maculata</i> <i>Maireana brevifolia</i> <i>M. decalvans</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i></p> <p>Slender-fruited Saltbush Eastern Flat-top Saltbush Ruby Saltbush Spotted Fuchsia Yanga Bush Black Cottonbush Dillon Bush Thorny Saltbush Pale Poverty-bush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>5</sup> <i>Arthropodium fimbriatum</i> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachycome basalica</i> var. <i>gracilis</i> <i>Carex appressa</i> <i>C. inversa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Cyperus exaltatus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>5</sup> <i>Glinus lotoides</i> <i>Lachnogroffia filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i><sup>6</sup> <i>Oxalis perennans</i> <i>Paspalum jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Poa tordeana</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>5</sup></p> <p>Lesser Joyweed Vined Swamp Wallaby-grass Nodding Chocolate-lily Creeping Saltbush Red Azolla Swamp Daisy Tall Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Darling Lily Water-ribbons Giant Sedge Climbing Saltbush Common Spike-rush Hairy Carpet-weed Blown Grass Poison Pratia Common Nardoo Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sweet Swamp grass White-top Brown back Wallaby Grass Eel-weed</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Juncus aridicola</i> <i>J. flavicus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Marsilea drummondii</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i></p> <p>Dwarf Amaranth Creeping Saltbush Round-leaf Pigface Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Common Nardoo Bushy Groundsel Cumbungi Cumbungi</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>Boerhavia domini</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eriopogon acicularis</i> <i>Eragrostis australasica</i> <i>Maireana ciliata</i> <i>Paspalum jubiflorum</i> <i>Roepera glauca</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Teucrium racemosum</i></p> <p>Dwarf Amaranth Creeping Saltbush Twin-horned Copperburr Climbing Saltbush Spider Grass Canegrass Hairy Fisure weed Warrego Summer-grass Pale Twinleaf White-top Corrugated Sida Quena Grey Germander</p>

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# BOOROORBAN



LANDFORM	Creeklines and Secondary Floodplains	Prior Streams, Lunettes and Sand Ridges	Level to Depressed Plains
VEGETATION TYPE	Black Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Alluvial or aeolian, well-drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Floodplains of Coleambally and Billabong Creeks.	Tchelery exclusion plot, Tchelery Rd east of Tchelery Woolshed, Keri East Rd, Moulamein Rd 3 km north of Wanganella-Moulamein Rd, Booroorban State Forest.	Paradise exclusion plot, travelling stock reserve between Wanganella and Black Swamp, Tchelery Rd east of Mieguyah Rd.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i><sup>s</sup>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Allocasuarina lehmannii</i>  <i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p>Bull Oak  White Cypress Pine  Black Oak  Wilga  Hooked Needlewood</p>	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitraiaceum</i>  <i>Duma florulenta</i></p> <p>Cooba  Rosewood  Old Man Saltbush  Nitre Goosefoot  Lignum</p>	<p><i>Acacia ligulata</i>  <i>A. melvillei</i>  <i>A. oswalddi</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Bursaria spinosa</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>E. sturtii</i>  <i>Hakea leucoptera</i>  <i>Pimelea microcephala</i>  <i>Pitiosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>S. lanceolatum</i>  <i>Senna artemisioides</i> subsp. <i>petiolaris</i>  <i>Templetonia egena</i></p> <p>Sandhill Wattle  Myall  Miljee  Cooba  Rosewood  Native Blackthorn  Narrow leaf Hoppush  Emubush  Turpentine  Needlewood  Shrubby Rice-flower  Butterbush  Quandong  Sandalwood  Phylloclinous Desert Cassia  Desert Broombush</p>	<p><i>Atriplex nummularia</i><sup>s</sup>  <i>Chenopodium nitraiaceum</i></p> <p>Old Man Saltbush  Nitre Goosefoot</p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i>  <i>A. lindleyi</i>  <i>Enchylaena tomentosa</i>  <i>Eremophila maculata</i>  <i>Maireana brevifolia</i>  <i>M. decalvans</i>  <i>Nitraria billardierei</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena divaricata</i></p>	<p>Slender-fruited Saltbush  Eastern Flat-top Saltbush  Ruby Saltbush  Spotted Fuchsia  Yanga Bush  Black Cottonbush  Dillon Bush  Thorny Saltbush  Pale Poverty-bush</p>	<p><i>Chenopodium desertorum</i>  <i>Enchylaena tomentosa</i>  <i>Maireana aphylla</i>  <i>M. pyramidata</i>  <i>M. turbinata</i>  <i>Rhagodia spinescens</i></p>	<p>Desert Goosefoot  Ruby Saltbush  Cottonbush  Black Bluebush  Sainty Bluebush  Thorny Saltbush</p>	<p><i>Atriplex leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampaulata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Maireana aphylla</i><sup>10</sup>  <i>M. brevifolia</i>  <i>M. decalvans</i>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Sclerolaena divaricata</i>  <i>S. muricata</i></p>	<p>Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bladder Saltbush  Ruby Saltbush  Cottonbush  Yanga Bush  Black Cottonbush  Soft-horns  Dillon Bush  Pale Poverty-bush  Five spined Bassia</p>
<p><b>GROUND COVERS</b></p>	<p><i>Amaranthus macrocarpus</i>  <i>Atriplex semibaccata</i>  <i>Boerhavia dominii</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Eragrostis australasica</i>  <i>Maireana ciliata</i>  <i>Roopea glauca</i>  <i>Paspalidium jubiflorum</i>  <i>Fyridosperma caespitosa</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i>  <i>Teucrium racemosum</i></p>	<p>Dwarf Amaranth  Creeping Saltbush  Tar Vine  Twin-horned Copperburr  Climbing Saltbush  Spider Grass  Canegrass  Hairy Fissure weed  Warrego Summer-grass  Pale Twinleaf  White-top  Corrugated Sida  Quena  Grey Germander</p>	<p><i>Actinobole uliginosum</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa nitida</i>  <i>Calocephalus sonderi</i>  <i>Chysocephalum apiculatum</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Jasminum didymum</i> subsp. <i>lineare</i>  <i>Oxalis perennans</i>  <i>Plantago cunninghamii</i>  <i>Rhodanthe stuartiana</i>  <i>Fyridosperma caespitosa</i>  <i>Vittacimia cenicularis</i>  <i>Wahlenbergia luteola</i></p>	<p>Flannel Cudweed  Creeping Saltbush  Balcarra Speargrass  Pale Beauty-heads  Yellow Buttons  Climbing Saltbush  Native Jasmine  Grassland Wood sorrel  Sago weed  Clay Sunray  White-top  Annual New Holland Daisy  Yellowish Bluebell</p>	<p><i>Atriplex semibaccata</i>  <i>Calocephalus sonderi</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Eragrostis australasica</i><sup>4</sup>  <i>Hyalosperma glutinosum</i>  <i>Maireana ciliata</i>  <i>M. enchylaenoides</i>  <i>Minuria cunninghamii</i>  <i>Pycnosorus chrysanthos</i>  <i>Sclerolaena brachyptera</i>  <i>Sida fibulifera</i>  <i>Sporobolus caroli</i></p>	<p>Creeping Saltbush  Pale Beauty-heads  Flat Spurge  Windmill Grass  Climbing Saltbush  Spider Grass  Canegrass  Golden Sunray  Hairy Fissure weed  Wingless Fissure-weed  Bush Minuria  Golden Billy-buttons  Short-winged Copperburr  Pin Sida  Fairy Grass</p>

# BOORORBAN (WESTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Undulating Plains, Low Rises and Levees	Sandplains and Low Rises
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.	Belah – Rosewood Woodland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Alluvial or aeolian, calcareous sands and loams, red-brown duplex sandy soils with clay subsoils.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Paradise exclusion plot, travelling stock reserve between Wanganella and Black Swamp, Tchelely Rd east of Miegunyah Rd.	Tchelely Rd west of Moulamein Rd, Tchelely Rd west of Tchelely Woolshed.	Sturt Highway west of The Willows, Moulamein-Balranald Rd.
TREES > 8 m	nil	<p>White Cypress Pine Hooked Needlewood</p> <p><i>Callitris glaucophylla</i> <i>Haakea tephrosperma</i></p>	<p>White Cypress Pine Black Oak Wilga Sugarwood</p> <p><i>Callitris glaucophylla</i> <i>Casuarina pauper</i> <i>Geijera parviflora</i> <i>Myoporum platycarpum</i></p>
SHRUBS & SMALL TREES < 8 m	<p><i>Atriplex nummularia</i><sup>a</sup> <i>Chenopodium nitriaceum</i></p> <p>Old Man Saltbush Nitre Goosefoot</p>	<p><i>Acacia melvillei</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> <i>Haakea leucoptera</i></p> <p>Mvall Rosewood Old Man Saltbush Emubush Needlewood</p>	<p><i>Acacia colletioides</i> <i>A. melvillei</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Chenopodium nitriaceum</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Exocarpos aphyllus</i> <i>Pitiosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>Senna artemisioides</i> subsp. <i>triflora</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egena</i></p> <p>Spine Bush Mvall Miljee Needle Wattle Rosewood Nitre Goosefoot Narrow leaf Hoppbush Emubush Turpentine Leafless Cherry Butterbush Quandong Fine leaf Desert Cassia Phyllochinous Desert Cassia Narrow leaf Desert Cassia Desert Broombush</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>Atriplex leptocarpa A. lindleyi A. pseudocampanulata A. vesicaria Enchylaena tomentosa Maireana aphylla<sup>10</sup> M. brevifolia M. decalvans Malacocera tricornis<sup>10</sup> Nitraria billardierei Scleroaena divaricata S. muricata</p>	<p>Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Yangia Bush Black Cottonbush Soft-horns Dillon Bush Pale Poverty-bush Five spined Bassia</p>	<p>Atriplex lindleyi subsp. conduplicata A. leptocarpa A. lindleyi A. pseudocampanulata A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans M. georgei M. pyramidata M. sedifolia Malacocera tricornis Nitraria billardierei Rhogodia spinescens Scleroaena divaricata S. intricata S. muricata S. tricuspis Tecticornia tenuis<sup>6</sup></p>	<p>Baldoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Grey Bluebush Black Cottonbush Satiny Bluebush Black Bluebush Pearl Bluebush Soft-horns Dillon Bush Thorny Saltbush Pale Poverty-bush Tangled Poverty-bush Five spined Bassia Streaked Poverty-bush Slender Glasswort</p>	<p>Atriplex lindleyi subsp. conduplicata A. eardleyae A. leptocarpa A. lindleyi A. vesicaria Chenopodium curvispicatum Enchylaena tomentosa Eremophila glabra Lyrium australe Maireana aphylla M. brevifolia M. decalvans M. pyramidata M. radiata M. triptera M. turbinata Nitraria billardierei Olearia magniflora O. muelleri O. pimeloides Osteocarpum acropterum var. deminutum Rhogodia spinescens Sclerobilium atriplicinum Scleroaena diacantha S. divaricata S. obliquicaulis S. tricuspis</p>
<p><b>GROUND COVERS</b></p>	<p>Atriplex semibaccata Calceophalus sonderi Chamaesyce drummondii Chloris truncata Einadia nutans subsp. nutans Enteropogon acicularis Eragrostis australasica<sup>4</sup> Hyalosperma glutinosum Maireana ciliata M. enclytaenoides Minuria cunninghamii Pycnosorus chrysanthus Scleroaena brachyptera Sida fibulifera Sporobolus caroli</p>	<p>Creeping Saltbush Pale Beauty-heads Flat Spurge Windmill Grass Climbing Saltbush Spider Grass Canegrass Golden Sunray Hairy Fissure weed Wingless Fissure-weed Bush Minuria Golden Billy-buttons Short-winged Copperburr Pin Sida Fairy Grass</p>	<p>Atriplex semibaccata Austrostipa nitida A. scabra subsp. falcata Calandrinia eremaea Calceophalus sonderi Dysphania pumilio Grassula colorata Disphyma crassifolium subsp. clavellatum Dissocarpus biflorus var. biflorus Einadia nutans subsp. nutans Eragrostis dielsii Homopholis prolata Lachnogrostis filiformis Minuria cunninghamii Panicum decompositum Rhodanthe corymbiflora Rytidosperma caespitosa Scleroaena brachyptera Sida corrugata Solanum esuriale</p>	<p>Flannel Cudweed Creeping Saltbush Feather Speargrass Balcarra Speargrass Knotty Speargrass Hard head Daisy Small Purslane Pale Beauty-heads Bogan Flea Australian Bindweed Cannon-ball Climbing Saltbush Spider Grass Earth Grass Scrambled Eggs Goodenia pinnatifida G. pusilliflora Lachnogrostis filiformis Leucochrysum molle Bluebush Bush Minuria Burr Stickseed Pussy tails Grey Sunray Common White Sunray Brilliant Sunray Clay Sunray Sand Twinleaf Gall Weed Shrubby Twinleaf Violet Twinleaf White-top Short-winged Copperburr Slender Groundsel Corrugated Sida New Zealand Spinach Common Sunray Annual New Holland Daisy Club hair New Holland Daisy Golden Everlasting</p>	

# BOORORBAN (SOUTH-EASTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Moulamein No 8 Channel north of Dahwilly.	Wanganella – Moulamein Rd near Cooroonboon.	No examples known, See Four Corners sub-region.
TREES > 8 m	<i>Callitris glaucoophylla</i> White Cypress Pine	<i>Acacia homalophylla</i> Yarran	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriariaceum</i> <i>Eremophila longifolia</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <sup>§</sup> <i>Chenopodium nitriariaceum</i> <i>Duma florulenta</i>	<i>Acacia pendula</i> <sup>§</sup>
	Miljee Boree Cooba Old Man Saltbush Nitre Goosefoot Emubush	Miljee Boree Nitre Goosefoot Lignum	Boree

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhogodia spinescens Sclerolaena birchii S. muricata</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia</p>	<p>nil</p>	<p>Lesser Joyweed Plains Grass Leek Lily Wilcannia Lily Rough Burr-daisy Smooth Centrolepis Windmill Grass Australian Bindweed Spreading Crassula Yellow Twin heads Pale Spike-rush Canegrass Eryngo Small-flowered Goodenia Rigid Panic Grassy Club sedge Victorian Club sedge Hoary Rush Blown Grass Winged Peppergrass Annual Buttons Slender Fissure-weed Common Nardoo Mouse tail Woolly-heads Common Water-milfoil Showy Foxtail Drumsticks Smooth Buttercup Grey Sunray Dock White-top Brown back Wallaby Grass Corrugated Sida Dwarf Triggerplant Slender Darling Pea Broughton Pea Grey Germander Purple Bladderwort Early Nancy</p>
<p><b>GROUND COVERS</b></p>	<p>Atriplex leptocarpa Calocephalus sonderi Calotis scabiosifolia Chloris truncata Convulvulus erubescens Einadia nutans subsp. nutans Enteropogon acicularis Maireana ciliata M. enchylaenoides Ptilotus erubescens Rhodanthe corymbiflora Sida corrugata Solanum esuriale Sporobolus caroli Swainsona procumbens Vittadinia cuneata</p>	<p>Creeping Saltbush Pale Beauty-heads Rough Burr-daisy Windmill Grass Australian Bindweed Climbing Saltbush Spider Grass Hairy Fissure weed Wingless Fissure-weed Hairy tails Grey Sunray Corrugated Sida Quena Fairy Grass Broughton Pea Fuzzweed</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium fimbriatum A. minus Atriplex semibaccata Austrostipa aristigulumis A. nodosa A. scabra subsp. falcata Bulbine bulbosa Calocephalus sonderi Chamaesyce drummondii Chloris truncata Chysocephalum apiculatum Convulvulus erubescens Cotula australis Enteropogon acicularis E. ramosus Goodenia fascicularis G. pusilliflora Homopholis prolata Hyalosperma glutinosum Leiocarpa leptolepis Leiocarpa panaetoides Maireana enchylaenoides M. excavata Maireana pentagona Myriocephalus rhizocephalus Oxalis perenans Ptilotus exaltatus var. exaltatus Ptilotus macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Rytidosperma eriantha Sida corrugata Solanum esuriale Sporobolus caroli Swainsona murrayana S. procumbens Teucrium racemosum Triptilodiscus pygmaeus Wahlenbergia luteola</p>	<p>Flannel Cudweed Lesser Joyweed Nodding Chocolate-lily Small Vanilla-lily Creeping Saltbush Plains Grass Knotty Speargrass Rough Speargrass Native Leek Pale Beauty-heads Rough Burr-daisy Fiat Spurge Windmill Grass Yellow Buttons Australian Bindweed Common Cotula Spider Grass Curly Windmill Grass Silly Goodenia Small-flowered Goodenia Rigid Panic Golden Sunray Stalked Plover-daisy Woolly Buttons Wingless Fissure-weed Bottle Fissure weed Slender Fissure-weed Woolly-heads Grassland Wood sorrel Showy Foxtail Square headed Foxtail Drumsticks Grey Sunray Hill Wallaby Grass Corrugated Sida Quena Fairy Grass Slender Darling Pea Broughton Pea Grey Germander Common Sunray Yellowish Bluebell</p>



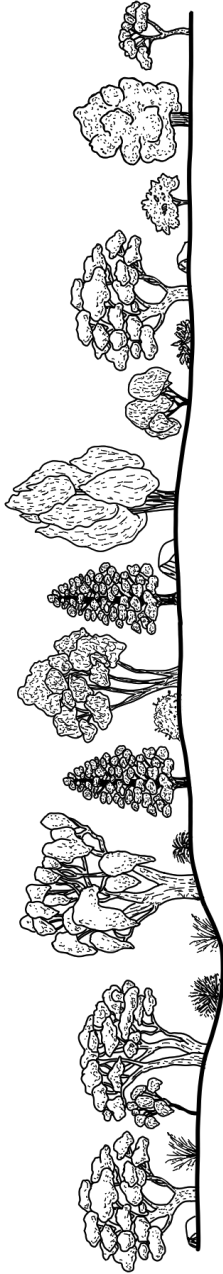
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Creeplines and Secondary Floodplains	Lunettes and Sand Ridges
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian, well-drained sandy-loams and loams.
LOCATION EXAMPLE	Koondrook State Forest, Perricoota State Forest, Lower Thule Rd, Campbells Island State Forest.	Perricoota State Forest, Whymoul State Forest.	Koondrook, Lower Thule Rd.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Allocasuarina luehmannii</i><sup>†</sup>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>‡</sup></p> <p>River Cooba            Bull Oak            River Red Gum            Black Box            Grey Box</p>	<p><i>Eucalyptus camaldulensis</i><sup>§</sup>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>‡</sup></p> <p>River Red Gum            Black Box            Grey Box</p>	<p><i>Acacia homalophylla</i>  <i>Allocasuarina luehmannii</i>  <i>Callitris glaucochrylla</i>  <i>C. gracilis</i>  <i>Hakea tephrosperma</i>  <i>Myoporum platycarpum</i></p> <p>Yarran            Bull Oak            White Cypress Pine            Murray Pine            Hooked Needlewood            Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia pycnantha</i>  <i>A. salicina</i>  <i>Exocarpos strictus</i>  <i>Pittosporum phylliraeoides</i></p> <p>Golden Wattle            Cooba            Dwarf Cherry            Butterbush</p>	<p><i>Acacia salicina</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitirariaceum</i>  <i>Melaleuca lanceolata</i>  <i>Duma florulenta</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba            Old Man Saltbush            Nitre Goosefoot            Moonah            Lignum            Butterbush</p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. montana</i>  <i>A. oswaldii</i>  <i>A. rigens</i>  <i>A. salicina</i>  <i>Bursaria spinosa</i>  <i>Calytrix tetragona</i>  <i>Dodoniaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>Exocarpos aphyllus</i>  <i>E. strictus</i>  <i>Hakea leucoptera</i>  <i>Melaleuca lanceolata</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>petiolaris</i></p> <p>Gold-dust Wattle            Grey Mulga            Western Black Wattle            Mallee Wattle            Miljee            Needle Wattle            Cooba            Native Blackthorn            Common Fringe-myrtle            Narrow leaf Hobbush            Erubush            Leafless Cherry            Dwarf Cherry            Needlewood            Moonah            Butterbush            Quandong            Phylloclinous Desert Cassia</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Cassinia sifton  Dillwynia cinerascens  Enchylaena tomentosa  Eutaxia microphylla</p>	<p>Dolly Bush  Grey Parrot-pea  Ruby Saltbush  Mallee Bush-pea</p>	<p>Enchylaena tomentosa  Rhogodia spinescens</p>	<p>Ruby Saltbush  Thorny Saltbush</p>	<p>Dodonea viscosa subsp. cuneata  Enchylaena tomentosa  Rhogodia spinescens</p>	<p>Wedge leaf Hoppbush  Ruby Saltbush  Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata  Amphibromus nervosus<sup>5</sup>  Atriplex semibaccata  Azolla filiculoides  Brachycome basaltica var. gracilis  Calotis scapigera  Carex appressa  C. tereticaulis  Centipeda cunninghamii  Chamaesyce drummondii  Cotula australis  Cynogeton procerum<sup>5</sup>  Einadia nutans subsp. nutans  Eleocharis acuta<sup>5</sup>  Juncus ingens<sup>5</sup>  Lachnogrostis filiformis  Lipocarpha microcephala  Lobelia concolor  Marsilea drummondii  Myriophyllum papillosum<sup>5</sup>  Oxalis perennans  Paspalidium jubiflorum  Phragmites australis<sup>5</sup>  Plantago cunninghamii  Poa tordeana  Ranunculus pumilio  Rytidosperma caespitosa  R. duttoniana  Vallisneria australis<sup>5</sup>  Wahlenbergia fluminalis  Xerochrysum bracteatum</p>	<p>Lesser Joyweed  Vined Swamp Walaby-grass  Creeping Saltbush  Red Azolla  Swamp Daisy  Tufted Burr-daisy  Tall Sedge  Rush Sedge  Common Sneezeweed  Flat Spurge  Common Cotula  Water-ribbons  Climbing Saltbush  Common Spike-rush  Giant Rush  Blown Grass  Button Rush  Poison Pratia  Common Nardoo  Water-milfoil  Grassland Wood sorrel  Warrego Summer-grass  Common Reed  Sago weed  Sweet Swamp grass  Ferny Buttercup  White-top  Brown back Wallaby Grass  Eel-weed  River Bluebell  Golden Everlasting</p>	<p>Amphibromus nervosus  Atriplex semibaccata  Boerhavia dominii  Brachycome basaltica var. gracilis  Calostemma purpureum  Calotis scapigera  Einadia nutans subsp. nutans  Eryngium ovinum  Lachnogrostis filiformis  Lobelia concolor  Maireana enchylaenoides  Marsilea drummondii  Poa tordeana  Stemodia florulenta  Rytidosperma caespitosa</p>	<p>Vined Swamp Walaby-grass  Creeping Saltbush  Tar Vine  Swamp Daisy  Wilcannia Lily  Tufted Burr-daisy  Climbing Saltbush  Blue Devil  Blown Grass  Poison Pratia  Wingless Fissure-weed  Common Nardoo  Sweet Swamp grass  Blue Rod  White-top</p>	<p>Agua australis  Aristida lenchoensis  Atriplex semibaccata  Austrostipa scabra subsp. falcata  Clematis microphylla  Einadia nutans subsp. nutans  Erneapogon nigricans  Lomandra effusa  L. leucocephala  Rytidosperma caespitosa</p>	<p>Australian Bugle  No. 9 Wiregrass  Creeping Saltbush  Rough Speargrass  Small-leaved Clematis  Climbing Saltbush  Pappus Grass  Scented Mat-rush  Woolly-head Mat-rush  White-top</p>

# CADELL



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM VEGETATION TYPE	Creeklines and Secondary Floodplains	Plains	Level to Depressed Plains
<b>GEOLOGY &amp; SOILS</b>	Black Box Woodland.  Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Grey Box Woodland.  Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Boree Woodland.  Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Grey and brown clays, or sometimes on red-brown earths.
<b>LOCATION EXAMPLE</b>	Perricoota State Forest, Whymoul State Forest.	Lower Thule Rd, 5 Mile Travelling Stock Reserve, 10 Mile Travelling Stock Reserve.	Formerly in north east part of Cadell sub-region, no intact examples remain, only known examples are in the vicinity of Walliston Rd south of Wilson Lane.
<b>TREES &gt; 8 m</b>	<i>Eucalyptus camaldulensis</i> <sup>5</sup> <i>E. largiflorens</i> <i>E. microcarpa</i> <sup>3</sup>	<i>Acacia implexa</i> <i>Allocasuarina luehmamii</i> <i>Banksia marginata</i> <i>Brachychiton populneus</i> subsp. <i>populneus</i> <i>Callitris glaucophylla</i> <i>C. gracilis</i> <i>Eucalyptus camaldulensis</i> <i>E. melliodora</i> <i>E. microcarpa</i> <i>Myoporum platycarpum</i>	nil
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<i>Acacia salicina</i> <i>Atriplex nummularia</i> <i>Chenopodium nitariaceum</i> <i>Duma florulenta</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i>	<i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>Bursaria spinosa</i> <i>Dodonaea viscosa</i> subsp. <i>spatulata</i> <i>Duma florulenta</i> <i>Eremophila longifolia</i> <i>Exocarpos aphyllus</i> <i>Melaleuca lanceolata</i> <i>Myoporum montanum</i> <i>Pittosporum phylliraeoides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i>  Miljee Boree Cooba Old Man Saltbush Erubush



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> <i>Rhagodia spinescens</i></p>	<p>Ruby Saltbush Thorny Saltbush</p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Maireana microphylla</i> <i>Sclerolaena muricata</i></p>	<p>Wedge leaf Hoppbush Eastern Cottonbush Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i></p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Amphibromus nervosus</i> <i>Atriplex semibaccata</i> <i>Boerhavia dominii</i> <i>Brachyscome basaltica</i> var. <i>gracilis</i> <i>Calostemma purpureum</i> <i>Calotis scapigera</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eryngium ovinum</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Poa tordeana</i> <i>Rytidosperma caespitosa</i> <i>Stemodia florulenta</i></p>	<p>Vined Swamp Wallaby-grass Creeping Saltbush Tar Vine Swamp Daisy Wilcannia Lily Tufted Burr-daisy Climbing Saltbush Blue Devil Blown Grass Poison Pratia Wingless Fissure-weed Common Nardoo Sweet Swamp grass White-top Blue Rod</p>	<p><i>Alternanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Arthropodium minus</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Cotula australis</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lipocarpus microcephala</i> <i>Ptilotus spathulatus</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Wahlenbergia fluminallis</i></p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Rough Speargrass Common Cotula Climbing Saltbush Spider Grass Button Rush Pussy tails Drumsticks Grey Sunray White-top Corrugated Sida River Bluebell</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nodosa</i> <i>Calotis hispida</i> <i>Chrysocephalum apiculatum</i> <i>Cotula australis</i> <i>Crassula colorata</i> <i>C. decumbens</i> var. <i>decumbens</i> <i>Enteropogon acicularis</i> <i>Maireana pentagona</i> <i>Myrioccephalus rhizocephalus</i> <i>Plantago turritera</i> <i>Ptilotus erubescens</i> <i>Rhodanthe corymbiflora</i> <i>Rumex tenax</i> <i>Rytidosperma caespitosa</i> <i>R. setaceum</i> <i>Sida corrugata</i> <i>Swainsona murrayana</i> <i>Triptilodiscus pygmaeus</i> <i>Vittadinia cuneata</i> <i>Wahlenbergia gracilis</i> <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>	<p>Creeping Saltbush Knotty Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Spider Grass Slender Fissure-weed Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Australian Bluebell Early Nancy</p>

# CADELL (NORTH-EASTERN)



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM VEGETATION TYPE	Level to Depressed Plains	Plains	Gilgai Plains
<b>GEOLOGY &amp; SOILS</b>	Boree Woodland. Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Grey and brown clays, or sometimes on red-brown earths.	Native Grassland. Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Gilgai Wetland. Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
<b>LOCATION EXAMPLE</b>	Formerly in north east part of Cadell sub-region, no intact examples remain, only known examples are in the vicinity of Walliston Rd south of Wilson Lane.	Formerly interspersed with Boree Woodland, mainly in north east part of Cadell sub-region, Cobb Highway Travelling Stock Reserve.	No intact examples, formerly interspersed with Native Grassland and Boree Woodland in north east part of Cadell sub-region.
<b>TREES &gt; 8 m</b>	nil	<i>Acacia homalophylla</i> Yarran	nil
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p>Acacia oswaldii A. pendula A. salicina Atriplex nummularia Eremophila longifolia</p> <p>Miljee Boree Cooba Old Man Saltbush Emubush</p>	<p>Acacia oswaldii A. pendula<sup>g</sup> Chenopodium nitriaceum Duma florulenta</p> <p>Miljee Boree Nitre Goosefoot Lignum</p>	Acacia pendula <sup>g</sup> Boree

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhagodia spinescens Sclerolaena muricata S. stelligera</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>nil</p>		
<p><b>GROUND COVERS</b></p>	<p>Atriplex semibaccata Austrostipa nodosa Calotis hispida Chrysocephalum apiculatum Cotula australis Crassula colorata C. decumbens var. decumbens Enteropogon acicularis Maireana pentagona Myriocephalus rhizocephalus Plantago turrifera Ptilotus erubescens Rhodanthe corymbiflora Rumex tenax Rytidosperma caespitosa R. setaceum Sida corrugata Swainsona murrayana Tripliodiscus pygmaeus Vittadinia cuneata Wahlenbergia gracilis Wurmbea dioica subsp. dioica</p>	<p>Creeping Saltbush Knotty Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Spider Grass Slender Fissure-weed Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Australian Bluebell Early Nancy</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium fimbriatum A. minus Atriplex semibaccata Austrostipa aristigulum A. nodosa A. scabra subsp. falcata Brachyscome chrysoglossa<sup>14</sup> Bulbine bulbosa Calocephalus sonderi Calotis scabiosifolia Chamaesyce drummondii Chloris truncata Chrysocephalum apiculatum Convolvulus erubescens Cotula australis Enteropogon acicularis E. ramosus Goodenia fascicularis G. pusilliflora Homopholis prolata Hyalosperma glutinosum Leiocarpa leptolepis L. squamatus<sup>14</sup> Leucochrysum molle<sup>13</sup> Maireana enchylaenoides M. excavata M. pentagona Myriocephalus rhizocephalus Oxalis perenans Ptilotus exaltatus var. exaltatus P. macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Rytidosperma caespitosa R. eriantha Sida corrugata Solanum esuriate Sporobolus caroli Swainsona murrayana S. plagiotropis<sup>14</sup> S. swainsonioides S. swainsonioides Teucrium racemosum Tripliodiscus pygmaeus Wahlenbergia luteola</p>	<p>Flannel Cudweed Lesser Joyweed Nodding Chocolate-lily Small Vanilla-lily Creeping Saltbush Plains Grass Knotty Speargrass Rough Speargrass Yellow tongue Daisy Native Leek Pale Beauty-heads Rough Burr-daisy Flat Spurge Windmill Grass Yellow Buttons Australian Bindweed Common Cotula Spider Grass Curly Windmill Grass Silky Goodenia Small-flowered Goodenia Rigid Panic Golden Sunray Stalked Plover-daisy Woolly Buttons Scaly Buttons Hoary Sunray Wingless Fissure-weed Bottle Fissure weed Slender Fissure-weed Woolly-heads Grassland Wood sorrel Showy Foxtail Square headed Foxtail Drumsticks Grey Sunray White-top Hill Wallaby Grass Corrugated Sida Quena Fairy Grass Slender Darling Pea Red Darling Pea Broughton Pea Downy Darling Pea Grey Germander Common Sunray Yellowish Bluebell</p>	<p>Lesser Joyweed Plains Grass Leek Lily Wilcannia Lily Rough Burr-daisy Smooth Centrolepis Windmill Grass Australian Bindweed Spreading Crassula Yellow Twin heads Pale Spike-rush Canegrass Eryngo Small-flowered Goodenia Rigid Panic Grass Cushion Grassy Club sedge Victorian Club sedge Hoary Rush Blown Grass Winged Peppergrass Annual Buttons Slender Fissure-weed Common Nardoo Mouse tail Woolly-heads Common Water-milfoil Showy Foxtail Drumsticks Smooth Buttercup Grey Sunray Dock White-top Brown back Wallaby Grass Corrugated Sida Dwarf Triggerplant Slender Darling Pea Broughton Pea Purple Bladderwort Early Nancy</p>

# CARRATHOOL



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LANDFORM VEGETATION TYPE	Rivers, Floodplains and Levees	Shallow Depressions	Creeklines and Secondary Floodplains
<b>GEOLOGY &amp; SOILS</b>	Riverine Forest. River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Lignum – Goosefoot / Canegrass Swamp. Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Black Box Woodland. Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
<b>LOCATION EXAMPLE</b>	Beneremban State Forest, Cuba State Forest.	Wetlands south of Lake Urana.	Westons Travelling Stock Reserve, Amsbury Common, Whitton Common.
<b>TREES &gt; 8 m</b>	<p><i>Acacia stenophylla</i> <i>Callitris glaucophylla</i> <i>Casuarina cristata</i> <i>C. cunninghamiana</i> subsp. <i>cunninghamiana</i> <i>Eucalyptus camaldulensis</i> <i>E. largiflorens</i> <i>E. melliodora</i></p> <p>River Cooba White Cypress Pine Belah River Oak River Red Gum Black Box Yellow Box</p>	<p><i>Eucalyptus largiflorens</i></p> <p>Black Box</p>	<p><i>Acacia stenophylla</i> <i>Casuarina cristata</i> <i>Eucalyptus camaldulensis</i><sup>s</sup> <i>E. largiflorens</i> <i>E. melliodora</i> <i>Exocarpos cupressiformis</i> <i>Geijera parviflora</i></p> <p>River Cooba Belah River Red Gum Black Box Yellow Box Native Cherry Wilga</p>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p><i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Exocarpos sparteus</i> <i>Duma florulenta</i> <i>Pittosporum phylliraeoides</i></p> <p>Miljee Boree Cooba Rosewood Old Man Saltbush Nitre Goosefoot Slender Cherry Lignum Butterbush</p>	<p><i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i></p> <p>Old Man Saltbush Nitre Goosefoot Lignum</p>	<p><i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i><sup>s</sup> <i>Pittosporum phylliraeoides</i> <i>Senna artemisioides</i> subsp. <i>circinnata</i></p> <p>Miljee Boree Cooba Rosewood Old Man Saltbush Nitre Goosefoot Lignum Butterbush Spring pod Cassia</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> <i>Rhagodia spinescens</i></p>	<p>Ruby Saltbush Thorny Saltbush</p>		<p><i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Ruby Saltbush Yanga Bush Thorny Saltbush Five spined Bassia</p>		
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Anthrosachne scaber</i> <i>Arthropodium minus</i> <i>Asperula conferta</i> <i>Atriplex semibaccata</i> <i>Azolla fillicoides</i> <i>Boerhavia macro</i> <i>Brachycome basaltica</i> var. <i>gracilis</i> <i>Bulbine bulbosa</i> <i>Calostemma purpureum</i> <i>Calotis scapigera</i> <i>Carex appressa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Chloris truncata</i> <i>Cynogeton procerum</i><sup>s</sup> <i>Dianella porraceae</i> <i>Dichondra repens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Glycine clandestina</i> <i>Goodenia glauca</i> <i>Halenia glauca</i> <i>Lachnagrostis filiformis</i> <i>Lipocarpha microcephala</i> <i>Lobelia concolor</i> <i>Lomandra effusa</i> <i>L. longifolia</i> <i>Marsilea drummondii</i> <i>Mentha australis</i> <i>Microlaena stipoides</i> <i>Myriophyllum papillosum</i><sup>f</sup> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>s</sup> <i>Poa tordeana</i> <i>Pycnosorus globosus</i> <i>P. pleiocephalus</i> <i>Ranunculus lappaceus</i> <i>R. pumilio</i> <i>Teucrium racemosum</i> <i>Tricoryne elatior</i> <i>Vallisneria australis</i><sup>s</sup> <i>Viola betonicifolia</i> <i>Wahlenbergia fluminalis</i></p>	<p>Lesser Joyweed Veined Swamp Walaby-grass Common Wheatgrass Small Vanilla-lily Common Woodruff Creeping Saltbush Red Azolla Swamp Daisy Native Leek Wilcannia Lily Tufted Burr-daisy Tall Sedge Rush Sedge Common Sneezeweed Flat Spurge Windmill Grass Water-ribbons Smooth Flax-lily Kidneyweed Climbing Saltbush Twining Glycine Pale Goodenia Grey Raspwort Blown Grass Button Rush Poison Pratia Scented Mat-rush Spiny-headed Mat-rush Common Nardoo River Mint Meadow Rice-grass Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Soft Billy buttons Common Buttercup Ferry Buttercup Grey Germander Yellow Rush-lily Eel-weed Floodplain Violet River Bluebell</p>		<p><i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Boerhavia dominii</i> <i>Calocephalus sonderi</i> <i>Chamaesyce drummondii</i> <i>Chenopodium melanocarpum</i> <i>Cressa australis</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Geranium solanderi</i> <i>Juncus aridicola</i> <i>J. flavidus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>Marsilea drummondii</i> <i>Pycnosorus globosus</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Solanum esuriale</i> <i>Vittadinia cuneata</i></p>	<p>Creeping Saltbush Lagoon Saltbush Tar Vine Pale Beauty-heads Black Crumbweed Rosinweed Twin-horned Copperburr Climbing Saltbush Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Australian Cranesbill Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Hairy Fissure weed Wingless Fissure-weed Common Nardoo Drumsticks Short-winged Copperburr Bushy Groundsel Corrugated Sida Pin Sida Quena Fuzzweed</p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Boerhavia macro</i> <i>Bulbine bulbosa</i> <i>Centipeda cunninghamii</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Enterogon acicularis</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Oxalis peremans</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sporobolus caroli</i> <i>Triptilodiscus pygmaeus</i></p>	<p>Lesser Joyweed Veined Swamp Walaby-grass Bunch Wiregrass Creeping Saltbush Rough Speargrass Tar Vine Red Grass Native Leek Common Sneezeweed Windmill Grass Australian Bindweed Spider Grass Climbing Saltbush Grassland Wood sorrel Grey Sunray White-top Fairy Grass Common Sunray</p>

# CARRATHOOL (EASTERN)



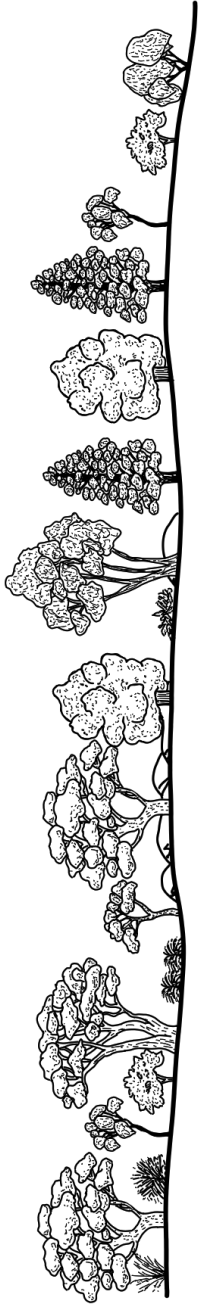
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www revegetation.org.au](http://www revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Plains	Prior Streams, Lunettes and Sand Ridges
VEGETATION TYPE	Riverine Forest.	Grey Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Alluvial or aeolian, well-drained sandy-loams and loams.
LOCATION EXAMPLE	Benerambah State Forest, Cuba State Forest.	Murrumbidgee south-east of Griffith, Narrandera area.	No intact examples remain, disturbed example of a prior stream on Wrights Lane 5 km north of Carrathool.
TREES > 8 m	<p>Acacia stenophylla Callitris glaucophylla Casuarina cristata C. cunningghamiana subsp. cunningghamiana Eucalyptus camaldulensis E. largiflorens E. melliodora</p> <p>River Cooba White Cypress Pine Belah River Oak River Red Gum Black Box Yellow Box</p>	<p>Allocasuarina luehmanni Brachychiton populineus subsp. trilobus Callitris glaucophylla Eucalyptus microcarpa Hakea tephrosperma</p> <p>Bull Oak Kurralong White Cypress Pine Grey Box Hooked Needlewood</p>	<p>Acacia homalophylla Allocasuarina luehmanni Callitris glaucophylla Eucalyptus populinea subsp. bimbil Geijera parviflora Hakea tephrosperma Myoporum platycarpum</p> <p>Yarran Bull Oak White Cypress Pine Bimble Box Wilga Hooked Needlewood Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia oswaldii A. pendula A. salicina Alectryon oleifolius subsp. canescens Atriplex nummularia Chenopodium nitariaceum Duma florulenta Exocarpos sparteus Pittosporum phylliraeoides</p> <p>Miljee Boree Cooba Rosewood Old Man Saltbush Nitre Goosefoot Lignum Slender Cherry Butterbush</p>	<p>Acacia hakeoides A. oswaldii A. pendula Senna artemisioides subsp. zygophylla</p> <p>Western Black Wattle Miljee Boree Narrow leaf Desert Cassia</p>	<p>Acacia deanei subsp. paucijuga A. hakeoides A. oswaldii A. pendula A. salicina Alectryon oleifolius subsp. canescens Atriplex nummularia Bursaria spinosa Dodonaea viscosa subsp. angustissima Eremophila longifolia Pittosporum phylliraeoides Santalum acuminatum Senna artemisioides subsp. filifolia</p> <p>Green Wattle Western Black Wattle Miljee Boree Cooba Rosewood Old Man Saltbush Native Blackthorn Narrow leaf Hoppbush Erubush Butterbush Quandong Fine leaf Desert Cassia</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Enchylaena tomentosa Rhagodia spinescens</p>	<p>Ruby Saltbush Thorny Saltbush</p>	<p>Chenopodium desertorum</p>	<p>Desert Goosefoot</p>	<p>Enchylaena tomentosa Maireana decalvans Rhagodia spinescens</p>	<p>Ruby Saltbush Black Cottonbush Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata Amphibromus nervosus<sup>s</sup> Anthrosachne scaber Arthropodium minus Asperula conferta Atriplex semibaccata Azolla filiculoides Bohrhiochloa macro Brachycome basaltica var. gracilis Bulbine bulbosa Calostemma purpureum Calotis scapigera Carex appressa C. tereticaulis Centipeda cunninghamii Chamaesyce drummondii Chloris truncata Cynogeton procerum<sup>s</sup> Dianella porraceae Dichondra repens Einadia nutans subsp. nutans Glycine clandestina Goodenia glauca Haloragis glauca Lachnagrostis filiformis Lipocarpha microcephala Lobelia concolor Lomandra effusa L. longifolia Marsilea drummondii Mentha australis Microlaena stipoides Myriophyllum papillosum<sup>f</sup> Paspalidium jubiflorum Phragmites australis Poa tordeana Pycnosorus globosus Pycnosorus pleiocephalus Ranunculus lappaceus R. pumilio Teucrium racemosum Tricoryne elatior Vallisneria australis<sup>s</sup> Viola betonicifolia Wahlenbergia fluminalis</p>	<p>Lesser Joyweed Vehed Swamp Wababy-grass Common Wheatgrass Small Vanilla-lily Common Woodruff Creeping Saltbush Red Azolla Red Grass Swamp Daisy Native Leek Wilcannia Lily Tufted Burr-daisy Tall Sedge Rush Sedge Common Sneezeweed Flat Spurge Windmill Grass Water-ribbons Smooth Flax-lily Kidneyweed Climbing Saltbush Twining Glycine Pale Goodenia Grey Raspwort Blown Grass Button Rush Poison Pratia Scented Mat-rush Spiny-headed Mat-rush Common Nardoo River Mint Meadow Rice-grass Water-miifol Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Soft Billy buttons Common Buttercup Ferry Buttercup Grey Germander Yellow Rush-lily Eel-weed Floodplain Violet River Bluebell</p>	<p><i>Austrostipa blackii</i> <i>Calostemma purpureum</i> <i>Chloris truncata</i> <i>Dianella porraceae</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana humillima</i> <i>Parsonsia eucalyptophylla</i> <i>Rytidosperma caespitosa</i> <i>Sida fibulifera</i> <i>Solanum esuriale</i></p>	<p>Crested Speargrass Wilcannia Lily Windmill Grass Smooth Flax-lily Climbing Saltbush Spider Grass Dwarf Bluebush Gargaloo White-top Pin Sida Quena</p>	<p><i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Chellanthus sieberi</i> subsp. <i>sieberi</i> <i>Chenopodium melanocarpum</i> <i>Chloris truncata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Lomandra leucocephala</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Stackhousia monogyna</i> <i>Triptilodiscus pygmaeus</i> <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>	<p>Bunch Wiregrass Creeping Saltbush Mulga Fern Black Crumbweed Windmill Grass Climbing Saltbush Spider Grass Native Jasmine Woolly-head Mat-rush White-top Corrugated Sida Creamy Candles Common Sunray Early Nancy</p>

# CARATHOOL (NORTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

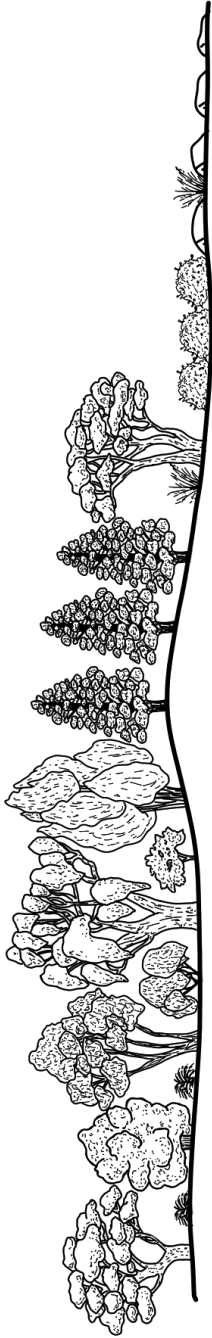
Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Level to Depressed Plains	Sandplains and Low Rises
VEGETATION TYPE	Black Box Woodland.	Boree Woodland.	Belah – Rosewood Woodland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Westons Travelling Stock Reserve, Amsbury Common, Whitton Common.	Gum Creek.	No examples known, see Gunbar sub-region.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Casuarina cristata</i>  <i>Eucalyptus camaldulensis</i><sup>s</sup>  <i>E. largiflorens</i>  <i>E. melliodora</i>  <i>Exocarpos cupressiformis</i>  <i>Geijera parviflora</i></p>	<p><i>Callitris glaucophylla</i>  <i>Eucalyptus largiflorens</i>  <i>E. populnea</i> subsp. <i>bimbi</i></p>	<p><i>Acacia homalophylla</i>  <i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i>  <i>Myoporum platycarpum</i></p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Miljee  Boree  Cooba  Rosewood  Old Man Saltbush  Nitre Goosefoot  Lignum  Butterbush  Spring pod Cassia  <i>Senna artemisioides</i> ssp. <i>circinnata</i></p>	<p>Miljee  Boree  Cooba  Rosewood  Old Man Saltbush  Nitre Goosefoot  Erubush  Butterbush  Spring pod Cassia</p>	<p>Miljee  Rosewood  Warrior Bush  Narrow leaf Hoppbush  Erubush  Leafless Cherry  Needlewood  Butterbush  Broad leaf Desert Cassia  <i>S. artemisioides</i> subsp. <i>filifolia</i></p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Ruby Saltbush Yanga Bush Thorny Saltbush Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Lycium australe</i> <i>Rhagodia spinescens</i></p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Australian Boxthorn Thorny Saltbush</p>	<p><i>Atriplex stipitata</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Rhagodia spinescens</i></p>	<p>Bitter Saltbush Ruby Saltbush Black Bluebush Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Bothriochloa macra</i> <i>Bulbine bulbosa</i> <i>Centipeda cunninghamii</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Oxalis perenans</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sporobolus caroli</i> <i>Triptilodiscus pygmaeus</i></p>	<p>Lesser Joyweed Veined Swamp Wallabygrass Bunch Wiregrass Creeping Saltbush Rough Speargrass Tar Vine Red Grass Native Leek Common Sneezeweed Windmill Grass Australian Bindweed Climbing Saltbush Spider Grass Grassland Wood sorrel Grey Sunray White-top Fairy Grass Common Sunray</p>	<p><i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Chamaesyce drummondii</i> <i>Chloris truncata</i> <i>Chrysocephalum semipapposum</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Homopholis proluta</i> <i>Lepidium pseudohyssopifolium</i> <i>Maireana excavata</i> <i>M. pentagona</i> <i>Ptilotus erubescens</i> <i>P. exaltatus</i> var. <i>exaltatus</i> <i>Ryidosperma caespitosa</i> <i>Thysanotus baueri</i> <i>Vittadinia cuneata</i></p>	<p>Bunch Wiregrass Creeping Saltbush Rough Speargrass Flat Spurge Windmill Grass Clustered Everlasting Australian Bindweed Climbing Saltbush Spider Grass Rigid Panic Peppercress Bottle Fissure weed Slender Fissure-weed Hairy tails Showy Foxtail White-top Mallee Fringe lily Fuzzweed</p>	<p><i>Calocephalus sonderi</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Maireana humilima</i> <i>Ptilotus spathulatus</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Swainsona formosa</i></p>	<p>Pale Beauty-heads Cannon-ball Climbing Saltbush Dwarf Bluebush Pussy tails Grey Sunray White-top Sturts Desert Pea</p>

# CARRATHOOL (WESTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

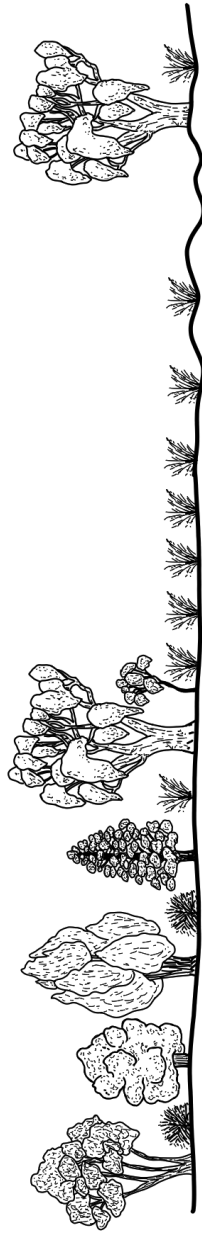
LANDFORM	Level to Depressed Plains	Prior Streams, Lunettes and Sand Ridges	Level to Depressed Plains
VEGETATION TYPE	Boree Woodland.	Callitris Mixed Woodland.	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Alluvial or aeolian, well-drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Gum Creek.	No intact examples remain, disturbed example of a prior stream on Wrights Lane 5 km north of Carrathool.	Mid Western Highway 25 – 45 km north of Hay.
TREES > 8 m	<p><i>Callitris glaucophylla</i>  <i>Eucalyptus largiflorens</i>  <i>E. populnea</i> subsp. <i>bimbil</i></p> <p>White Cypress Pine                      Black Box                      Bimble Box</p>	<p><i>Acacia homalophylla</i>  <i>Allocasuarina lehmannii</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus populnea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i>  <i>Myoporum platycarpum</i></p> <p>Yarran                      Bull Oak                      White Cypress Pine                      Bimble Box                      Wilga                      Hooked Needlewood                      Sugarwood</p>	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitraiaceum</i>  <i>Eremophila longifolia</i>  <i>Pittosporum phylliraeoides</i>  <i>Senna artemisioides</i> ssp. <i>circinnata</i></p> <p>Miljee                      Boree                      Cooba                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Ernubush                      Butterbush                      Spring pod Cassia</p>	<p><i>Acacia deanei</i> subsp. <i>paucijuga</i>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Bursaria spinosa</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i></p> <p>Green Wattle                      Western Black Wattle                      Miljee                      Boree                      Cooba                      Rosewood                      Old Man Saltbush                      Native Blackthorn                      Narrow leaf Hoppush                      Ernubush                      Butterbush                      Quandong                      Fine leaf Desert Cassia</p>	<p><i>Atriplex nummularia</i><sup>a</sup>  <i>Chenopodium nitraiaceum</i>  <i>Duma florulenta</i></p> <p>Old Man Saltbush                      Nitre Goosefoot                      Lignum</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Lycium australe</i>  <i>Rhagodia spinescens</i></p>	<p>Slender-fruited Saltbush  Bladder Saltbush  Ruby Saltbush  Australian Boxthorn  Thorny Saltbush</p>	<p><i>Enchylaena tomentosa</i>  <i>Maireana decalvans</i>  <i>Rhagodia spinescens</i></p>	<p>Ruby Saltbush  Black Cottonbush  Thorny Saltbush</p>	<p><i>Abutilon halophilum</i>  <i>Atriplex vesicaria</i>  <i>Maireana aphylla</i><sup>o</sup>  <i>M. brevifolia</i>  <i>M. decalvans</i>  <i>Malacocera tricornis</i>  <i>Sclerolaena muricata</i></p>	<p>Plains Lantern bush  Bladder Saltbush  Cottonbush  Yanga Bush  Black Cottonbush  Soft-horns  Five spined Bassia</p>
<p><b>GROUND COVERS</b></p>	<p><i>Aristida behriana</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa scabra</i> subsp. <i>falcata</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Chrysocephalum semipapposum</i>  <i>Convolvulus erubescens</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Homopholis proluta</i>  <i>Lepidium pseudohyssopifolium</i>  <i>Maireana excavata</i>  <i>Maireana pentagona</i>  <i>Ptilotus erubescens</i>  <i>Ptilotus exaltatus</i> var. <i>exaltatus</i>  <i>Rytidosperma caespitosa</i>  <i>Thysanotus baueri</i>  <i>Vittadinia cuneata</i></p>	<p>Bunch Wiregrass  Creeping Saltbush  Rough Speargrass  Flat Spurge  Windmill Grass  Clustered Everlasting  Australian Bindweed  Climbing Saltbush  Spider Grass  Rigid Panic  Peppercress  Bottle Fissure weed  Slender Fissure-weed  Hairy tails  Showy Foxtail  White-top  Mallee Fringe lily  Fuzzweed</p>	<p><i>Aristida behriana</i>  <i>Atriplex semibaccata</i>  <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>  <i>Chenopodium melanocarpum</i>  <i>Chloris truncata</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Jasminum didymum</i> subsp. <i>lineare</i>  <i>Lomandra leucocephala</i>  <i>Rytidosperma caespitosa</i>  <i>Sida corrugata</i>  <i>Stackhousia monogyne</i>  <i>Triptilodiscus pygmaeus</i>  <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>	<p>Bunch Wiregrass  Creeping Saltbush  Mulga Fern  Black Crumbweed  Windmill Grass  Climbing Saltbush  Spider Grass  Native Jasmine  Woolly-head Mat-rush  White-top  Corrugated Sida  Creamy Candles  Common Sunray  Early Nancy</p>	<p><i>Atriplex semibaccata</i>  <i>Calotis scabiosifolia</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon ramosus</i>  <i>Erodium cicutarium</i>  <i>Homopholis proluta</i>  <i>Leiocarpa leptolepis</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>S. fibulifera</i>  <i>Solanum esuriate</i>  <i>Sporobolus caroli</i>  <i>Swainsona murrayana</i>  <i>S. procumbens</i></p>	<p>Creeping Saltbush  Rough Burr-daisy  Flat Spurge  Windmill Grass  Australian Bindweed  Climbing Saltbush  Curly Windmill Grass  Blue Crowfoot  Rigid Panic  Stalked Plover-daisy  Short-winged Copperburr  Corrugated Sida  Pin Sida  Quena  Fairy Grass  Slender Darling Pea  Broughton Pea</p>

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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

# CARRATHOOL (SOUTHERN)



LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Gum Creek.	Carrathool Rd, 23.5 km south of Tabbitta Lane.	No example known, see Coleambally sub-region.
TREES > 8 m	<p><i>Callitris glaucophylla</i>  <i>Eucalyptus largiflorens</i>  <i>E. populnea</i> subsp. <i>bimbil</i></p>	nil	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Eremophila longifolia</i>  <i>Pittosporum phylliraeoides</i>  <i>Senna artemisioides</i> ssp. <i>circinnata</i></p>	<p><i>Acacia pendula</i><sup>8</sup>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i></p>	<p><i>Acacia pendula</i><sup>8</sup></p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Lycium australe Rhagodia spinescens</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Australian Boxthorn Thorny Saltbush</p>	<p>nil</p>	<p>Lesser Joyweed Plains Grass Leek Lily Wilcannia Lily Rough Burr-daisy Smooth Centrolepis Windmill Grass Australian Bindweed Spreading Crassula Yellow Twin heads Pale Spike-rush Canegrass Eryngo Small-flowered Goodenia Rigid Panic Grass Cushion Grassy Club sedge Victorian Club sedge Hoary Rush Blown Grass Winged Peppergrass Annual Buttons Slender Fissure-weed Common Nardoo Mouse tail Woolly-heads Common Water-milfoil Showy Foxtail Drumsticks Smooth Buttercup Grey Sunray Dock White-top Brown back Wallaby Grass Corrugated Sida Dwarf Triggerplant Broughton Pea Grey Germander Purple Bladderwort Early Nancy</p>
<p><b>GROUND COVERS</b></p>	<p>Aristida behriana Atriplex semibaccata Austrostipa scabra subsp. falcata Chamaesyce drummondii Chloris truncata Chysocephalum semipapposum Convolvulus erubescens Einadia nutans subsp. nutans Enteropogon acicularis Homopholis prolata Lepidium pseudohyssopifolium Maireana excavata M. pentagona Ptilotus erubescens P. exaltatus var. exaltatus Ryidosperma caespitosa Thysanotus baueri Vittadinia cuneata</p>	<p>Bunch Wiregrass Creeping Saltbush Rough Speargrass Flat Spurge Windmill Grass Clustered Everlasting Australian Bindweed Climbing Saltbush Spider Grass Rigid Panic Peppergrass Bottle Fissure weed Slender Fissure-weed Hairy tails Showy Foxtail White-top Mallee Fringe lily Fuzzweed</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium fimbriatum A. minus Atriplex semibaccata Austrostipa aristigulumis A. nodosa Brachyscome muelleroides Bulbine bulbosa Cabocephalus sonderi Calotis scabrosifolia Chamaesyce drummondii Chloris truncata Chysocephalum apiculatum Convolvulus erubescens Cotula australis Daucus glochidiatus Enteropogon acicularis Goodenia fascicularis G. pusilliflora Homopholis prolata Hyalosperma glutinosum Leiocarpa leptolepis L. panaetiooides Maireana enchylaenoides M. excavata M. pentagona Myriocephalus rhizocephalus Ptilotus exaltatus var. exaltatus P. macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Ryidosperma caespitosa R. eriantha Sida corrugata Solanum esuriale Sporobolus caroli Swainsona murrayana S. plagiotropis S. procumbens S. swainsonioides Teucrium racemosum Triptilodiscus pygmaeus Wahlenbergia luteola</p>	<p>Flannel Cudweed Lesser Joyweed Nodding Chocolate-lily Small Vanilla-lily Creeping Saltbush Plains Grass Knotty Speargrass Rough Speargrass Mueller Daisy Native Leek Pale Beauty-heads Rough Burr-daisy Flat Spurge Windmill Grass Yellow Buttons Australian Bindweed Common Cotula Australian Carrot Spider Grass Silty Goodenia Small-flowered Goodenia Rigid Panic Golden Sunray Stalked Plover-daisy Woolly Buttons Wingless Fissure-weed Bottle Fissure weed Slender Fissure-weed Woolly-heads Showy Foxtail Square headed Foxtail Drumsticks Grey Sunray White-top Hill Wallaby Grass Corrugated Sida Quena Fairy Grass Slender Darling Pea Red Darling Pea Broughton Pea Downy Darling Pea Grey Germander Common Sunray Yellowish Bluebell</p>

# COCOPARRA (NORTHERN)



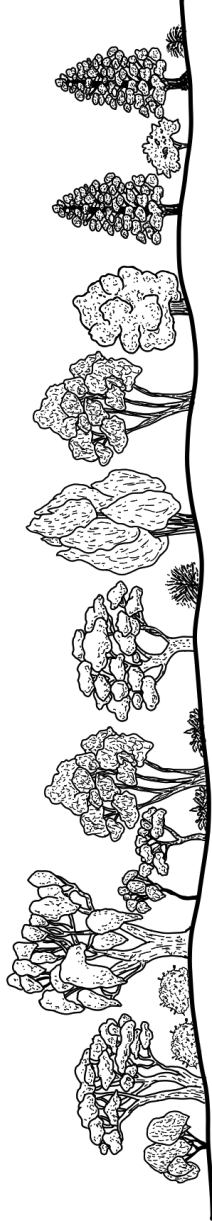
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

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LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Valleys and Floodplains
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Bimble Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy, grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open Bimble Box woodland on floodplains and wide valleys with grassy understorey. Alluvial, red loams.
LOCATION EXAMPLE	Lachlan River.	Lachlan Valley west of Lake Cargellico.	Euabolong – Hillston Rd, approximately 7.1km west of the Kidman Way, Naradhan – Rankin Springs Rd.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Casuarina cunninghamiana</i><sup>2</sup>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i>  <i>E. melliodora</i></p>	<p><i>Acacia stenophylla</i>  <i>Casuarina cristata</i>  <i>Eucalyptus largiflorens</i>  <i>Exocarpos cupressiformis</i></p>	<p><i>Casuarina pauper</i>  <i>Eremophila mitchellii</i>  <i>Eucalyptus populinea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaraceum</i>  <i>Duma florulenta</i>  <i>Exocarpos sparteus</i>  <i>Pittosporum phylliraeoides</i></p>	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaraceum</i>  <i>Duma florulenta</i></p>	<p><i>Acacia salicina</i>  <i>Eremophila longifolia</i></p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> <i>Rhagodia spinescens</i></p> <p>Ruby Saltbush Thorny Saltbush</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>Rhagodia spinescens</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Yanga Bush Thorny Saltbush</p>	<p><i>Atriplex pseudocampanulata</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena lanicuspis</i></p> <p>Mealy Saltbush Ruby Saltbush Woolly Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Calostemma purpureum</i> <i>Carex appressa</i> <i>Centipeda cunninghamii</i> <i>Cynogeton procerum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Lachnagrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Mentha australis</i> <i>Myriophyllum papillosum</i> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i> <i>Poa fordeana</i> <i>Teucrium racemosum</i> <i>Vallisneria australis</i></p> <p>Lesser Joyweed Creeping Saltbush Red Azolla Wilcannia Lily Tall Sedge Common Sneezeweed Water-ribbons Climbing Saltbush Blown Grass Poison Pratia Common Nardoo River Mint Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass Grey Germander Eel-weed</p>	<p><i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Chloris truncata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Marsilea drummondii</i> <i>Ryidosperma caespitosa</i> <i>Triptilodiscus pygmaeus</i></p> <p>Bunch Wiregrass Creeping Saltbush Rough Speargrass Windmill Grass Climbing Saltbush Spider Grass Common Nardoo White-top Common Sunray</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Chrysocephalum semipapposum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana humilima</i> <i>Ryidosperma caespitosa</i> <i>Sida cunninghamii</i> <i>Xerochrysum bracteatum</i></p> <p>Creeping Saltbush Rough Speargrass Clustered Everlasting Climbing Saltbush Spider Grass Dwarf Bluebush White-top Ridge Sida Golden Everlasting</p>

# COCOPARRA



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LANDFORM	Sandplains and Low Rises	Sandplains and Minor Dunefields	Sandplains, Swales and Dune Crests
VEGETATION TYPE	Belah – Rosewood Woodland.	Callitris Mixed Woodland (Sandplains and minor dunefields).	Mallee Woodland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
LOCATION EXAMPLE	No intact examples known, formerly occurred between Goolgowi and Tabbitta.	Binya State Forest, lower end of Bingar Track in Cocoparra National Park.	Nericon Travelling Stock Reserve, Pulletop Nature Reserve.
TREES > 8 m	<p>Acacia homalophylla Callitris glaucophylla Casuarina pauper Geijera parviflora Haakea tephrosperma</p> <p>Yarran White Cypress Pine Black Oak Wilga Hooked Needlewood</p>	<p>Acacia doratoxylon A. homalophylla Allocasuarina luehmanna Brachychiton populneus subsp. trilobus Callitris glaucophylla Casuarina cristata Eucalyptus dwyeri E. intertexta E. populnea subsp. bimbil Geijera parviflora Haakea tephrosperma</p> <p>Currawang Yarran Bull Oak Kurrajong White Cypress Pine Belah Dwyers Mallee Gum Red Box Bimble Box Wilga Hooked Needlewood</p>	<p>White Cypress Pine Grey Box Bimble Box Wilga</p> <p>Callitris glaucophylla Eucalyptus microcarpa E. populnea subsp. bimbil Geijera parviflora</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia oswaldii Alectryon oleifolius subsp. canescens Apophyllum anomalum Eriemophila longifolia Myoporum montanum Pitiosporum phylliraeoides Santalum acuminatum Senna artemisioides subsp. coriacea</p> <p>Miljee Rosewood Warrior Bush Emubush Western Boobialla Butterbush Quandong Broad leaf Desert Cassia</p>	<p>Acacia calamifolia A. deanei subsp. paucijuga A. hakeoides A. oswaldii Alectryon oleifolius subsp. canescens Beryta cunninghamii Dodonaea viscosa subsp. angustissima D. viscosa subsp. spatulata Eriemophila longifolia Pitiosporum phylliraeoides Senna artemisioides subsp. zygophylla</p> <p>Wallowa Green Wattle Western Black Wattle Miljee Rosewood Gooma Bush Narrow leaf Hoppush Spoon leaf Hoppush Emubush Butterbush Narrow leaf Desert Cassia</p>	<p>Acacia brachybotrya A. hakeoides A. oswaldii A. rigens Beryta cunninghamii Bossiaea walkeri Eucalyptus dumosa E. gracilis E. leptophylla E. socialis E. viridis<sup>17</sup> Melaleuca lanceolata Pitiosporum phylliraeoides</p> <p>Grey Mulga Western Black Wattle Miljee Needle Wattle Gooma Bush Cactus Pea Congo Mallee Yorrell Slender-leaf Mallee Pointed Mallee Green Mallee Moonah Butterbush</p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex stipitata</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Rhagodia spinescens</i></p>	<p>Bitter Saltbush Ruby Saltbush Black Bluebush Thorny Saltbush</p>	<p><i>Chenopodium desertorum</i> <i>Eremophila glabra</i> <i>Goodenia ovata</i></p>	<p>Desert Goosefoot Tar Bush Hop Goodenia</p>	<p>Acacia lineata Daviesia arenaria Dodonaea boroniifolia<sup>17</sup> Eutaxia microphylla Oleatia pimeleoides</p> <p>Streaked Wattle Sandhill Bitter-pea Fern-leaf Hopbush Mallee Bush-pea Showy Daisy-bush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex semibaccata</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Dianella porraceae</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Rhodanthe corymbiflora</i> <i>Roopea glauca</i> <i>Ryidosperma caespitosa</i> <i>Swainsona formosa</i> <i>Xerochrysum bracteatum</i></p>	<p>Creeping Saltbush Yellow Burtons Clustered Everlasting Smooth Flax-lily Cannon-ball Climbing Saltbush Grey Sunray Pale Twingleaf White-top Sturts Desert Pea Golden Everlasting</p>	<p><i>Ajuga australis</i> <i>Anthrosachne scaber</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>scabra</i> <i>Cassyltha melantha</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Podolepis arachnoidea</i> <i>Ryidosperma caespitosa</i> <i>Styandra glauca</i> <i>Xerochrysum bracteatum</i> <i>X. viscosum</i></p>	<p>Australian Bugle Common Wheatgrass Creeping Saltbush Rough Speargrass Mallee Strangle vine Yellow Burtons Clustered Everlasting Australian Bindweed Climbing Saltbush Native Jasmine Clustered Copper wire Daisy White-top Nodding Blue-lily Golden Everlasting Sticky Everlasting</p>	<p><i>Austrostipa elegantissima</i> <i>Dianella revoluta</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Lomandra effusa</i> <i>Scaevola humilis</i> <i>Solanum coactiferum</i> <i>Triodia scariosa</i><sup>2</sup> <i>Vittacina pterochaeta</i> <i>Waitzia acuminata</i></p> <p>Feather Speargrass Spreading Flax-lily Native Jasmine Scented Mat-rush Sandplain Fan flower Felted Nightshade Porcupine Grass Rough Fuzzweed Orange Immortelle</p>

# COCOPARRA



LANDFORM VEGETATION TYPE	Plains	Lower Slopes and Hills	Rocky Outcrops
<b>GEOLOGY &amp; SOILS</b>	Grey Box Woodland.	Box – Callitris Woodland.	Rocky Outcrop Woodland.
<b>LOCATION EXAMPLE</b>	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Woodland to open forest on low hills and slopes with Bimble Box and other eucalypts and a predominantly herbaceous understory. Alluvial: loamy red earths.	Low open woodland with exposed rock and sparse groundcover. Sandstone – conglomerate, sands and loams with a gravelly surface.
<b>TREES &gt; 8 m</b>	No intact examples known.	Erigolia Rd, Lake Cargellico Rd 6 km north of Rankin Springs.	Summit of Mt Bingar in Cocoparra National Park, Sims Gap, Lachlan Range and McPhersons Range.
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p>Allocastraria luehmanni Brachychiton populneus subsp. trilobus Callitris glaucophylla Eucalyptus melliodora E. microcarpa Hakea tephrosperma</p> <p>Acacia brachybotrya A. hakeoides A. oswaldii A. pendula Bursaria spinosa Eremophila longifolia Myoporum montanum Pitsopterum phylliraoides Senna artemisioides subsp. filifolia S. artemisioides subsp. zygophylla</p>	<p>Acacia homalophylla Allocastraria luehmanni Brachychiton populneus subsp. trilobus Callitris glaucophylla Eremophila mitchelli Eucalyptus dwyeri E. intertexta E. melliodora E. microcarpa E. populnea subsp. bimbil Geijera parviflora Hakea tephrosperma Myoporum platycarpum</p> <p>Yarran Bull Oak Kurralong White Cypress Pine Yellow Box Grey Box Hooked Needlewood</p> <p>Acacia calamifolia A. deanei subsp. paucijuga A. decora A. hakeoides A. oswaldii A. pendula A. salicina Alectryon oleifolius subsp. canescens Bursaria spinosa Dodonaea viscosa subsp. spatulata Eremophila longifolia Pitsopterum phylliraoides Senna artemisioides subsp. zygophylla</p>	<p>Acacia doratoxylon A. homalophylla Allocastraria luehmanni A. verticillata Brachychiton populneus Black Cypress Pine White Cypress Pine Black Oak Dwyers Mallee Gum Red Box E. intertexta E. macrorhyncha E. populnea subsp. bimbil E. sideroxylon Exocarpos cupressiformis</p> <p>Currawang Yarran Bull Oak Drooping Sheoak Kurralong Black Cypress Pine White Cypress Pine Black Oak Dwyers Mallee Gum Red Box Red Stringybark Bimble Box Mugga Ironbark Native Cherry</p> <p>Wallowa Green Wattle Western Silver Wattle Mvill Mallee Wattle Miljee Rosewood Common Fringe-myrtle Lobed-leaf Hopbush Narrow leaf Hopbush Spoon leaf Hopbush Erubush Slender Cherry Hill Tea-tree Needlewood Pink Honey-myrtle</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			
<p><b>GROUND COVERS</b></p>	<p>Chenopodium desertorum Dodonaea viscosa subsp. cuneata Maireana microphylla</p> <p>Desert Goosefoot Wedge leaf Hopbush Eastern Cottonbush</p>	<p>Dodonaea viscosa subsp. cuneata Enchylaena tomentosa Eutaxia microphylla Maireana microphylla Melichrus urceolatus Olearia pimeleoides Rhadodia spinescens Senna artemisioides subsp. artemisioides</p> <p>Wedge leaf Hopbush Ruby Saltbush Mallee Bush-pea Eastern Cottonbush Urn Heath Showy Daisy-bush Thorny Saltbush Punty Bush</p>	<p>Acacia paradoxa Cassinia laevis Correa glabra Goodenia ovata Grevillea floribunda Hibbertia incana H. obtusifolia Indigofera australis Melichrus urceolatus Phyllanthus hirtellus Platysace heterophylla</p> <p>Kangaroo Thorn Cough-bush Rock Correa Hop Goodenia Rusty Spider-flower Guinea flower Hoary Guinea-flower Hill Inigo Urn Heath Thyme Spurge Slender Platysace</p>
	<p>Alternanthera denticulata Anthrosachne scaber Atriplex semibaccata Austrostipa blackii A. scabra subsp. falcata Calostemma purpureum Chloris truncata Einadia nutans subsp. nutans Enteropogon acicularis Maireana humilima Rhodanthe corymbiflora Ryidosperma caespitosa Sida corrugata S. fibulifera</p> <p>Lesser Joyweed Common Wheatgrass Creeping Saltbush Crested Speargrass Rough Speargrass Wilcannia Lily Windmill Grass Climbing Saltbush Spider Grass Dwarf Bluebush Grey Sunray White-top Corrugated Sida Pin Sida</p>	<p>Arthrosachne scaber Aristida behriana Arthropodium milleflorum Asperula cunninghamii Austrostipa scabra subsp. falcata Bulbine bulbosa Calotis cuneifolia Chelanthus sieberi subsp. sieberi Chloris truncata Chrysocephalum apiculatum C. semipapposum Convulvulus erubescens Cymbonotus preissianus Dianella porraceae Dichondra repens Einadia hastata E. nutans subsp. nutans Enteropogon acicularis Eragrostis elongata Jasminum didymum subsp. lineare Lomandra leucocephala L. multiflora Oxalis perenans Parsonsia eucalyptophylla Poa sieberiana var. sieberiana Poranthera microphylla Pterostylis mutica Sida corrugata S. cunninghamii Thyridolepis mitchelliana Xerochrysum bracteatum X. viscosum</p> <p>Common Wheatgrass Bunch Wiregrass Pale Vanilla-lily Twining Woodruff Rough Speargrass Native Leek Purple Burr-daisy Mulga Fern Windmill Grass Yellow Buttons Clustered Everlasting Australian Bindweed Australian Bears ears Smooth Flax-lily Kidneyweed Saloop Climbing Saltbush Spider Grass Clustered Lovegrass Native Jasmine Woolly-head Mat-rush Many-flowered Mat-rush Grassland Wood sorrel Gargaloo Fine leaf Tussock Grass Small Poranthera Midget Greenhood Corrugated Sida Flodge Sida Mulga Grass Golden Everlasting Sticky Everlasting</p>	<p>Aristida behriana Arthropodium minus A. strictus Austroloma humifusum Austrostipa scabra subsp. falcata Bulbine semibarbata Cassytha melantha Chelanthus australeniifolia C. sieberi subsp. sieberi Chrysocephalum apiculatum C. semipapposum Convulvulus erubescens Daucus glochidiatus Dianella porraceae D. revoluta Glycine clandestina Gonocarpus elatus Hybanthus monopetalus Lomandra patens Pandorea pandorana Pleurosorus rutilifolius Stypanandra glauca Thyridolepis mitchelliana Thysanotus patersonii Xerochrysum bracteatum X. viscosum</p> <p>Bunch Wiregrass Small Vanilla-lily Chocolate-lily Native Cranberry Rough Speargrass Leek Lily Mallee Strangle vine Rock Fern Mulga Fern Yellow Buttons Clustered Everlasting Australian Bindweed Australian Carrot Smooth Flax-lily Spreading Flax-lily Twining Glycine Hill Raspwort Slender Violet Irongrass Inland Wonga Vine Blanket Fern Nodding Blue-lily Mulga Grass Twining Fringe lily Golden Everlasting Sticky Everlasting</p>

# COLEAMBALLY



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Shallow Depressions	Creeklines and Secondary Floodplains
VEGETATION TYPE	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.	Black Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
LOCATION EXAMPLE	Yanco Creek, Colambo Creek, Cuba South State Forest, Thurrowa Travelling Stock Reserve.	Bundure Travelling Stock Reserve.	Darlington Point Travelling Stock Reserve, Tom Bullens Travelling Stock Reserve.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Casuarina cunningghamiana</i>  <i>Eucalyptus camaldulensis</i></p> <p>River Cooba                      River Oak                      River Red Gum</p>	<p><i>Eucalyptus largiflorens</i><sup>8</sup></p> <p>Black Box</p>	<p><i>Eucalyptus largiflorens</i></p> <p>Black Box</p>
SHRUBS & SMALL TREES < 8 m	<p><i>Acacia pendula</i>  <i>A. salicina</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i>  <i>Eremophila longifolia</i>  <i>Pittosporum phylliraeoides</i></p> <p>Boree                      Cooba                      Nitre Goosefoot                      Lignum                      Ernubush                      Butterbush</p>	<p><i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i></p> <p>Old Man Saltbush                      Nitre Goosefoot                      Lignum</p>	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i>  <i>Pittosporum phylliraeoides</i></p> <p>Miljee                      Boree                      Cooba                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Lignum                      Butterbush</p>

SMALL SHRUBS < 2 m	Enchylaena tomentosa	Ruby Saltbush	Slender-fruited Saltbush Ruby Saltbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia Star Copperburr
	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>5</sup> <i>Anthrosachne scaber</i> <i>Azolla filiculoides</i> <i>Brachyscome basaltica</i> var. <i>gracilis</i> <i>Calostemma purpureum</i> <i>Carex tereticaulis</i><sup>5</sup> <i>Centipeda cunninghamii</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Haloragis glauca</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Poa tordeana</i> <i>Ranunculus lappaceus</i> <i>Vallisneria australis</i><sup>5</sup> <i>Viola betonicifolia</i></p>	<p>Lesser Joyweed Veined Swamp Walaby-grass Common Wheatgrass Red Azolla Swamp Daisy Wicannia Lily Rush Sedge Common Sneezeweed Water-ribbons Climbing Saltbush Grey Raspwort Poison Pratia Common Nardoo Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass Common Buttercup Eel-weed Floodplain Violet</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena birchii</i> <i>S. muricata</i> <i>S. stelligera</i></p>
GROUND COVERS		<p><i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Boerhavia domini</i> <i>Calocephalus sonderi</i> <i>Chenopodium melanocarpum</i> <i>Cressa australis</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dioscarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Geranium solanderi</i> <i>Juncus aridicola</i> <i>J. flavidus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>Marsilea drummondii</i> <i>Pycnosorus globosus</i> <i>Sclerolaena brachyptera</i> <i>Senecio cunninghamii</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Solanum esuriale</i> <i>Vittacima cuneata</i></p>	<p>Creeping Saltbush Lagoon Saltbush Tar Vine Pale Beauty-heads Flat Spurge Black Crumbweed Rosenweed Twin-horned Copperburr Climbing Saltbush Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Australian Cranesbill Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Hairy Fissure weed Wingless Fissure-weed Common Nardoo Drumsticks Short-winged Copperburr Bushy Groundsel Corrugated Sida Pin Sida Quena Fuzzweed</p>
		<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Glycyrrhiza acanthocarpa</i> <i>Maireana decalvans</i> <i>M. microphylla</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Native Liquorice Black Cottonbush Eastern Cottonbush Thorny Saltbush Five spined Bassia</p>
		<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia domini</i> <i>Carex inversa</i> <i>Chamaesyce drummondii</i> <i>Chloris truncata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lipocarpus microcephala</i> <i>Maireana pentagona</i> <i>Marsilea drummondii</i> <i>Oxalis peremans</i> <i>Ryidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Solanum esuriale</i> <i>Teucrium racemosum</i></p>	<p>Lesser Joyweed Creeping Saltbush Rough Speargrass Tar Vine Knob Sedge Flat Spurge Windmill Grass Climbing Saltbush Spider Grass Button Rush Slender Fissure-weed Common Nardoo Grassland Wood sorrel White-top Short-winged Copperburr Corrugated Sida Pin Sida Quena Grey Germander</p>

# COLEAMBALLY (EASTERN)



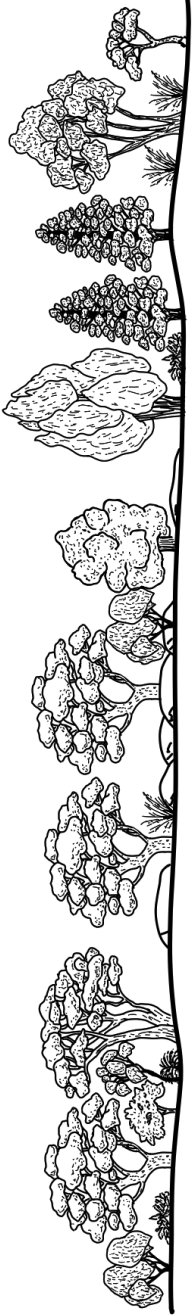
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Plains	Lunettes and Sand Ridges
VEGETATION TYPE	Black Box Woodland.	Grey Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian, well-drained sandy-loams and loams.
LOCATION EXAMPLE	Darlington Point Travelling Stock Reserve, Tom Bulls Travelling Stock Reserve.	Allan Carroll Flora and Fauna Reserve, Urana.	Adjacent to Yanco Creek.
TREES > 8 m	<i>Eucalyptus largiflorens</i>  Black Box	<i>Allocasuarina luehmannii</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>E. microcarpa</i>  Bull Oak White Cypress Pine Yellow Box Grey Box	<i>Allocasuarina luehmannii</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>Geijera parviflora</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i>  Bull Oak White Cypress Pine Yellow Box Wilga Hooked Needlewood Sugarwood
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaraceum</i> <i>Duma florulenta</i> <i>Pittosporum phylliraeoides</i>  Mullee Boree Cooba Rosewood Old Man Saltbush Nitre Goosefoot Lignum Butterbush	<i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>Bursaria spinosa</i> <i>Duma florulenta</i> <i>Eremophila longifolia</i> <i>Myoporum montanum</i> <i>Pittosporum phylliraeoides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>  Gold-dust Wattle Grey Mulga Western Black Wattle Mullee Native Blackthorn Lignum Emubush Western Boobialla Butterbush Fine leaf Desert Cassia Narrow leaf Desert Cassia	<i>Acacia deanei</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Calytrix tetragona</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>S. lanceolatum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>  Deane's Wattle Western Black Wattle Mullee Cooba Rosewood Common Fringe-myrtle Narrow leaf Hobbush Emubush Moonah Butterbush Quandong Sandalwood Fine leaf Desert Cassia Narrow leaf Desert Cassia

<p><b>SMALL SHRUBS &amp; &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena birchii</i> <i>S. muricata</i> <i>S. stelligera</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia Star Copperburr</p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Maireana microphylla</i> <i>Sclerolaena muricata</i></p>	<p>Wedge leaf Hopbush Eastern Cottonbush Five spined Bassia</p>	<p><i>Rhagodia spinescens</i></p>	<p>Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Carex inversa</i> <i>Chamaesyce drummondii</i> <i>Chloris truncata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lipocarpia microcephala</i> <i>Maireana pentagona</i> <i>Marsilea drummondii</i> <i>Oxalis perennans</i> <i>Ryidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Solanum esuriale</i> <i>Teucrium racemosum</i></p>	<p>Lesser Joyweed Creeping Saltbush Rough Speargrass Tar Vine Knob Sedge Flat Spurge Windmill Grass Climbing Saltbush Spider Grass Button Rush Slender Fissure-weed Common Nardoo Grassland Wood sorrel White-top Short-winged Copperburr Corrugated Sida Pin Sida Quena Grey Germander</p>	<p><i>Alternanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Lesser Joyweed Common Wheatgrass Creeping Saltbush Rough Speargrass Climbing Saltbush Spider Grass Drumsticks Grey Sunray White-top Corrugated Sida</p>	<p><i>Aristida behriana</i> <i>A. jerichoensis</i> <i>Atriplex semibaccata</i> <i>Boerhavia dominii</i> <i>Calostemma purpureum</i> <i>Chenopodium melanocarpum</i> <i>Chrysocephalum apiculatum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Erneapogon nigricans</i> <i>Enteropogon acicularis</i> <i>Eragrostis lacunaria</i> <i>Homopholis proluta</i> <i>Maireana ciliata</i> <i>Oxalis corniculata</i> <i>Paspalum constrictum</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Bunch Wiregrass No. 9 Wiregrass Creeping Saltbush Tar Vine Wilcannia Lily Black Crumbweed Yellow Buttons Climbing Saltbush Pappus Grass Spider Grass Purple Lovegrass Rigid Panic Hairy Fissure weed Yellow Wood sorrel Box Grass White-top Corrugated Sida</p>

# COLEAMBALLY



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Level to Depressed Plains	Lunettes and Sand Ridges
VEGETATION TYPE	Black Box Woodland.	Boree Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian, well-drained sandy-loams and loams.
LOCATION EXAMPLE	Darlington Point Travelling Stock Reserve, Tom Bullens Travelling Stock Reserve.	Ugobit Travelling Stock Reserve (TSR), German Yards TSR, Jerrys TSR, McPhails TSR, Jukes TSR.	Adjacent to Yanco Creek.
TREES > 8 m	<i>Eucalyptus largiflorens</i>	<i>Callitris glaucophylla</i> <i>Eucalyptus camaldulensis</i> <i>E. largiflorens</i>	<i>Allocasuarina luehmannii</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>Geijera parviflora</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i>
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriariceum</i> <i>Duma florulenta</i> <i>Pittosporum phylliraeoides</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriariceum</i> <i>Duma florulenta</i> <i>Eremophila longifolia</i> <i>Senna artemisioides</i> ssp. <i>circinnata</i>	<i>Acacia deanei</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Calytrix tetragona</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>S. lanceolatum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Atriplex leptocarpa Enchylaena tomentosa Maireana decalvans Rhogodia spinescens Sclerolaena birchii S. muricata S. stelligera</p> <p>Slender-fruited Saltbush Ruby Saltbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia Star Copperburr</p>	<p>Atriplex leptocarpa Enchylaena tomentosa Maireana aphylla M. decalvans Rhogodia spinescens Sclerolaena muricata</p> <p>Slender-fruited Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia</p>	<p>Rhogodia spinescens</p> <p>Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata Atriplex semibaccata Austrostipa scabra subsp. falcata Boerhavia dominii Carex inversa Chamaesyce drummondii Chloris truncata Einadia nutans subsp. nutans Enteropogon acicularis Lipocarpha microcephala Maireana pentagona Marsilea drummondii Oxalis perennans Ryidosperma caespitosa Sclerolaena brachyptera Sida corrugata S. fibulifera Solanum esuriale Teucrium racemosum</p> <p>Lesser Joyweed Creeping Saltbush Rough Speargrass Tar Vine Knob Sedge Flat Spurge Windmill Grass Climbing Saltbush Spider Grass Button Rush Slender Fissure-weed Common Nardoo Grassland Wood sorrel White-top Short-winged Copperburr Corrugated Sida Pin Sida Quena Grey Germander</p>	<p>Alternanthera denticulata Atriplex semibaccata Boerhavia dominii Cabocephalus citreus Calostemma purpureum Calotis scabiosifolia Chamaesyce drummondii Chloris truncata Convolvulus erubescens Einadia nutans subsp. nutans Enteropogon acicularis Eragrostis australasica Maireana ciliata M. enchylaenoides Marsilea drummondii Ptilotus erubescens Pycnosorus globosus Rhodanthe corymbiflora Ryidosperma caespitosa Sclerolaena brachyptera Sida corrugata S. fibulifera Solanum esuriale Sporobolus caroli Swainsona procumbens Vittadinia cuneata</p> <p>Lesser Joyweed Small Vanilla-lily Creeping Saltbush Tar Vine Lemon Beauty-heads Wilcannia Lily Rough Burr-daisy Flat Spurge Windmill Grass Australian Bindweed Climbing Saltbush Spider Grass Canegrass Hairy Fissure weed Wingless Fissure-weed Common Nardoo Hairy tails Drumsticks Grey Sunray White-top Short-winged Copperburr Corrugated Sida Pin Sida Quena Fairy Grass Broughton Pea Fuzzweed</p>	<p>Aristida behriana A. jerichoensis Atriplex semibaccata Boerhavia dominii Caboctemma purpureum Chenopodium melanocarpum Chrysocephalum apiculatum Einadia nutans subsp. nutans Enteropogon nigricans Enteropogon acicularis Eragrostis lacunaria Homopholis prolata Maireana ciliata Oxalis corniculata Paspalidium constrictum Ryidosperma caespitosa Sida corrugata</p> <p>Bunch Wiregrass No. 9 Wiregrass Creeping Saltbush Tar Vine Wilcannia Lily Black Crumbweed Yellow Butttons Climbing Saltbush Pappus Grass Spider Grass Purple Lovegrass Rigid Panic Hairy Fissure weed Yellow Wood sorrel Box Grass White-top Corrugated Sida</p>

# COLEAMBALLY (SOUTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Ugobit Travelling Stock Reserve (TSR), German Yards TSR, Jerrys TSR, McPhails TSR, Jukes TSR.	Urana – Jerilderie Road Travelling Stock Reserve (TSR), Bundure TSR.	Narrandera Rd 7 km north of Urana, swamp on Morundah, south west of Narrandera.
TREES > 8 m	<p><i>Callitris glaucophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>White Cypress Pine                      River Red Gum                      Black Box</p>	<p><i>Acacia homalophylla</i></p> <p>Yarran</p>	<p><i>Acacia homalophylla</i></p> <p>Yarran</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitraiaceum</i>  <i>Duma florulenta</i>  <i>Eremophila longifolia</i>  <i>Senna artemisioides</i> ssp. <i>circinnata</i></p> <p>Miljee                      Boree                      Cooba                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Lignum                      Emubush                      Spring pod Cassia</p>	<p><i>Acacia pendula</i><sup>®</sup>  <i>Chenopodium nitraiaceum</i>  <i>Duma florulenta</i></p> <p>Boree                      Nitre Goosefoot                      Lignum</p>	<p><i>Acacia pendula</i><sup>®</sup></p> <p>Boree</p>

SMALL SHRUBS < 2 m			nil
<p>Atriplex leptocarpa  <i>Enchylaena tomentosa</i>  <i>Maireana aphylla</i>  <i>M. decalvans</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena muricata</i></p>	<p>Slender-fruited Saltbush  Ruby Saltbush  Cottonbush  Black Cottonbush  Thorny Saltbush  Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i>  <i>Maireana aphylla</i>  <i>M. decalvans</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena muricata</i>  <i>S. stelligera</i></p>	<p>Slender-fruited Saltbush  Cottonbush  Black Cottonbush  Thorny Saltbush  Five spined Bassia  Star Copperburr</p>
<p><i>Alternanthera denticulata</i>  <i>Arthropodium minus</i>  <i>Atriplex semibaccata</i>  <i>Boerhavia dominii</i>  <i>Calocephalus citreus</i>  <i>Calostemma purpureum</i>  <i>Calotis scabiosifolia</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Eragrostis australasica</i>  <i>Maireana ciliata</i>  <i>M. enchylaenoides</i>  <i>Marsilea drummondii</i>  <i>Ptilotus erubescens</i>  <i>Pycnosorus globosus</i>  <i>Rhodanthe corymbiflora</i>  <i>Rytidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>S. fibulifera</i>  <i>Solanum esuriiale</i>  <i>Sporobolus caroli</i>  <i>Swainsona procumbens</i>  <i>Vittadinia cuneata</i></p>	<p>Lesser Joyweed  Small Vanilla-lily  Creeping Saltbush  Tar Vine  Lemon Beauty-heads  Wilcannia Lily  Rough Burr-daisy  Flat Spurge  Windmill Grass  Australian Bindweed  Climbing Saltbush  Spider Grass  Canegrass  Hairy Fissure weed  Wingless Fissure-weed  Common Nardoo  Hairy tails  Drumsticks  Grey Sunray  White-top  Short-winged Copperburr  Corrugated Sida  Pin Sida  Quena  Fairy Grass  Broughton Pea  Fuzzweed</p>	<p><i>Actinobole uliginosum</i>  <i>Alternanthera denticulata</i>  <i>Arthropodium fimbriatum</i>  <i>A. minus</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa aristigilumis</i>  <i>A. nodosa</i>  <i>A. scabra</i> subsp. <i>falcata</i>  <i>Brachycome chrysoglossa</i><sup>44</sup>  <i>B. muelleroides</i>  <i>Bulbine bulbosa</i>  <i>Calocephalus sonderi</i>  <i>Calotis scabiosifolia</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Chrysocephalum apiculatum</i>  <i>Convolvulus erubescens</i>  <i>Cotula australis</i>  <i>Daucus glochidiatus</i>  <i>Enteropogon acicularis</i>  <i>E. ramosus</i>  <i>Goodenia fascicularis</i>  <i>G. pusilliflora</i>  <i>Homopholis prolata</i>  <i>Hyalosperma glutinosum</i>  <i>Leiocarpa leptolepis</i>  <i>L. panaeitioides</i>  <i>L. squamatus</i><sup>44</sup>  <i>Leucochysum molle</i><sup>13</sup>  <i>M. excavata</i>  <i>M. pentagona</i>  <i>Myriocephalus rhizocephalus</i>  <i>Oxalis perennans</i>  <i>Ptilotus exaltatus</i> var. <i>exaltatus</i>  <i>P. macrocephalus</i>  <i>Pycnosorus globosus</i>  <i>Rhodanthe corymbiflora</i>  <i>Rytidosperma caespitosa</i>  <i>R. eriantha</i>  <i>Sida corrugata</i>  <i>Solanum esuriiale</i>  <i>Sporobolus caroli</i>  <i>Swainsona murrayana</i>  <i>S. plagiotropis</i><sup>44</sup>  <i>S. procumbens</i>  <i>S. swainsonioides</i>  <i>Teucrium racemosum</i>  <i>Triplidiscus pygmaeus</i>  <i>Wahlenbergia luteola</i></p>	<p><i>Alternanthera denticulata</i>  <i>Austrostipa aristigilumis</i>  <i>Bulbine semibarbata</i>  <i>Calostemma purpureum</i>  <i>Calotis scabiosifolia</i>  <i>Centrolepis glabra</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Crassula decumbens</i> var. <i>decumbens</i>  <i>Eclipta platyglossa</i>  <i>Eleocharis pallens</i>  <i>Eragrostis australasica</i>  <i>Eryngium paludosum</i>  <i>Goodenia pusilliflora</i>  <i>Homopholis prolata</i>  <i>Isoetopsis graminifolia</i>  <i>Isolepis hookeriana</i>  <i>I. victoriensis</i>  <i>Juncus radula</i>  <i>Lachnagrostis filiformis</i>  <i>Lepidium monolocoides</i>  <i>Leptorhynchus orientale</i>  <i>Maireana pentagona</i>  <i>Marsilea drummondii</i>  <i>Myosurus minimus</i> var. <i>australis</i>  <i>Myriocephalus rhizocephalus</i>  <i>Myriophyllum crispatum</i>  <i>Ptilotus exaltatus</i> var. <i>exaltatus</i>  <i>Pycnosorus globosus</i>  <i>Ranunculus penlandrus</i> var. <i>platycarpus</i>  <i>Rhodanthe corymbiflora</i>  <i>Rumex tenax</i>  <i>Rytidosperma caespitosa</i>  <i>R. duttoniana</i>  <i>Sida corrugata</i>  <i>Stylidium despectum</i>  <i>Swainsona murrayana</i>  <i>S. procumbens</i>  <i>Teucrium racemosum</i>  <i>Utricularia dichotoma</i>  <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>

# CONOBLE (EASTERN)



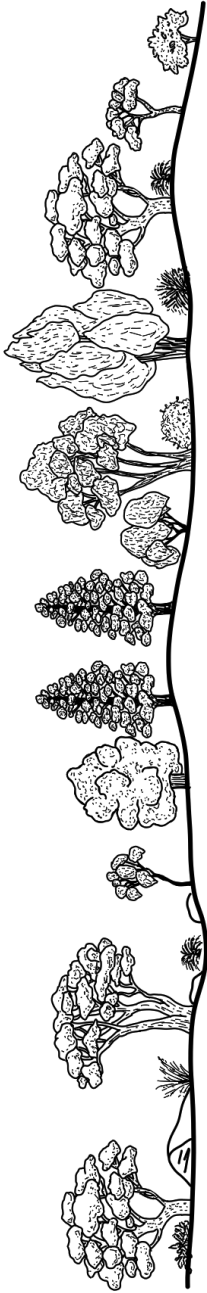
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Shallow Depressions	Level to Depressed Plains
VEGETATION TYPE	Black Box Woodland	Lignum – Goosefoot / Canegrass Swamp	Boree Woodland
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.
LOCATION EXAMPLE	Willandra Creek in Willandra NP, Merrowie Creek	Willandra Creek at the Cobb Highway crossing, south of Ivanhoe.	Eastern end of Trida Rd near Roto.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Chenopodium nitrariaceum</i>  <i>Duma florulenta</i></p> <p>nil</p>	<p><i>Acacia melvillei</i>  <i>A. oswaldii</i>  <i>A. pendula</i>  <i>Atriplex nummularia</i>  <i>Eremophila longifolia</i></p> <p>nil</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Atriplex nummularia</i>  <i>Chenopodium nitrariaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos aphyllus</i></p> <p>Old Man Saltbush  Nitre Goosefoot  Lignum  Leafless Cherry</p>	<p><i>Chenopodium nitrariaceum</i>  <i>Duma florulenta</i></p> <p>Nitre Goosefoot  Lignum</p>	<p>Myall  Miljee  Boree  Old Man Saltbush  Erubush</p>

<p><b>SHRUBS &amp; SMALL TREES &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Rhagodia spinescens</i> <i>Sclerolaena bicornis</i> <i>S. intricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Thorny Sahbush Goathead Burr Tangled Poverty-Bush</p>	<p><i>Abutilon halophilum</i> <i>Atriplex lindeleyi</i> <i>Nitraria billardierei</i> <i>Sclerolaena muricata</i> <i>S. tricuspsis</i></p>	<p>Plains Lantern-bush Eastern Flat-top Saltbush Dillon Bush Black Rolypoly Streaked Poverty-bush</p>	<p><i>Atriplex vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena bicornis</i> var. <i>bicornis</i> <i>S. muricata</i> <i>S. stelligera</i></p>	<p>Bladder Saltbush Ruby Saltbush Black Cottonbush Thorny Saltbush Goathead Burr Five spined Bassia Star Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera nodiflora</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Calotis scapigera</i> <i>Centipeda cunninghamii</i> <i>C. minima</i> <i>C. thespidioides</i> <i>Chamaesyce drummondii</i> <i>Convolvulus remotus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Eragrostis australasica</i> <i>Goodenia heteromera</i> <i>Haloragis aspera</i> <i>Homopholis prolata</i> <i>Juncus subsecundus</i> <i>Lachnagrostis filiformis</i> <i>Leiocarpa leptolepis</i> <i>Lobelia concolor</i> <i>Mentha australis</i> <i>Minuria integririma</i> <i>Paspalidium jubiflorum</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Typha orientalis</i></p>	<p>Common Joyweed Creeping Saltbush Rough Speargrass Tufted Burr-daisy Common Sneezeweed Spreading Sneezeweed Desert Sneezeweed Flat spurge Grassy Bindweed Climbing Saltbush Spider Grass Canegrass Spreading Goodenia Rough Raspwort Rigid Panic Finger Rush Blown Grass Stalked Plover-daisy Poison Pratia River Mint Smooth Minuria Warrego Summer-grass Grey Sunray White-top Curragated Sida Quena Cumbungi</p>	<p><i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Centipeda cunninghamii</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>Eragrostis australasica</i> <i>Juncus flavidus</i> <i>J. radula</i> <i>Lavatera plebia</i> <i>Limosella australis</i> <i>Lythrum hyssopifolia</i> <i>Marsilea drummondii</i> <i>Myriocephalus rhozocephalus</i> <i>Phragmites australis</i> <i>Rumex crystallinus</i> <i>Senecio cunninghamii</i></p>	<p>Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Sneezeweed Common Spike-rush Pale Spike-rush Canegrass Yellow Rush Hoary Rush Australian Hollyhook Australian Mudwort Hyssop Loosestrife Common Nardoo Wooly-heads Common Reed Shiny Dock Bushy Groundsel</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nodosa</i> <i>Calocephalus sonderi</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Enteropogon acicularis</i> <i>Maireana enchylaenoides</i> <i>Ptilotus erubescens</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Vittadinia cuneata</i></p>	<p>Creeping Saltbush Knotty Speargrass Pale Beauty-heads Windmill Grass Australian Bindweed Spider Grass Wingless Fissure-weed Hairy tails Grey Sunray White-top Curragated Sida Fuzzweed</p>

# CONOBLE (NORTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www revegetation.org.au](http://www revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Sandplains and Minor Dunefields	Sandplains and Low Rises
VEGETATION TYPE	Black Box Woodland	Callitris Mixed Woodland	Belah – Rosewood Woodland
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah. Alluvial, red loams.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Willandra Ck in Willandra NP, Murrumbidgee Ck.	Trida – Roto Rd east of Trida.	Trida Road at eastern edge of Ivanhoe township.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba                      River Red Gum                      Black Box</p>	<p><i>Callitris glaucophylla</i>  <i>Casuarina cristata</i>  <i>C. pauper</i>  <i>Eucalyptus intertexta</i>  <i>E. populnea</i> subsp. <i>bimbi</i>  <i>Geijera parviflora</i>  <i>Haakea tephrosperma</i></p> <p>White Cypress Pine                      Belah                      Black Oak                      Red Box                      Bimble Box                      Wilga                      Hooked Needlewood</p>	<p><i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Flindersia maculosa</i><sup>15</sup>  <i>Geijera parviflora</i>  <i>Myoporum platycarpum</i></p> <p>White Cypress Pine                      Black Oak                      Leopardwood                      Wilga                      Sugarwood</p>
SHRUBS & SMALL TREES < 8 m	<p><i>Atriplex nummularia</i>  <i>Chenopodium nitraiaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos aphyllus</i></p> <p>Old Man Saltbush                      Nitre Goosefoot                      Lignum                      Leafless Cherry</p>	<p><i>Acacia melvillei</i>  <i>A. victoriae</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Eremophila longifolia</i></p> <p>Myall                      Prickly Wattle                      Rosewood                      Emubush</p>	<p><i>Acacia melvillei</i>  <i>A. oswaldii</i>  <i>A. victoriae</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Apophyllum anomalum</i>  <i>Eremophila sturtii</i>  <i>Exocarpos aphyllus</i>  <i>Myoporum montianum</i>  <i>Senna artemisioides</i> subsp. <i>petiolaris</i>                      Cassia</p> <p>Myall                      Mijee                      Prickly Wattle                      Rosewood                      Warrior Bush                      Turpentine                      Leafless Cherry                      Western Boobialla                      Phyllodinous Desert</p>

<p><b>SHRUBS &amp; SMALL TREES &lt; 8 m</b></p>			
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Rhagodia spinescens</i> <i>Sclerolaena bicornis</i> var. <i>bicornis</i> <i>S. intricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Thorny Saltbush Goathead Burr Tangled Poverty-bush</p>	<p><i>Atriplex eardleyae</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i> <i>S. tricuspsis</i></p> <p>Small Saltbush Soft-horns Thorny Saltbush Five spined Bassia Star Copperburr Streaked Poverty-bush</p>	<p><i>Atriplex stipitata</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. erioclada</i> <i>M. pyramidata</i> <i>Rhagodia spinescens</i> <i>Sclerolaena bicornis</i> var. <i>bicornis</i> <i>S. diacantha</i></p> <p>Bitter Saltbush Ruby Saltbush Cottonbush Rosy Bluebush Black Bluebush Thorny Saltbush Goathead Burr Grey Copperburr</p>
	<p><i>Alternanthera nodiflora</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>faucata</i> <i>Calotis scapigera</i> <i>Centipeda cunninghamii</i> <i>C. minima</i> <i>C. thespidioides</i> <i>Chamaesyce drummondii</i> <i>Convolvulus remotus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Eragrostis australasica</i> <i>Goodenia heteromera</i> <i>Haloragis aspera</i> <i>Homopholis prolata</i> <i>Ixiolaena leptolepis</i> <i>Juncus subsecundus</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Mentha australis</i> <i>Minuria integerima</i> <i>Paspalidium jubiflorum</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperra caespitosa</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Typha orientalis</i></p> <p>Common Joyweed Creeping Saltbush Rough Speargrass Tufted Burr-daisy Common Sneezeweed Spreading Sneezeweed Desert Sneezeweed Flat Spurge Grassy Bindweed Climbing Saltbush Spider Grass Canegrass Spreading Goodenia Rough Raspwort Rigid Panic Stalked Plover-daisy Finger Rush Blown Grass Poison Pratia River Mint Smooth Minuria Warrego Summer-grass Grey Sunray White-top Corrugated Sida Quena Cumbungi</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Convolvulus erubescens</i> <i>Lachnogrostis filiformis</i> <i>Minuria integerima</i> <i>Oxalis peremans</i> <i>Rytidosperra caespitosa</i> <i>R. setacea</i> <i>Sclerolaena brachyptera</i> <i>Sida intricata</i> <i>S. trichopoda</i> <i>Solanum esuriale</i> <i>Wahlenbergia gracilentia</i></p> <p>Creeping Saltbush Rough Speargrass Yellow Buttons Clustered Everlasting Australian Bindweed Blown Grass Smooth Minuria Grassland Wood sorrel White-top Smallflower Wallaby Grass Short-winged Copperburr Twiggy Sida High Sida Quena Annual Bluebell</p>	<p><i>Atriplex suberea</i> <i>Austrostipa scabra</i> subsp. <i>faucata</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>D. paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Maireana sclerolaenoides</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperra caespitosa</i> <i>Sida intricata</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonoides</i> <i>Vittadinia gracilis</i></p> <p>Lagoon Saltbush Rough Speargrass Twin-horned Copperburr Cannon-ball Climbing Saltbush Woolly fruit Copperburr Grey Sunray White-top Twiggy Sida Quena New Zealand Spinach Woolly New Holland Daisy</p>

# CONOBLE (WESTERN)

For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.



LANDFORM	Shallow Depressions	Level to Depressed Plains	Undulating Plains, Low Rises and Levees
VEGETATION TYPE	Lignum-Goosefoot-Canegrass	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.
GEOLOGY & SOILS	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.
LOCATION EXAMPLE	Willandra Creek at the Cobb Highway crossing, south of Ivanhoe.	Trida – Willandra National Park Rd, Trida exclusion plot.	Trida exclusion plot, Cobb Highway approx. 15 km south of Ivanhoe.
TREES > 8 m	nil	nil	<i>Callitris glaucophylla</i> <i>Hakea tephrosperma</i> White Cypress Pine Hooked Needlewood
SHRUBS & SMALL TREES 2 - 8 m	<i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i> Nitre Goosefoot Lignum	<i>Acacia oswaldii</i> <sup>®</sup> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Senna artemisioides</i> subsp. <i>coriacea</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> Baldoon Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Spiny-fruit Saltbush	<i>Acacia melvillei</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <sup>®</sup> <i>Atriplex nummularia</i> <sup>®</sup> <i>Eremophila longifolia</i> <sup>®</sup> Mvalli Rosewood Old Man Saltbush Emubush



**SMALL  
SHRUBS  
< 2 m**

<p><i>Abutilon halophilum</i> <i>Atriplex lindleyi</i> <i>Nitraria billardierei</i> <i>Sclerolaena muricata</i> <i>S. tricuspis</i></p>	<p>Plains Lantern-bush Eastern Flat-top Saltbush Dillon Bush Black Rolypoly Streaked Poverty-bush</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. spinibractea</i> <i>A. spongiosa</i> <i>A. vesicaria</i> <i>Frankenia serpyllifolia</i> <i>Maireana aphylla</i> <i>M. erioclada</i> <i>M. pyramidata</i> <i>Malacocera tricornis</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Scleroblitum atriplicinum</i> <i>Sclerolaena intricata</i> <i>S. lanicuspis</i> <i>S. muricata</i> <i>S. tricuspis</i><sup>g</sup> <i>Tecticornia tenuis</i></p>	<p>Baldoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Spiny-fruit Saltbush Pop Saltbush Bladder Saltbush Bristly Sea heath Cottonbush Rosy Bluebush Black Bluebush Soft-horns Water Weed Thorny Saltbush Purple Goosefoot Tangled Poverty-bush Woolly Copperburr Five spined Bassia Streaked Poverty-bush Slender Glasswort</p>
<p><i>Atriplex semibaccata</i> <i>Atriplex suberecta</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Centipeda cunninghamii</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>Eragrostis australasica</i> <i>Juncus flavidus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Lytium hyssopifolia</i> <i>Malva preissiana</i> <i>Marsilea drummondii</i> <i>Myriocephalus rhizocephalus</i> <i>Phragmites australis</i> <i>Rumex crystallinus</i> <i>Senecio cunninghamii</i></p>	<p>Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Sneezeweed Common Spike-rush Pale Spike-rush Canegrass Yellow Rush Hoary Rush Australian Mudwort Hyssop Loosestrife Australian Hollyhock Common Nardoo Woolly-heads Common Reed Shiny Dock Bushy Groundsel</p>	<p><i>Amaranthus macrocarpus</i> <i>Astrelba pectinata</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Brachycome lineariloba</i> <i>Calocephalus sonderi</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Daucus glochidiatus</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Dissocarpus paradoxus</i><sup>g</sup> <i>Eragrostis australasica</i> <i>Eragrostis brownii</i> <i>Leiocarpa tomentosa</i> <i>L. panaeoides</i> <i>Maireana pentagona</i> <i>Minuria cunninghamii</i> <i>M. denticulata</i> <i>M. integririma</i> <i>Plantago cunninghamii</i> <i>Ptilotus nobilis</i> <i>Pycnosorus chrysanthes</i> <i>Rhodanthe corymbiflora</i> <i>R. floribunda</i> <i>Roepera glauca</i> <i>R. iodocarpa</i> <i>Fytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida trichopoda</i> <i>Sporobolus caroli</i> <i>Tetragonia tetragonoides</i> <i>Xerochrysum bracteatum</i></p>	<p>Dwarf Amaranth Barley Mitchell Grass Creeping Saltbush Lagoon Saltbush Hard head Daisy Pale Beauty-heads Windmill Grass Australian Bindweed Australian Carrot Round-leaf Pigface Twin-horned Copperburr Cannon-ball Canegrass Browns Lovagrass Woolly Plover daisy Woolly Buttons Slender Fissure-weed Bush Minuria Woolly Minuria Smooth Minuria Sago weed Regal Foxtail Golden Billy-buttons Grey Sunray Common White Sunray Pale Twinleaf Violet Twinleaf White-top Short-winged Copperburr High Sida Fairy Grass New Zealand Spinach Golden Everlasting</p>
<p><i>Atriplex semibaccata</i> <i>Austrostipa suberecta</i> <i>Calandrinia eremaea</i> <i>Calocephalus sonderi</i> <i>Chloris truncata</i> <i>Crassula colorata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Dysphania pumilio</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis dielsii</i> <i>Homopholis proluta</i> <i>Lachnagrostis filliformis</i> <i>Lepidium monolocoides</i> <i>Minuria cunninghamii</i> <i>Panicum decompositum</i> <i>Rhodanthe corymbiflora</i> <i>Fytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>Solanum esuriale</i></p>	<p>Creeping Saltbush Balcalra Speargrass Rough Speargrass Small Purslane Pale Beauty-heads Windmill Grass Dense Stonecrop Round-leaf Pigface Twin-horned Copperburr Small Crumbweed Climbing Saltbush Mulka Rigid Panic Blown Grass Winged Peppercress Bush Minuria Native Millet Grey Sunray White-top Short-winged Copperburr Corrugated Sida Quena</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana appressa</i> <i>M. decalvans</i> <i>M. pyramidata</i> <i>M. sedifolia</i> <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. intricata</i> <i>S. muricata</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i></p>	<p>Creeping Saltbush Balcalra Speargrass Rough Speargrass Small Purslane Pale Beauty-heads Windmill Grass Dense Stonecrop Round-leaf Pigface Twin-horned Copperburr Small Crumbweed Climbing Saltbush Mulka Rigid Panic Blown Grass Winged Peppercress Bush Minuria Native Millet Grey Sunray White-top Short-winged Copperburr Corrugated Sida Quena</p>

**GROUND  
COVERS**

# FOUR CORNERS (SOUTHERN)



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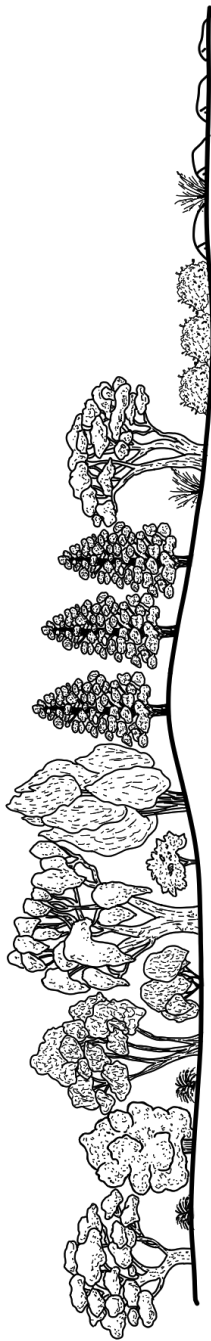
LANDFORM	Rivers, Floodplains and Levees	Shallow Depressions	Creeklines and Secondary Floodplains
VEGETATION TYPE	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.	Black Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy, grey cracking clays, sometimes slightly saline.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
LOCATION EXAMPLE	Billabong Creek, Sheep Wash Creek.	Oolambeyan National Park.	Oolambeyan National Park, Coleambally Creek (outfall drain), Boorooban State Forest.
TREES > 8 m	<p>Acacia stenophylla                      Allocasuarina luehmannii<sup>®</sup>                      Callitris glaucophylla                      Eucalyptus camaldulensis                      E. melliodora                      E. microcarpa</p> <p>River Cooba                      Bull Oak                      White Cypress Pine                      River Red Gum                      Yellow Box                      Grey Box</p>	<p>Eucalyptus largiflorens                      Black Box</p>	<p>Eucalyptus largiflorens                      Geijera parviflora                      Black Box                      Wilga</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia acinacea                      A. pendula                      Calytrix tetragona                      Exocarpos strictus</p> <p>Gold-dust Wattle                      Boree                      Common Fringe-myrtle                      Dwarf Cherry</p>	<p>Atriplex nummularia                      Chenopodium nitraraceum                      Duma florulenta                      Old Man Saltbush                      Nitre Goosefoot                      Lignum</p>	<p>Acacia oswaldii                      A. pendula                      Alectryon oleifolius subsp. canescens                      Atriplex nummularia                      Chenopodium nitraraceum                      Duma florulenta                      Eremophila deserti                      Exocarpos aphyllus                      Pittosporum phylliraeoides                      Miljee                      Boree                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Lignum                      Ellangowan Poison-bush                      Leafless Cherry                      Butterbush</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			
<p><b>GROUND COVERS</b></p>	<p><i>Dillwynia cinerascens</i> <i>Enchylaena tomentosa</i></p> <p>Grey Parrot-pea Ruby Saltbush</p> <p>Lesser Joyweed Veined Swamp Red Azolla Swamp Daisy Bogam Flea Tall Sedge Rush Sedge Common Sheeze-weed Darling Lily Water-ribbons Smooth Flax-lily Kidneyweed Climbing Saltbush Australian Cranesbill Spreading Goodenia Victorian Club sedge Giant Rush Blown Grass Poison Pratia Common Nardoo Mouse tail Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Ferny Buttercup White-top Cushion Knawel Eel-weed River Bluebell</p> <p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>5</sup> <i>Azolla filiculoides</i> <i>Brachycome basaltica</i> var. <i>gracilis</i> <i>Calotis hispidula</i> <i>Carex appressa</i> <i>C. tereticaulis</i><sup>5</sup> <i>Centipeda cunninghamii</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Dianella porraceae</i> <i>Dichondra repens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Geranium solanderi</i> <i>Goodenia heteromera</i> <i>Isolepis victoriensis</i> <i>Juncus ingens</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myosurus minimus</i> var. <i>australis</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Oxalis perennans</i> <i>Paspalidium jubiflorum</i><sup>5</sup> <i>Phragmites australis</i> <i>Poa tordeana</i> <i>Pycnosorus globosus</i> <i>Ranunculus pumilio</i> <i>Rytidosperma caespitosa</i> <i>Scleranthus minusculus</i> <i>Vallisneria australis</i><sup>5</sup> <i>Wahlenbergia fluminalis</i></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Glycyrrhiza acanthocarpa</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. muricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Native Liquorice Black Cottonbush Thorny Saltbush Pale Poverty-bush Five spined Bassia</p> <p><i>Atriplex semibaccata</i> <i>Boerhaavia dominii</i> <i>Calocephalus sonderi</i> <i>Chamaesyce drummondii</i> <i>Chenopodium melanocarpum</i> <i>Cressa australis</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Geranium solanderi</i> <i>Juncus aridicola</i> <i>J. flavicus</i> <i>Maireana ciliata</i> <i>M. enclylaenoides</i> <i>Poa tordeana</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Solanum esuriale</i> <i>Vittadinia cuneata</i></p> <p>Creeping Saltbush Tar Vine Pale Beauty-heads Flat Spurge Black Crumbweed Rosinweed Twin-horned Copperburr Climbing Saltbush Common Spike-rush Pale Spike-rush Ribbed Spike-rush Australian Cranesbill Tussock Rush Yellow Rush Hairy Fissure weed Wingless Fissure-weed Sweet Swamp grass Short-winged Copperburr Corrugated Sida Pin Sida Quena Fuzzweed</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena diacantha</i> <i>S. divaricata</i> <i>S. muricata</i> <i>S. stelligera</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Grey Copperburr Pale Poverty-bush Five spined Bassia Star Copperburr</p> <p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Calocephalus sonderi</i> <i>Calostemma purpureum</i> <i>Calotis cuneata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lachnogrostis filiformis</i> <i>Maireana ciliata</i> <i>M. pentagona</i> <i>Marsilea drummondii</i> <i>Minuria integririma</i> <i>Rhodanthe conymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio cunninghamii</i> <i>S. quadridentatus</i> <i>Sida corrugata</i> <i>S. fibulifera</i> <i>Sporobolus caroli</i> <i>Roepera glauca</i></p> <p>Dwarf Amaranth Creeping Saltbush Rough Speargrass Pale Beauty-heads Wilcannia Lily Mountain Burr daisy Climbing Saltbush Spider Grass Blown Grass Hairy Fissure weed Slender Fissure-weed Common Nardoo Smooth Minuria Grey Sunray White-top Short-winged Copperburr Bushy Groundsel Cotton Fireweed Corrugated Sida Pin Sida Fairy Grass Pale Twinleaf</p>

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# FOUR CORNERS



LANDFORM	Level to Depressed Plains	Prior Streams, Lunettes and Sand Ridges	Level to Depressed Plains
VEGETATION TYPE	Boree Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Alluvial or aeolian, well-drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Oolambeyan National Park.	Oolambeyan National Park, Boorooban State Forest, Steam Plains State Forest, Edgar State Forest.	Cobb Highway north of Wanganella, Cobb Highway between Boorooban and Hay.
TREES > 8 m	<i>Callitris glaucophylla</i>  White Cypress Pine	<i>Acacia homalophylla</i> <i>Allocasuarina luehmanni</i> <i>Callitris glaucophylla</i> <i>Geijera parviflora</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>Atriplex nummularia</i> <i>Chenopodium nitraticeum</i> <i>Eremophila longifolia</i> <i>Senna artemisioides</i> ssp. <i>circinnata</i>	<i>Acacia oswaldii</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Bursaria spinosa</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>S. lanceolatum</i>	<i>Atriplex nummularia</i> <sup>1</sup>  Old Man Saltbush

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena birchii</i> <i>S. muricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>A. pseudocampanulata</i> <i>A. vesicaria</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i></p>	<p>Slender-fruited Saltbush Mealy Saltbush Bladder Saltbush Cottonbush Black Cottonbush Soft-horns Dillon Bush Thorny Saltbush Five spined Bassia Star Copperburr Streaked Poverty-bush Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex semibaccata</i> <i>Calocephalus sonderi</i> <i>Calotis scabiosifolia</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>Ptilotus erubescens</i> <i>Rhodanthe corymbiflora</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Sporobolus caroli</i> <i>Swainsonia procumbens</i> <i>Vittadinia cuneata</i></p>	<p>Creeping Saltbush Pale Beauty-heads Rough Burr-daisy Windmill Grass Australian Bindweed Climbing Saltbush Spider Grass Hairy Fissure weed Hairy tails Grey Sunray Corrugated Sida Quena Fairy Grass Broughton Pea Fuzzweed</p>	<p><i>Actinobole uliginosum</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Calotis cuneifolia</i> <i>Chenopodium melanocarpum</i> <i>Dactyloctenium radulans</i> <i>Dissochilus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Eragrostis lacunaria</i> <i>Geranium solanderi</i> <i>Maireana enchylaenoides</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Creeping Saltbush Pale Beauty-heads Rough Burr-daisy Windmill Grass Australian Bindweed Climbing Saltbush Canegrass Silky Goodenia Woolly Plover daisy Slender Fissure-weed Bush Minuria White-top Short-winged Copperburr Sand Sida High Sida Quena Fairy Grass Fuzzweed</p>
	<p><i>Atriplex leptocarpa</i> <i>A. pseudocampanulata</i> <i>Callistemon brachyandrus</i> <i>Enchylaena tomentosa</i> <i>Olearia pimeleoides</i> <i>Rhagodia spinescens</i> <i>Sclerolaena diacantha</i> <i>S. muricata</i></p>	<p>Slender-fruited Saltbush Mealy Saltbush Prickly Bottlebrush Ruby Saltbush Showy Daisy-bush Thorny Saltbush Grey Copperburr Five spined Bassia</p>	<p><i>Actinobole uliginosum</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Calotis cuneifolia</i> <i>Chenopodium melanocarpum</i> <i>Dactyloctenium radulans</i> <i>Dissochilus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Eragrostis lacunaria</i> <i>Geranium solanderi</i> <i>Maireana enchylaenoides</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Flamm Cudweed Rough Speargrass Tar Vine Purple Burr-daisy Black Crumbweed Button Grass Twin-horned Copperburr Climbing Saltbush Spider Grass Purple Lovegrass Australian Cranesbill Wingless Fissure-weed White-top Corrugated Sida</p>

# FOUR CORNERS



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Oolambeyan National Park.	Oolambeyan National Park, 1.2 km east along Cooinbil access road, Willurah Rd 5.7 km north of Delta Ck.	Oolambeyan National Park.
TREES > 8 m	<i>Callitris glaucophylla</i> White Cypress Pine	<i>Acacia homalophylla</i> Yarran	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Eriophila longifolia</i> <i>Senna artemisioides</i> subsp. <i>circinnata</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <sup>†</sup> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i>	<i>Acacia pendula</i> Boree

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena birchii</i> <i>S. muricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia</p>	<p>nil</p>
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex semibaccata</i> <i>Calceophthalus sonderi</i> <i>Calotis scabiosifolia</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>Ptilotus erubescens</i> <i>Rhodanthe corymbiflora</i> <i>Sida corrugata</i> <i>Solanum esuriate</i> <i>Sporobolus caroli</i> <i>Swainsona procumbens</i> <i>Vittadinia cuneata</i></p>	<p>Creeping Saltbush Pale Beauty-heads Rough Burr-daisy Windmill Grass Australian Bindweed Climbing Saltbush Spider Grass Hairy Fissure weed Hairy tails Grey Sunray Corrugated Sida Quena Fairy Grass Broughton Pea Fuzzweed</p>	<p><i>Alternanthera denticulata</i> <i>Austrostipa aristigulumis</i> <i>Bulbine semibarbata</i> <i>Calostemma purpureum</i> <i>Calotis scabiosifolia</i> <i>Centrolepis glabra</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Crassula decumbens</i> var. <i>decumbens</i> <i>Eclipta platyglossa</i> <i>Eleocharis pallens</i> <i>Eragrostis australasica</i> <i>Eryngium paludosum</i> <i>Goodenia pusilliflora</i> <i>Homopholis prolata</i> <i>Isoetopsis graminifolia</i> <i>Isolepis hookeriana</i> <i>I. victoriensis</i> <i>Juncus radula</i> <i>Lachnagrostis filliformis</i> <i>Leptidium monolocooides</i> <i>Leptorhynchos orientale</i> <i>Maireana pentagona</i> <i>Marsilea drummondii</i> <i>Mysurus minimus</i> var. <i>australis</i> <i>Myriocephalus rhizocephalus</i> <i>Myriophyllum crispatum</i> <i>Ptilotus exaltatus</i> var. <i>exaltatus</i> <i>Pycnosorus globosus</i> <i>Ranunculus pentandrus</i> var. <i>platycarpus</i> <i>Rhodanthe corymbiflora</i> <i>Rumex tenax</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Sida corrugata</i> <i>Styidium despectum</i> <i>Swainsona procumbens</i> <i>Teucrium racemosum</i> <i>Utricularia dichotoma</i> <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>

# GUNBAR (SOUTHERN)



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LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Level to Depressed Plains
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Murrumbidgee River east of the Cobb Highway at Hay.	Murrumbidgee floodplain around Hay, scattered creeklines along the Lachlan Valley Way south-east of Hillston.	One Tree enclosure plot, Booligal Rd approx. 10 km south-east of Booligal.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Allocasuarina lehmannii</i>  <i>Callitris glaucophylla</i>  <i>Casuarina cristata</i>  <i>C. cunninghamiana</i><sup>12</sup>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p>	<p><i>Eucalyptus largiflorens</i>  <i>Exocarpos cupressiformis</i></p>	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos sparteus</i>  <i>Pittosporum phylliraeoides</i></p>	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i></p>	<p><i>Atriplex nummularia</i><sup>14</sup></p>



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			
<p><b>GROUND COVERS</b></p>	<p>Enchylaena tomentosa Rhogodia spinescens</p>	<p>Ruby Saltbush Thorny Saltbush</p>	<p>Slender-fruited Saltbush Ruby Saltbush Black Cottonbush Thorny Saltbush Galvanised Bassia Five spined Bassia Star Copperburr</p>
<p>Anthrosachne scaber Arthropodium minus Asperula conferta Atriplex semibaccata Azolla filiculoides Bothriochloa macro Brachycome basaltica var. gracilis Bulbosa bulbosa Calostemma purpureum Calotis scapigera Carex appressa C. inversa Centipeda cunninghamii Chamaesyce drummondii Chloris truncata Cynogeton procerum<sup>5</sup> Dianella porraceae Dichondra repens Einadia nutans subsp. nutans Glycine clandestina Goodenia glauca Haloragis glauca Lachnagrostis filiformis Lobelia concolor Lomandra effusa L. longifolia Marsilea drummondii Mentha australis Microlaena stipoides Myriophyllum papillosum<sup>5</sup> Paspalidium jubiflorum Phragmites australis Poa tordeana Pycnosorus globosus P. pleiocephalus Ranunculus lappaceus R. pumilio Teucrium racemosum Tricornium elatior Vallisneria australis<sup>6</sup> Viola betonicifolia Wahlenbergia fluminalis</p>	<p>Atriplex leptocarpa Enchylaena tomentosa Maireana decalvans Rhogodia spinescens Sclerolaena birchii S. muricata S. stelligera</p>	<p>Lesser Joyweed Creeping Saltbush Tar Vine Common Sneezeweed Flat Spurge Windmill Grass Spider Grass Slender Fissure-weed Common Nardoo Grassland Wood sorrel Dock White-top Short-winged Copperburr Cotton Fireweed Corrugated Sida Quena Grey Germander</p>	<p>Plains Lantern bush Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Clustered Sea-heath Cottonbush Black Cottonbush Black Bluebush Soft-horns Dillon Bush Goathead Burr Tangled Poverty-bush Five spined Bassia Star Copperburr Streaked Poverty-bush Slender Glasswort</p>
<p>Common Wheatgrass Small Vanilla-lily Common Woodruff Creeping Saltbush Red Azolla Red Grass Swamp Daisy Native Leek Wilcannia Lily Tufted Burr-daisy Tail Sedge Knob Sedge Common Sneezeweed Flat Spurge Windmill Grass Water-ribbons Smooth Flax-lily Kidneyweed Climbing Saltbush Twining Glycine Pale Goodenia Grey Raspwort Blown Grass Poison Pratia Scented Mat-rush Spiny-headed Mat-rush Common Nardoo River Mint Meadow Rice-grass Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Soft Billy buttons Common Buttercup Ferry Buttercup Grey Germander Yellow Rush-lily Eel-weed Floodplain Violet River Bluebell</p>	<p>Alternanthera denticulata Atriplex semibaccata Boerhavia dominii Centipeda cunninghamii Chamaesyce drummondii Chloris truncata Einadia nutans subsp. nutans Enteropogon acicularis Maireana pentagona Marsilea drummondii Oxalis perennans Rumex tenax Ryidosperma caespitosa Sclerolaena brachyptera Senecio quadridentatus Sida corrugata Solanum esuriale Teucrium racemosum</p>	<p>Abutilon halophilum Atriplex leptocarpa A. lindleyi A. pseudocampiculata A. vesicaria Enchylaena tomentosa Frankenia connata<sup>6</sup> Maireana aphylla M. decalvans M. pyramidata Malacocera tricornis Nitratia billardierei Sclerolaena bicornis var. bicornis S. intricata S. muricata S. stelligera S. tricusps Tecticornia tenuis<sup>6</sup></p>	<p>Creeping Saltbush Pale Beauty-heads Windmill Grass Ferry Cotula Australian Carrot Round-leaf Pigface Twin-horned Copperburr Climbing Saltbush Canegrass Stalked Plover-daisy Slender Fissure-weed Bush Minuria Grassland Wood sorrel Native Millet White-top Short-winged Copperburr High Sida Fairy Grass</p>

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# GUNBAR



LANDFORM	Creeklines and Secondary Floodplains	Shallow Depressions	Level to Depressed Plains
VEGETATION TYPE	Black Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Murrumbidgee floodplain around Hay, scattered creeklines along the Lachlan Valley Way south-east of Hillston.	Booilgal State Forest, Cabbage Garden Creek, Muckerumba Swamp.	One Tree enclosure plot, Booligal Rd approx. 10 km south-east of Booligal.
TREES > 8 m	<i>Eucalyptus largiflorens</i> <i>Exocarpos cupressiformis</i>	<i>Eucalyptus largiflorens</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i> <i>Myoporum montanum</i> <i>Pittosporum phylliracoides</i>	Miljee Boree Cooba Rosewood Old Man Saltbush Nitre Goosefoot Lignum Western Boobialla Butterbush	<i>Atriplex nummularia</i> Old Man Saltbush Nitre Goosefoot Lignum

SMALL SHRUBS < 2 m			
<p>Atriplex leptocarpa  <i>Enchylaena tomentosa</i>  <i>Maireana decalvans</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena birchii</i>  <i>S. muricata</i>  <i>S. stelligera</i></p>	<p>Slender-fruited Saltbush  Ruby Saltbush  Black Cottonbush  Thorny Saltbush  Galvanised Bassia  Five spined Bassia  Star Copperburr</p>	<p>Atriplex leptocarpa  <i>Enchylaena tomentosa</i>  <i>Glycyrrhiza acanthocarpa</i>  <i>Maireana decalvans</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena muricata</i></p>	<p>Plains Lantern bush  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bladder Saltbush  Ruby Saltbush  Clustered Sea-heath  Cottonbush  Black Cottonbush  Black Bluebush  Soft-horns  Dillon Bush  Goathead Burr  Tangled Poverty-bush  Five spined Bassia  Star Copperburr  Streaked Poverty-bush  Slender Glasswort</p>
<p><i>Alternanthera denticulata</i>  Atriplex semibaccata  <i>Boerhavia dominii</i>  <i>Centipeda cunninghamii</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Maireana pentagona</i>  <i>Marsilea drummondii</i>  <i>Oxalis perennans</i>  <i>Rumex tenax</i>  <i>Ryidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Senecio quadridentatus</i>  <i>Sida corrugata</i>  <i>Solanum esuriate</i>  <i>Teucrium racemosum</i></p>	<p>Lesser Joyweed  Creeping Saltbush  Tar Vine  Common Sneezeweed  Flat Spurge  Windmill Grass  Climbing Saltbush  Spider Grass  Slender Fissure-weed  Common Nardoo  Grassland Wood sorrel  Dock  White-top  Short-winged Copperburr  Cotton Fireweed  Corrugated Sida  Quena  Grey Germander</p>	<p>Atriplex semibaccata  Atriplex suberecta  <i>Boerhavia dominii</i>  <i>Calocephalus sonderi</i>  <i>Chamaesyce drummondii</i>  <i>Chenopodium melanocarpum</i>  <i>Cressa australis</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eleocharis acuta</i>  <i>E. pallens</i>  <i>E. plana</i>  <i>Eragrostis australasica</i>  <i>Geranium solanderi</i>  <i>Juncus aridicola</i>  <i>J. flavicus</i>  <i>J. radula</i>  <i>Limosella australis</i>  <i>Maireana ciliata</i>  <i>M. enchylaenoides</i>  <i>Marsilea drummondii</i>  <i>Pycnosorus globosus</i>  <i>Sclerolaena brachyptera</i>  <i>Senecio cunninghamii</i>  <i>Sida corrugata</i>  <i>Solanum esuriate</i>  <i>Vittadina cuneata</i></p>	<p>Creeping Saltbush  Pale Beauty-heads  Windmill Grass  Ferry Cotula  Australian Carrot  Round-leaf Pigface  Twin-horned Copperburr  Climbing Saltbush  Canegrass  Stalked Plover-daisy  Slender Fissure-weed  Bush Minuria  Grassland Wood sorrel  Native Millet  White-top  Short-winged Copperburr  High Sida  Fairy Grass</p>
<p><i>Atriplex semibaccata</i>  <i>Calocephalus sonderi</i>  <i>Chloris truncata</i>  <i>Daucus glochidiatus</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>a</sup>  <i>Leiocarpa leptolepis</i>  <i>Maireana pentagona</i>  <i>Minuria cunninghamii</i>  <i>Oxalis perennans</i>  <i>Panicum decompositum</i>  <i>Ryidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida trichopoda</i>  <i>Sporobolus caroli</i></p>	<p>Creeping Saltbush  Lagoon Saltbush  Tar Vine  Pale Beauty-heads  Flat Spurge  Black Crumbweed  Rosenweed  Round-leaf Pigface  Twin-horned Copperburr  Climbing Saltbush  Common Spike-rush  Pale Spike-rush  Ribbed Spike-rush  Canegrass  Australian Cranesbill  Tussock Rush  Yellow Rush  Hoary Rush  Australian Mudwort  Hairy Fissure weed  Wingless Fissure-weed  Common Nardoo  Drumsticks  Short-winged Copperburr  Bushy Groundsel  Corrugated Sida  Quena  Fuzzweed</p>	<p>Atriplex semibaccata  <i>Calocephalus sonderi</i>  <i>Chloris truncata</i>  <i>Daucus glochidiatus</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>a</sup>  <i>Leiocarpa leptolepis</i>  <i>Maireana pentagona</i>  <i>Minuria cunninghamii</i>  <i>Oxalis perennans</i>  <i>Panicum decompositum</i>  <i>Ryidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida trichopoda</i>  <i>Sporobolus caroli</i></p>	<p>Creeping Saltbush  Pale Beauty-heads  Windmill Grass  Ferry Cotula  Australian Carrot  Round-leaf Pigface  Twin-horned Copperburr  Climbing Saltbush  Canegrass  Stalked Plover-daisy  Slender Fissure-weed  Bush Minuria  Grassland Wood sorrel  Native Millet  White-top  Short-winged Copperburr  High Sida  Fairy Grass</p>

# GUNBAR



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LANDFORM	Level to Depressed Plains	Prior Streams, Lunettes and Sand Ridges	Undulating Plains, Low Rises and Levees
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Callitris Mixed Woodland (Prior Streams / Lunettes).	Black / Pearl Bluebush Chenopod Shrubland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Alluvial or aeolian, well-drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.
LOCATION EXAMPLE	One Tree enclosure plot, Booligal Rd approx. 10 km south-east of Booligal.	Mid Western Highway north of Illiwiwa Siding (prior stream), northern end of Lara Rd (sand ridge), McKinley Rd south of McKinley.	Yurdylla Road near Myurree Station, Booligal Road east of Wongalea Road, Wongalea Road.
TREES > 8 m	nil	<p>Acacia homalophylla</p> <p>Allocasuarina Lehmannii</p> <p>Callitris glaucophylla</p> <p>Eucalyptus populnea subsp. bimbil</p> <p>Geijera parviflora</p> <p>Haakea tephrosperma</p> <p>Myoporum platycarpum</p>	<p>Callitris glaucophylla</p> <p>Haakea tephrosperma</p> <p>White Cypress Pine</p> <p>Hooked Needlewood</p>
SHRUBS & SMALL TREES 2 - 8 m	Atriplex nummularia* Old Man Saltbush	<p>Acacia deanei subsp. paucijuga</p> <p>A. hakeoides</p> <p>A. pendula</p> <p>A. salicina</p> <p>Alectryon oleifolius subsp. canescens</p> <p>Atriplex nummularia</p> <p>Bursaria spinosa</p> <p>Dodonaea viscosa subsp. angustissima</p> <p>Eremophila longifolia</p> <p>Pitiosporum phylliraeoides</p> <p>Santalum acuminatum</p> <p>Senna artemisioides subsp. filifolia</p>	<p>Acacia melvillei</p> <p>Alectryon oleifolius subsp. canescens</p> <p>Atriplex nummularia</p> <p>Eremophila longifolia</p> <p>Mvall</p> <p>Rosewood</p> <p>Old Man Saltbush</p> <p>Emubush</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>		<p><i>Rhagodia spinescens</i></p> <p>Thorny Saltbush</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Maireana appressa</i>  <i>M. decalvans</i>  <i>M. pyramidata</i>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena divaricata</i>  <i>S. intricata</i>  <i>S. muricata</i>  <i>S. tricuspsis</i>  <i>Tecticornia tenuis</i></p>	<p>Baldeo  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bladder Saltbush  Ruby Saltbush  Grey Bluebush  Black Cottonbush  Black Bluebush  Soft-horns  Dillon Bush  Thorny Saltbush  Pale Poverty-bush  Tangled Poverty-bush  Five spined Bassia  Streaked Poverty-bush  Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p><i>Abutilon halophilum</i>  <i>Atriplex leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Frankenia connata</i><sup>8</sup>  <i>Maireana aphylla</i>  <i>M. decalvans</i>  <i>M. pyramidata</i>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Sclerolaena bicornis</i> var. <i>bicornis</i>  <i>S. intricata</i>  <i>Sclerolaena muricata</i>  <i>S. stelligera</i>  <i>S. tricuspsis</i>  <i>Tecticornia tenuis</i><sup>8</sup></p> <p>Plains Lantern bush  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bladder Saltbush  Ruby Saltbush  Clustered Sea-head  Cottonbush  Black Cottonbush  Black Bluebush  Soft-horns  Dillon Bush  Goathead Burr  Tangled Poverty-bush  Five spined Bassia  Star Copperburr  Streaked Poverty-bush  Slender Glasswort</p>	<p><i>Aristida behriana</i>  <i>Atriplex semibaccata</i>  <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>  <i>Chloris truncata</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Lomandra leucocephala</i>  <i>Ryidosperma caespitosa</i>  <i>Sida corrugata</i>  <i>Triplidiscus pygmaeus</i>  <i>Wurmbea dioica</i> subsp. <i>dioica</i></p> <p>Bunch Wiregrass  Creeping Saltbush  Muiga Fern  Windmill Grass  Climbing Saltbush  Spider Grass  Woolly-head Mat-rush  White-top  Corrugated Sida  Creamy Candles  Common Sunray  Early Nancy</p>	<p><i>Atriplex semibaccata</i>  <i>Austrostipa nitida</i>  <i>A. scabra</i> subsp. <i>falcata</i>  <i>Calandrinia eremaea</i>  <i>Calocephalus sonderi</i>  <i>Crassula colorata</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dysphania pumilio</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis dielsii</i>  <i>Homopholis prolata</i>  <i>Lachnogrostis filiformis</i>  <i>Lepidium monolocoides</i>  <i>Minuria cunninghamii</i>  <i>Panicum decompositum</i>  <i>Rhodanthe corymbiflora</i>  <i>Ryidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i></p> <p>Creeping Saltbush  Balcarra Speargrass  Rough Speargrass  Small Purslane  Pale Beauty-heads  Dense Stonecrop  Round-leaf Pigface  Small Crumbweed  Climbing Saltbush  Mulka  Rigid Panic  Blown Grass  Winged Peppergrass  Bush Minuria  Native Millet  Grey Sunray  White-top  Short-winged Copperburr  Corrugated Sida  Quena</p>	

# GUNBAR (EASTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

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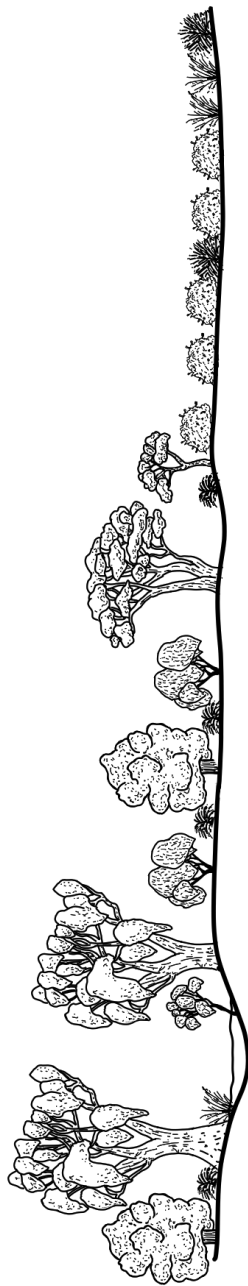
LANDFORM	Level to Depressed Plains	Sandplains and Low Rises	Sandplains and Minor Dunefields
VEGETATION TYPE	Boree Woodland.	Belah – Rosewood Woodland.	Callitris Mixed Woodland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes Alluvial or aeolian, red or brown calcareous loams or loamy sands.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.
LOCATION EXAMPLE	McKinley Rd north of Crowsnest Rd.	Green Hills Track west of Goolgowi.	McKinley Rd near McKinlay.
TREES > 8 m	<p><i>Callitris glaucophylla</i>  <i>Eucalyptus largiflorens</i>  <i>E. populnea</i> subsp. <i>bimbil</i></p> <p>White Cypress Pine                      Black Box                      Bimble Box</p>	<p><i>Acacia homalophylla</i>  <i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i>  <i>Myoporum platycarpum</i></p> <p>Yarran                      White Cypress Pine                      Black Oak                      Wilga                      Hooked Needlewood                      Sugarwood</p>	<p><i>Allocasuarina luehmannii</i>  <i>Brachychiton populneus</i> subsp. <i>trilobus</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus intertexta</i>  <i>E. populnea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p>Bull Oak                      Kurralong                      White Cypress Pine                      Red Box                      Bimble Box                      Wilga                      Hooked Needlewood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitraraceum</i>  <i>Eremophila longifolia</i>  <i>Pitiosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>citriannata</i></p> <p>Miljee                      Boree                      Cooba                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Emubush                      Butterbush                      Spring pod Cassia</p>	<p><i>Acacia oswaldii</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Apophyllum anomalum</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>Exocarpos aphyllus</i>  <i>Pitiosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>coriacea</i>  <i>S. artemisioides</i> subsp. <i>filifolia</i></p> <p>Miljee                      Rosewood                      Warrior Bush                      Narrow leaf Hopbush                      Emubush                      Leafless Cherry                      Butterbush                      Broad leaf Desert Cassia                      Fine leaf Desert Cassia</p>	<p><i>Acacia calamifolia</i>  <i>A. deanei</i> subsp. <i>paucijuga</i>  <i>A. hakeoides</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Senna artemisioides</i> subsp. <i>zygophylla</i></p> <p>Wallowa                      Green Wattle                      Western Black Wattle                      Rosewood                      Narrow leaf Hopbush                      Narrow leaf Desert Cassia</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Lycium australe</i>  <i>Rhagodia spinescens</i>  <i>Senna aciphylla</i></p>	<p>Slender-fruited Saltbush  Bladder Saltbush  Ruby Saltbush  Australian Boxthorn  Thorny Saltbush  Sprawling Cassia</p>	<p><i>Atriplex stipitata</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Rhagodia spinescens</i></p>	<p>Bitter Saltbush  Ruby Saltbush  Black Bluebush  Thorny Saltbush</p>	<p><i>Atriplex eardleyae</i>  <i>Enchylaena tomentosa</i>  <i>Maireana decalvans</i>  <i>Malacocera tricornis</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena patenticuspis</i></p>	<p>Small Saltbush  Ruby Saltbush  Black Cottonbush  Soft-horns  Thorny Saltbush  Spear fruit Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Aristida behriana</i>  <i>Atriplex semibaccata</i>  <i>Austrosipa scabra</i> subsp. <i>falcata</i>  <i>Chamaesyce drummondii</i>  <i>Chloris truncata</i>  <i>Chrysocephalum semipapposum</i>  <i>Convolvulus erubescens</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Homopholis prolata</i>  <i>Lepidium pseudohyssopifolium</i>  <i>Maireana excavata</i>  <i>M. pentagona</i>  <i>Ptilotus erubescens</i>  <i>P. exaltatus</i> var. <i>exaltatus</i>  <i>Rytidosperma caespitosa</i>  <i>Thysanotus baueri</i>  <i>Vittadinia cuneata</i></p>	<p>Bunch Wiregrass  Creeping Saltbush  Rough Speargrass  Flat Spurge  Windmill Grass  Clustered Everlasting  Australian Bindweed  Climbing Saltbush  Spider Grass  Rigid Panic  Peppercress  Bottle Fissure weed  Slender Fissure-weed  Hairy tails  Showy Foxtail  White-top  Mallee Fringe lily  Fuzzweed</p>	<p><i>Calocephalus sonderi</i>  <i>Dioscarpus paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Maireana humillima</i>  <i>Ptilotus spathulatus</i>  <i>Rhodanthe corymbiflora</i>  <i>Rytidosperma caespitosa</i>  <i>Swainsona formosa</i></p>	<p>Pale Beauty-heads  Cannon-ball  Climbing Saltbush  Dwarf Bluebush  Pussy tails  Grey Sunray  White-top  Sturts Desert Pea</p>	<p><i>Anthrosachne scaber</i>  <i>Atriplex semibaccata</i>  <i>Chrysocephalum semipapposum</i>  <i>Dianella revoluta</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Lomandra multiflora</i>  <i>Ptilotus spathulatus</i>  <i>Rhodanthe corymbiflora</i>  <i>R. polygalifolia</i>  <i>Rytidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida intricata</i>  <i>Thyridolepis mitchelliana</i>  <i>Xerochrysum bracteatum</i></p>	<p>Common Wheatgrass  Creeping Saltbush  Clustered Everlasting  Spreading Flax-lily  Climbing Saltbush  Many-flowered Mat-rush  Pussy tails  Grey Sunray  Brilliant Sunray  White-top  Short-winged Copperburr  Twiggy Sida  Mulga Grass  Golden Everlasting</p>

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# HATFIELD (SOUTHERN)

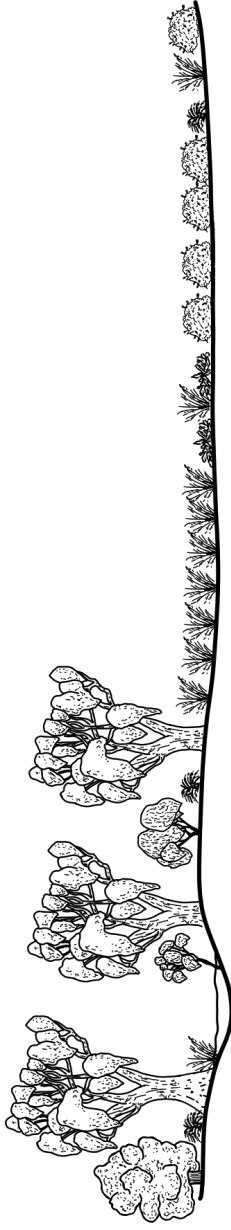


LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Shallow Depressions
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.
LOCATION EXAMPLE	Redbank Weir.	Redbank Weir Road, Box Creek.	Tyson Lake, Box Creek.
TREES > 8 m	<p><i>Acacia stenophylla</i> <i>Eucalyptus camaldulensis</i></p> <p>River Cooba River Red Gum</p>	<p><i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i></p> <p>River Cooba Black Box</p>	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i> <i>Chenopodium nitrarriaceum</i> <i>Duma florulenta</i></p> <p>Cooba Nitre Goosefoot Lignum</p>	<p><i>Acacia oswaldii</i> <i>A. salicina</i> <i>A. victoriae</i> <i>Atriplex nummularia</i> <i>Chenopodium nitrarriaceum</i> <i>Duma florulenta</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i></p> <p>Miljée Cooba Prickly Wattle Old Man Saltbush Nitre Goosefoot Lignum Moonah Butterbush</p>	<p><i>Chenopodium nitrarriaceum</i> <i>Duma florulenta</i></p> <p>Nitre Goosefoot Lignum</p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p><i>Atriplex lindleyi</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Nitraria billiardieri</i>  <i>Rhagodia spinescens</i></p>	<p>Eastern Flat-top Saltbush  Ruby Saltbush  Black Bluebush  Dillon Bush  Thorny Saltbush</p>	<p><i>Abutilon halophilum</i>  <i>Atriplex lindleyi</i>  <i>Nitraria billiardieri</i>  <i>Sclerolaena muricata</i>  <i>S. tricuspis</i></p>	<p>Plains Lantern bush  Eastern Flat-top Saltbush  Dillon Bush  Five spined Bassia  Streaked Poverty-bush</p>	
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i>  <i>Amphibromus nervosus</i><sup>s</sup>  <i>Atriplex semibaccata</i>  <i>Azolla filiculoides</i><sup>s</sup>  <i>Brachycome basaltica</i> var. <i>gracilis</i>  <i>Calostemma purpureum</i>  <i>Cardamine paucijuga</i>  <i>Carex appressa</i>  <i>C. tereticaulis</i><sup>s</sup>  <i>Centipeda cunninghamii</i>  <i>Cynogeton procerum</i><sup>s</sup>  <i>Damasonium minus</i><sup>s</sup>  <i>Eclipta platyglossa</i>  <i>Eleocharis acuta</i><sup>s</sup>  <i>E. pusilla</i>  <i>E. sphacelata</i><sup>s</sup>  <i>Eragrostis australasica</i>  <i>Glinus lotoides</i>  <i>Juncus flavidus</i>  <i>Lachnagrostis filiformis</i>  <i>Lobelia concolor</i>  <i>Ludwigia peploides</i> subsp. <i>montevicensis</i><sup>s</sup>  <i>Malva preissiana</i>  <i>Marsilea drummondii</i>  <i>Mentha australis</i>  <i>Mimulus gracilis</i>  <i>Myriophyllum crispatum</i><sup>s</sup>  <i>M. papillosum</i>  <i>Nymphoides crenata</i><sup>s</sup>  <i>Paspalidium jubiflorum</i>  <i>Phragmites australis</i><sup>s</sup>  <i>Poa fordeana</i>  <i>Ranunculus lappaceus</i>  <i>R. pumilio</i>  <i>Senecio cunninghamii</i>  <i>Typha domingensis</i><sup>s</sup>  <i>T. orientalis</i><sup>s</sup>  <i>Vallisneria australis</i><sup>s</sup>  <i>Wahlenbergia fluminalis</i>  <i>W. gracilentia</i></p>	<p><i>Alternanthera denticulata</i>  <i>Atriplex suberecta</i>  <i>Austrostipa nitida</i>  <i>Calandrinia eremaea</i>  <i>Centipeda cunninghamii</i>  <i>Crassula colorata</i>  <i>Dissocarpus paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Haloragis aspera</i>  <i>Lobelia concolor</i>  <i>Mimulus gracilis</i>  <i>Sternodia florulenta</i>  <i>Tetragonia tetragonioides</i>  <i>Vittadina cervicularis</i></p>	<p>Lesser Joyweed  Vined Swamp Walaby-grass  Creeping Saltbush  Red Azolla  Swamp Daisy  Wilcannia Lily  Annual Bitter cress  Tall Sedge  Rush Sedge  Common Sneezeweed  Water-ribbons  Starrfruit  Yellow Twin heads  Common Spike-rush  Small Spike-rush  Tail Spike-rush  Canegrass  Hairy Carpet-weed  Yellow Rush  Blown Grass  Poison Pratia  Water Primrose  Australian Hollyhock  Common Nardoo  River Mint  Slender Monkey flower  Common Water-milfoil  Water-milfoil  Wavy Marshwort  Warrego Summer-grass  Common Reed  Sweet Swamp grass  Common Buttercup  Ferry Buttercup  Bushy Groundsel  Cumbungi  Cumbungi  Eel-weed  River Bluebell  Annual Bluebell</p>	<p>Lesser Joyweed  Lagoon Saltbush  Balcarra Speargrass  Small Purslane  Common Sneezeweed  Dense Stonecrop  Cannon-ball  Climbing Saltbush  Rough Raspwort  Poison Pratia  Slender Monkey flower  Blue Rod  New Zealand Spinach  Annual New Holland Daisy</p>	<p><i>Atriplex semibaccata</i>  <i>A. suberecta</i>  <i>Austrostipa scabra</i> subsp. <i>falcata</i>  <i>Centipeda cunninghamii</i>  <i>Eleocharis acuta</i>  <i>E. pallens</i>  <i>Eragrostis australasica</i>  <i>Juncus flavidus</i>  <i>J. radula</i>  <i>Limosella australis</i>  <i>Lythrum hyssopifolia</i>  <i>Malva preissiana</i>  <i>Marsilea drummondii</i>  <i>Myriocephalus rhizocephalus</i>  <i>Phragmites australis</i>  <i>Rumex crystallinus</i>  <i>Senecio cunninghamii</i></p>	<p>Creeping Saltbush  Lagoon Saltbush  Rough Speargrass  Common Sneezeweed  Common Spike-rush  Pale Spike-rush  Canegrass  Yellow Rush  Hoary Rush  Australian Mudwort  Hyssop Loosestrife  Australian Hollyhock  Common Nardoo  Woolly-heads  Common Reed  Shiny Dock  Bushy Groundsel</p>

# HATFIELD (SOUTHERN)



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LANDFORM	Rivers, Floodplains and Levees	Deep Wetland	Shallow Depressions
VEGETATION TYPE	Riverine Forest.	Reed Bed.	Lignum – Goosefoot / Canegrass Swamp.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Deep wetland dominated by Bulrushes. Alluvial, heavy grey clays.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.
LOCATION EXAMPLE	Redbank Weir.	Great Cumbung Swamp, Lake Tala, Lake Bunumburt.	Tyson Lake, Box Creek.
TREES > 8 m	Acacia stenophylla Eucalyptus camaldulensis	Eucalyptus camaldulensis	nil
SHRUBS & SMALL TREES 2 - 8 m	River Cooba River Red Gum	River Red Gum	Chenopodium nitrariaceum Duma florulenta
	Acacia salicina Chenopodium nitrariaceum Duma florulenta	nil	Nitre Goosefoot Lignum

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p>nil</p>	<p>Abutilon halophilum Atriplex lindleyi Nitraria billardierei Scleroalaena muricata S. tricuspsis</p> <p>Plains Lantern bush Eastern Flat-top Saltbush Dillon Bush Five spined Bassia Streaked Poverty-bush</p>
<p>Alternanthera denticulata Amphibromus nervosus<sup>5</sup> Atriplex semibaccata Azolla filiculoides<sup>5</sup> Brachycome basaltica var. gracilis Calostemma purpureum Cardamine paucijuga Carex appressa C. tereticaulis<sup>5</sup> Centipeda cunninghamii Cynogeton procerum<sup>5</sup> Damasonium minus<sup>5</sup> Eclipta platylossa Eleocharis acuta<sup>5</sup> E. pusilla E. sphacelata<sup>5</sup> Eragrostis australasica Glinus lotoides Juncus flavidus Lachnagrostis filiformis Lobelia concolor Ludwigia peploides subsp. montevidensis<sup>5</sup> Maiva preissiana Marsilea drummondii Mentha australis Mimulus gracilis Myriophyllum crispatum<sup>6</sup> M. papillosum Nymphoides crenata<sup>5</sup> Paspalidium jubiflorum Phragmites australis<sup>5</sup> Poa tordeana Ranunculus lappaceus R. pumilio Senecio cunninghamii Typha domingensis<sup>5</sup> T. orientalis<sup>5</sup> Vallisneria australis<sup>5</sup> Wahlenbergia fluminalis W. gracilentia</p>	<p>Lesser Joyweed Veined Swamp Wallaby-grass Creeping Saltbush Red Azolla Swamp Daisy Wilcannia Lily Annual Bitter cress Tail Sedge Rush Sedge Common Sneezeweed Water-ribbons Starfruit Yellow Twin heads Common Spike-rush Small Spike-rush Tail Spike-rush Canegrass Hairy Carpet-weed Yellow Rush Blown Grass Poison Pratia Water Primrose Australian Hollyhock Common Nardoo River Mint Slender Monkey flower Common Water-milfoil Water-milfoil Wavy Marshwort Warrego Summer-grass Common Reed Sweet Swamp grass Common Buttercup Ferny Buttercup Bushy Groundsel Cumbungi Eel-weed River Bluebell Annual Bluebell</p>	<p>Azolla filiculoides Brachycome basaltica var. gracilis Centipeda cunninghamii Cotula coronopifolia Cyperus gymnocaulos Damasonium minus Eleocharis acuta Juncus flavidus Lachnagrostis filiformis Lobelia concolor Ludwigia peploides subsp. montevidensis Marsilea drummondii Persicaria decipiens Phragmites australis Potamogeton crispus Senecio cunninghamii Typha domingensis T. orientalis Vallisneria australis</p>	<p>Red Azolla Swamp Daisy Common Sneezeweed Waterbuttons Spiny Sedge Starfruit Common Spike-rush Yellow Rush Blown Grass Poison Pratia Water Primrose Common Nardoo Slender Knotweed Common Reed Curly Pondweed Bushy Groundsel Cumbungi Cumbungi Eel-weed</p> <p>Atriplex semibaccata A. suberecta Austrostipa scabra subsp. falcata Centipeda cunninghamii Eleocharis acuta E. pallens Eragrostis australasica Juncus flavidus J. radula Limosella australis Lythrum hyssopifolia Maiva preissiana Marsilea drummondii Myriocephalus rhizocephalus Phragmites australis Rumex crystallinus Senecio cunninghamii</p> <p>Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Sneezeweed Common Spike-rush Pale Spike-rush Canegrass Yellow Rush Hoary Rush Australian Mudwort Hyssop Loosestrife Australian Hollyhock Common Nardoo Woolly-heads Common Reed Shiny Dock Bushy Groundsel</p>

# HATFIELD



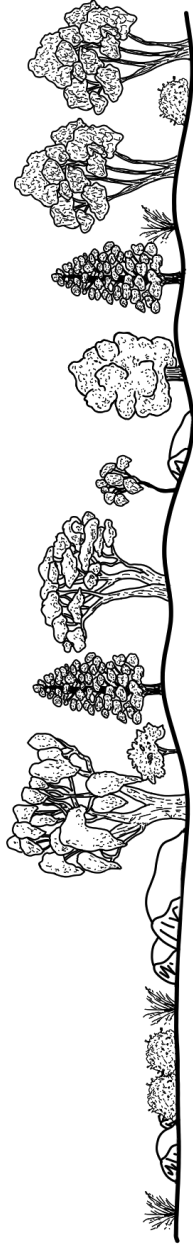
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Undulating Plains, Low Rises and Levees	Sandplains and Low Rises
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.	Belah – Rosewood Woodland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Oxley exclusion plot, Freshwater Rd, 16km north of Oxley (dieback affected).	Freshwater Rd north of Oxley, Clare – Oxley Rd.	Clare – Oxley Rd, Balranald – Ivanhoe Rd south of Hatfield.
TREES > 8 m	<i>Acacia homalophylla</i> Yarran	<i>Callitris glaucophylla</i> <sup>†</sup> <i>Haakea tephrosperma</i> White Cypress Pine Hooked Needlewood	<i>Callitris glaucophylla</i> <i>Casuarina paupe</i> <i>Geijera parviflora</i> <i>Myoporum platycarpum</i> White Cypress Pine Black Oak Wilga Sugarwood
SHRUBS & SMALL TREES 2 - 8 m	<i>Atriplex nummularia</i> <sup>†</sup> <i>Eremophila sturtii</i> Old Man Saltbush Turpentine	<i>Acacia melvillei</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <sup>†</sup> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> Myall Rosewood Old Man Saltbush Erubush	<i>Acacia colletioides</i> <i>A. melvillei</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>A. victoriae</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Chenopodium nitriaceum</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Exocarpos aphyllus</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egena</i> Spine Bush Myall Miljee Needle Wattle Prickly Wattle Rosewood Nitre Goosefoot Narrow leaf Hoppush Erubush Turpentine Leafless Cherry Butterbush Quandong Fine leaf Desert Cassia Phylloninus Desert Cassia Narrow leaf Desert Cassia Desert Broombush

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex lindleyi</i> A. stipitata A. vesicaria <i>Enchylaena tomentosa</i> <i>Frankenia connata</i><sup>6</sup> <i>Maireana decalvans</i> <i>M. pyramidata</i> <i>M. turbinata</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena tricuspsis</i> <i>Tecticornia tenuis</i><sup>6</sup></p>	<p>Eastern Flat-top Saltbush Bitter Saltbush Bladder Saltbush Ruby Saltbush Clustered Sea-health Black Cottonbush Black Bluebush Sainty Bluebush Soft-horns Thorny Saltbush Streaked Poverty-bush Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> A. leptocarpa A. lindleyi A. pseudocampanulata A. vesicaria <i>Enchylaena tomentosa</i> <i>Maireana sedifolia</i><sup>11</sup> <i>Maireana</i> spp. <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. intricata</i> <i>S. muricata</i> <i>S. tricuspsis</i> <i>Tecticornia tenuis</i></p>	<p>Baidoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Pearl Bluebush Bluebush Soft-horns Dillon Bush Water Weed Thorny Saltbush Pale Poverty-bush Tangled Poverty-bush Five spined Bassia Streaked Poverty-bush Slender Glasswort</p>	<p><i>Calocephalus sonderi</i> <i>Calotis cuneifolia</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i><sup>6</sup> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i><sup>4</sup> <i>Hyalosperma glutinosum</i> <i>Leiocarpa tomentosa</i> <i>Minuria cunninghamii</i> <i>Myriocephalus rhizocephalus</i> <i>Plantago drummondii</i> <i>Podolepis muelleri</i> <i>Pycnosorus chrysanthus</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio glossanthus</i> <i>Triptilodiscus pygmaeus</i> <i>Velleia paradoxax</i></p>	<p>Pale Beauty-heads Purple Burr-daisy Windmill Grass Australian Bindweed Round-leaf Pigface Cannon-ball Climbing Saltbush Canegrass Golden Sunray Woolly Plover daisy Bush Minuria Woolly-heads Dark Sago weed Small Copper wire Daisy Golden Billy-buttons Grey Sunray White-top Short-winged Copperburr Slender Groundsel Common Sunray Spur Velleia</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nitida</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Calandrinia eremaea</i> <i>Dysphania purpurea</i> <i>Crassula colorata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis dielsii</i> <i>Homopholis prolata</i> <i>Lachnogrostis filiformis</i> <i>Lepidium monolocoides</i> <i>Minuria cunninghamii</i> <i>Panicum decompositum</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>Solanum esuriate</i></p>	<p>Creeping Saltbush Balcarra Speargrass Rough Speargrass Small Purslane Pale Beauty-heads Small Crumbweed Dense Stonecrop Round-leaf Pigface Twin-horned Copperburr Climbing Saltbush Mulka Rigid Panic Blown Grass Winged Peppergrass Bush Minuria Native Millet Grey Sunray White-top Short-winged Copperburr Corrugated Sida Quena</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> A. eardleyae A. leptocarpa A. lindleyi A. vesicaria <i>Chenopodium curvispicatum</i> C. desertorum <i>Enchylaena tomentosa</i> <i>Eremophila glabra</i> <i>Lycium australe</i> <i>Maireana</i> spp. <i>Nitraria billardierei</i> <i>Olearia magniflora</i> O. <i>muelleri</i> <i>O. pimeloides</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Roepora eremaea</i> <i>Scleroblitum atriplicinum</i> <i>Sclerolaena diacantha</i> <i>S. divaricata</i> <i>S. obliquicuspis</i> <i>S. tricuspsis</i></p>	<p>Baidoo Small Saltbush Slender-fruited Saltbush Eastern Flat-top Saltbush Bladder Saltbush Cottony Saltbush Desert Goosefoot Ruby Saltbush Tar Bush Australian Boxthorn Bluebush Dillon Bush Splendid Daisy-bush Mueller Daisy-bush Water Weed Thorny Saltbush Climbing Twinleaf Purple Goosefoot Grey Copperburr Pale Poverty-bush Limestone Copperburr Streaked Poverty-bush</p>	<p><i>Actinobole uliginosum</i> <i>Atriplex semibaccata</i> <i>Austrostipa elegantissima</i> A. <i>nitida</i> A. <i>nodosa</i> <i>Brachycome lineariloba</i> <i>Calandrinia eremaea</i> <i>Calocephalus sonderi</i> <i>Calotis hispida</i> <i>Convolvulus erubescens</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Geococcus pusillus</i> <i>Goodenia pinnatifida</i> G. <i>pusilliflora</i> <i>Lachnogrostis filiformis</i> <i>Leucochrysum molle</i> <i>Maireana ciliata</i> <i>M. sclerolaenoides</i> <i>Malva preissiana</i> <i>Minuria cunninghamii</i> <i>Omphalappula concava</i> <i>Ptilotus spathulatus</i> <i>Rhodanthe corymbiflora</i> R. <i>floribunda</i> R. <i>polygallifolia</i> R. <i>stuartiana</i> <i>Roepora amimophila</i> R. <i>apiculata</i> R. <i>aurantiaca</i> subsp. <i>aurantiaca</i> R. <i>iodocarpa</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio glossanthus</i> <i>Sida corrugata</i> <i>Tetragonia tetragonoides</i> <i>Triptilodiscus pygmaeus</i> <i>Vittadima condyloides</i> <i>Xerochrysum bracteatum</i></p>	<p>Flannel Cudweed Creeping Saltbush Feather Speargrass Balcarra Speargrass Knobby Speargrass Hard head Daisy Small Purslane Pale Beauty-heads Bogan Flea Australian Bindweed Cannon-ball Climbing Saltbush Spider Grass Earth Grass Scrambled Eggs Small-flowered Goodenia Blown Grass Hoary Sunray Hoary Fissure weed Woolly fruit Copperburr Australian Hollyhock Bush Minuria Burr Stickseed Pussy tails Grey Sunray Common White Sunray Brilliant Sunray Clay Sunray Sand Twinleaf Gall Weed Shrubby Twinleaf Violet Twinleaf White-top Short-winged Copperburr Slender Groundsel New Zealand Spinach Common Sunray Club hair New Holland Daisy Golden Everlasting</p>
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# HATFIELD (SOUTHERN)



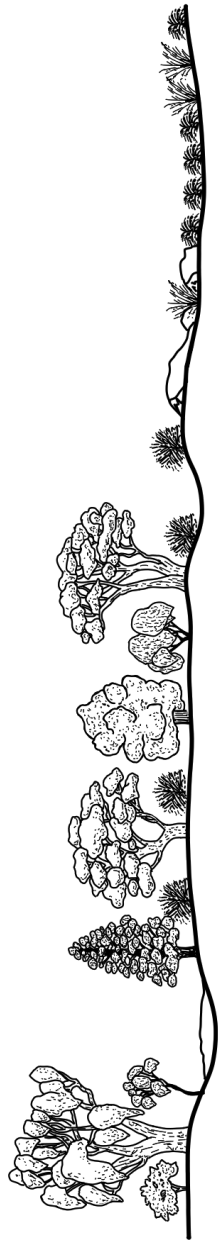
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Undulating Plains, Low Rises and Levees	Sandplains, Swales and Dune Crests
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.	Mallee Woodland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
LOCATION EXAMPLE	Oxley exclusion plot, Freshwater Rd, 16km north of Oxley (dieback affected).	Freshwater Rd north of Oxley, Clare – Oxley Rd.	Clare – Oxley Rd, Balranald – Ivanhoe Rd near Hatfield.
TREES > 8 m	<i>Acacia homalophylla</i> Yarran	<i>Callitris glaucophylla</i> <sup>†</sup> <i>Hakea tephrosperma</i> White Cypress Pine Hooked Needlewood	<i>Acacia homalophylla</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i> Yarran Hooked Needlewood Sugarwood
SHRUBS & SMALL TREES 2 - 8 m	<i>Atriplex nummularia</i> <sup>4</sup> <i>Eremophila sturtii</i> Old Man Saltbush Turpentine	<i>Acacia melvillei</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <sup>†</sup> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> Myall Rosewood Old Man Saltbush Erubush	<i>Acacia oswaldii</i> <i>A. victoriae</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> <i>Eucalyptus dumosa</i> <i>E. gracilis</i> <i>E. oleosa</i> <i>E. porosa</i> <i>E. socialis</i> <i>Melaleuca lanceolata</i> Miljee Prickly Wattle Old Man Saltbush Erubush Congo Mallee Yorrell Red Mallee Quorn Mallee Pointed Mallee Moonah

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex lindleyi</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Frankenia connata</i><sup>6</sup>  <i>Maireana decalvans</i>  <i>M. pyramidata</i>  <i>M. turbinata</i>  <i>Malacocera tricornis</i>  <i>Rhagodia spinescens</i>  <i>Scleroaena tricuspis</i>  <i>Tecticornia tenuis</i><sup>8</sup></p>	<p>Eastern Flat-top Saltbush  Bitter Saltbush  Bladder Saltbush  Ruby Saltbush  Clustered Sea-head  Black Cottonbush  Black Bluebush  Satiny Bluebush  Soft-horns  Thorny Saltbush  Streaked Poverty-bush  Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Maireana appressa</i>  <i>M. decalvans</i>  <i>M. pyramidata</i>  <i>M. sedifolia</i><sup>11</sup>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Osteocarpum acropterum</i> var. <i>deminutum</i>  <i>Rhagodia spinescens</i>  <i>Scleroaena divaricata</i>  <i>S. intricata</i>  <i>S. muricata</i>  <i>S. tricuspis</i>  <i>Tecticornia tenuis</i></p>	<p>Baldoo  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bladder Saltbush  Ruby Saltbush  Grey Bluebush  Black Cottonbush  Black Bluebush  Pearl Bluebush  Soft-horns  Dillon Bush  Water Weed  Thorny Saltbush  Pale Poverty-bush  Tangled Poverty-bush  Five spined Bassia  Streaked Poverty-bush  Slender Glasswort</p>	<p><i>Atriplex acutibracteata</i> subsp. <i>acutibracteata</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Chenopodium curvispicatum</i>  <i>Enchylaena tomentosa</i>  <i>Maireana brevifolia</i>  <i>M. erioclada</i>  <i>M. pentatropis</i>  <i>M. pyramidata</i>  <i>M. radiata</i>  <i>M. triptera</i>  <i>M. turbinata</i>  <i>Nitraria billardierei</i>  <i>Rhagodia spinescens</i>  <i>Roepora eremaea</i>  <i>Scleroaena diacantha</i>  <i>S. obliquicuspis</i>  <i>S. patentiscuspis</i>  <i>Westringia rigida</i></p>	<p>Pointed Saltbush  Bitter Saltbush  Bladder Saltbush  Cottony Saltbush  Ruby Saltbush  Yanga Bush  Rosy Bluebush  Erect Mallee Bluebush  Black Bluebush  Grey Bluebush  Three winged Bluebush  Sattiny Bluebush  Dillon Bush  Thorny Saltbush  Climbing Twinleaf  Grey Copperburr  Limestone Copperburr  Spear fruit Copperburr  Stiff Western Rosemary</p>
<p><b>GROUND COVERS</b></p>	<p><i>Calocephalus sonderi</i>  <i>Calotis cuneifolia</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i><sup>f</sup>  <i>Dissocarpus paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>4</sup>  <i>Hyaloperma glutinosum</i>  <i>Leiocarpa tomentosa</i>  <i>Minuria cunninghamii</i>  <i>Myriocephalus rhozocephalus</i>  <i>Plantago drummondii</i>  <i>Podolepis muelleri</i>  <i>Pycnosorus chrysanthus</i>  <i>Rhodanthe corymbiflora</i>  <i>Flyidosperma caespitosa</i>  <i>Scleroaena brachyptera</i>  <i>Senecio glossanthus</i>  <i>Triptilodiscus pygmaeus</i>  <i>Velleia paradoxa</i></p>	<p>Pale Beauty-heads  Purple Burr-daisy  Windmill Grass  Australian Bindweed  Round-leaf Pigface  Cannon-ball  Climbing Saltbush  Canegrass  Golden Sunray  Woolly Plover daisy  Bush Minuria  Woolly-heads  Dark Sago weed  Small Copper wire Daisy  Golden Billy-buttons  Grey Sunray  White-top  Short-winged Copperburr  Slender Groundsel  Common Sunray  Spur Velleia</p>	<p><i>Atriplex semibaccata</i>  <i>Austrostipa nitida</i>  <i>A. scabra</i> subsp. <i>falcata</i>  <i>Calaodrinia eremaea</i>  <i>Calocephalus sonderi</i>  <i>Crassula colorata</i>  <i>Dysphania pumilo</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis dielsii</i>  <i>Homopholis prolata</i>  <i>Lachnagrostis filiformis</i>  <i>Lepidium monoplocoides</i>  <i>Minuria cunninghamii</i>  <i>Panicum decompositum</i>  <i>Rhodanthe corymbiflora</i>  <i>Flyidosperma caespitosa</i>  <i>Scleroaena brachyptera</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i></p>	<p>Creeping Saltbush  Balcarra Speargrass  Rough Speargrass  Small Purslane  Pale Beauty-heads  Dense Stonecrop  Small Crumbweed  Round-leaf Pigface  Twin-horned Copperburr  Climbing Saltbush  Mulka  Rigid Panic  Blown Grass  Winged Peppergrass  Bush Minuria  Native Millet  Grey Sunray  White-top  Short-winged Copperburr  Corrugated Sida  Quena</p>	<p><i>Austrostipa nitida</i>  <i>A. nodosa</i>  <i>Calaodrinia eremaea</i>  <i>Calotis hispidula</i>  <i>Dissocarpus paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Elachanthus pusillus</i>  <i>Haloragis aspera</i>  <i>Maireana pentagona</i>  <i>M. scleroaenoides</i>  <i>Omphalolappula concava</i>  <i>Oxalis peremans</i>  <i>Rhodanthe stuartiana</i>  <i>Roepora amimophila</i>  <i>R. apiculata</i>  <i>R. aurantiaca</i> subsp. <i>aurantiaca</i>  <i>R. crenata</i>  <i>R. iodocarpa</i>  <i>R. simile</i>  <i>Senecio glossanthus</i>  <i>Tetragonia tetragonoides</i>  <i>Vittadinia cervicularis</i></p>	<p>Balcarra Speargrass  Knotty Speargrass  Small Purslane  Bogan Flea  Cannon-ball  Climbing Saltbush  Elachanth  Rough Raspwort  Slender Fissure-weed  Woolly fruit Copperburr  Burr Stickseed  Grassland Wood sorrel  Clay Sunray  Sand Twinleaf  Gall Weed  Shrubby Twinleaf  Lobed Twinleaf  Violet Twinleaf  White Twinleaf  Slender Groundsel  New Zealand Spinach  Annual New Holland Daisy</p>

# HILLSTON



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

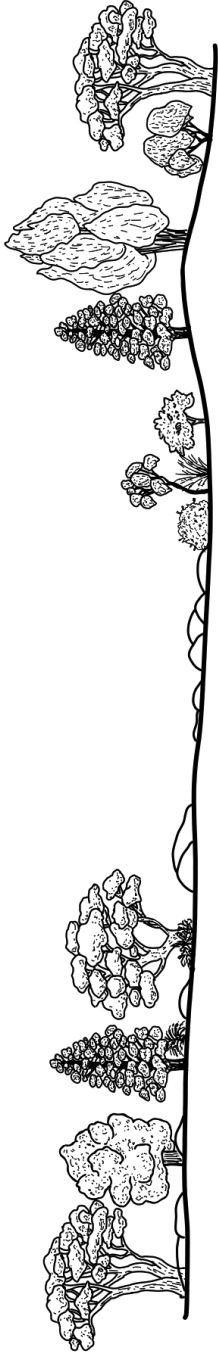
Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Shallow Depressions
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.
LOCATION EXAMPLE	Lachlan River at end of Cemetery Track, 7km east of Booligal, Moon Moon State Forest.	Willandra Creek in Willandra National Park, Box Creek crossing on Merungle Rd.	Cobb Highway at Moolbong Creek crossing, Mossgiel Trunk Rd at Umbrella Creek and Once-A-White Creek crossings.
TREES > 8 m	<i>Acacia stenophylla</i> <i>Eucalyptus camaldulensis</i> <i>E. largiflorens</i>	<i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitraiaceum</i> <i>Duma florulenta</i> <i>Eremophila longifolia</i> <i>Exocarpos sparteus</i> <i>Pittosporum phylliraeoides</i>	<i>Chenopodium nitraiaceum</i> <i>Duma florulenta</i> <i>Pittosporum phylliraeoides</i> <i>Templetonia egana</i>	<i>Atriplex nummularia</i> <i>Chenopodium nitraiaceum</i> <i>Duma florulenta</i>



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>Enchylaena tomentosa Rhagodia spinescens</p>	<p>Ruby Saltbush Thorny Saltbush</p>	<p><i>Atriplex eardleyae</i> <i>A. leptocarpa</i> <i>Chenopodium desertorum</i> <i>Rhagodia spinescens</i> <i>Scleroblitum atriplicinum</i> <i>Sclerolaena intricata</i></p>	<p>Small Saltbush Slender-fruited Saltbush Desert Goosefoot Thorny Saltbush Purple Goosefoot Tangled Poverty-bush</p>	<p><i>Abutilon halophilum</i> <i>Atriplex lindleyi</i> <i>Sclerolaena muricata</i> <i>S. tricuspis</i></p>	<p>Plains Lantern bush Eastern Flat-top Saltbush Five spined Bassia Streaked Poverty-bush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachyscome basaltica</i> var. <i>gracilis</i> <i>Calostemma purpureum</i> <i>Carex appressa</i> <i>Centipeda cunninghamii</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>s</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Lachnagrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Mentha australis</i> <i>Myriophyllum papillosum</i><sup>s</sup> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>s</sup> <i>Poa tordeana</i> <i>Rytidosperma caespitosa</i> <i>R. duttoniana</i> <i>Solanum esuriale</i> <i>Teucrium racemosum</i> <i>Vallisneria australis</i><sup>s</sup></p>	<p>Lesser Joyweed Veined Swamp Walaby-grass Creeping Saltbush Red Azolla Swamp Daisy Wilcannia Lily Tall Sedge Common Sneezeweed Darling Lily Water-ribbons Climbing Saltbush Blown Grass Poison Pratia Common Nardoo River Mint Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass White-top Brown back Wallaby Grass Quena Grey Germander Eel-weed</p>	<p><i>Atriplex semibaccata</i> <i>Calotis scapigera</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i> <i>E. parviflora</i> <i>Erodium crinitum</i> <i>Halragis aspera</i> <i>H. heterophylla</i> <i>Lachnagrostis filiformis</i> <i>Limosella australis</i> <i>Malva preissiana</i> <i>Mentha australis</i> <i>Mimulus prostratus</i> <i>Paspalidium jubiflorum</i> <i>Poa tordeana</i> <i>Ranunculus pumilio</i> <i>Senecio glossanthus</i> <i>S. gregorii</i></p>	<p>Creeping Saltbush Tufted Burr-daisy Australian Bindweed Climbing Saltbush Canegrass Weeping Lovegrass Blue Crowfoot Rough Raspwort Variable Raspwort Blown Grass Australian Mudwort Australian Hollyhock River Mint Small Monkey flower Warrego Summer-grass Sweet Swamp grass Ferry Buttercup Slender Groundsel Fleshy Groundsel</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Austrofitia scabra</i> subsp. <i>falcata</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Juncus flavidus</i> <i>Lachnagrostis filiformis</i> <i>Limosella australis</i> <i>Lythrum hyssopifolia</i> <i>Malva preissiana</i> <i>Marsilea drummondii</i> <i>Rumex crystallinus</i> <i>Rytidosperma caespitosa</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i></p>	<p>Dwarf Amaranth Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Yellow Rush Blown Grass Australian Mudwort Hyssop Loosestrife Australian Hollyhock Common Nardoo Shiny Dook White-top Bushy Groundsel Cumbungi Cumbungi</p>

# HILLSTON



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Level to Depressed Plains	Lunettes and Sand Ridges
VEGETATION TYPE	Boree Woodland.	Bladder Saltbush Chenopod Shrubland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low woodland to woodland of prior streams, source Pine and shrubs scattered over a grassy understorey. Aeolian: well drained sandy-loams and loams.
LOCATION EXAMPLE	No intact examples in sub-region, Crowsnest Rd east of McKinley Road, McKinley Rd approximately 3km south of Lachlan Valley Way.	Cobb Highway in vicinity of Toms Tank, Willandra National Park.	No intact examples remain, The Lea west of Hillston on Mossiel Trunk Rd.
TREES > 8 m	<i>Callitris glaucophylla</i> White Cypress Pine	nil	<i>Allocasuarina luehmarii</i> <i>Brachychiton populineus</i> subsp. <i>trilobus</i> <i>Callitris glaucophylla</i> <i>Casuarina cristata</i> <i>Eucalyptus intertexta</i> <i>E. populnea</i> subsp. <i>bimbi</i> <i>Geijera parviflora</i> <i>Haakea tephrosperma</i> Bull Oak Kurrajong White Cypress Pine Belah Red Box Bimble Box Wilga Hooked Needlewood
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia pendula</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Eremophila longifolia</i> <i>Templetonia egena</i> Boree Rosewood Emubush Desert Broombush	<i>Acacia oswaldii</i> <i>Atriplex nummularia</i> <sup>†</sup> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Senna artemisioides</i> subsp. <i>coriacea</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> Miljee Old Man Saltbush Emubush Turpentine Broad leaf Desert Cassia Phyllodinous Desert Cassia	<i>Acacia deanei</i> subsp. <i>paucijuga</i> <i>A. hakeoides</i> <i>A. melvillei</i> <i>A. victoriae</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Senna artemisioides</i> subsp. <i>zygophylla</i> Green Wattle Western Black Wattle Mvall Prickly Wattle Rosewood Narrow leaf Hoppbush Emubush Narrow leaf Desert Cassia

<p><b>SMALL SHRUBS &lt; 2 m</b></p>			
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Lycium australe</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Australian Boxthorn Black Cottonbush Thorny Saltbush</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. spinibractea</i> <i>A. spongiosa</i> <i>A. stipitata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Frankenia serpyllifolia</i> <i>Maireana aphylla</i> <i>M. erioclada</i> <i>M. pyramidata</i> <i>Malacocera tricornis</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Scleroblitum atriplicinum</i> <i>Sclerolaena intricata</i> <i>S. lanicuspis</i> <i>S. muricata</i> <i>S. tricuspis</i></p> <p>Baldoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Spiny-fruit Saltbush Pop Saltbush Bitter Saltbush Bladder Saltbush Ruby Saltbush Bristly Sea heath Cottonbush Rosy Bluebush Black Bluebush Soft-horns Water Weed Thorny Saltbush Purple Goosefoot Tangled Poverty-bush Woolly Copperburr Five spined Bassia Streaked Poverty-bush</p>	<p><i>Atriplex eardleyae</i> <i>Enchylaena tomentosa</i> <i>Maireana decalvans</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i> <i>S. tricuspis</i></p> <p>Small Saltbush Ruby Saltbush Black Cottonbush Soft-horns Thorny Saltbush Five spined Bassia Star Copperburr Streaked Poverty-bush</p>
<p><i>Calceophalus citreus</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Erodium crinitum</i> <i>Gnephosis arachnoidea</i> <i>Goodenia pusilliflora</i> <i>Hyalosperma glutinosum</i> <i>H. semisterile</i> <i>Leiocarpa panaeitioides</i> <i>Maireana excavata</i> <i>M. lobiflora</i> <i>Minuria leptophylla</i> <i>Ptilotus erubescens</i> <i>P. exaltatus</i> var. <i>exaltatus</i> <i>Rhodanthe floribunda</i> <i>R. pygmaea</i> <i>Ryidosperma caespitosa</i> <i>Swainsona murrayana</i> <i>Tetragonia tetragonioides</i></p> <p>Lemon Beauty-heads Windmill Grass Australian Bindweed Climbing Saltbush Blue Crowfoot Erect Yellow-heads Small-flowered Goodenia Golden Sunray Orange Sunray Woolly Buttons Bottle Fissure weed Lobed Bluebush Minnie Daisy Hairy tails Showy Foxtail Common White Sunray Pygmy Sunray White-top Slender Darling Pea New Zealand Spinach</p>	<p><i>Amaranthus macrocarpus</i> <i>Astrelia pectinata</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Brachycome lineariloba</i> <i>Cabocephalus sonderi</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Daucus glochidialis</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>D. paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i><sup>4</sup> <i>E. brownii</i> <i>Leiocarpa tomentosa</i> <i>L. panaeitioides</i> <i>Maireana pentagona</i> <i>Minuria cunninghamii</i> <i>M. denticulata</i> <i>M. integririma</i> <i>Plantago cunninghamii</i> <i>Ptilotus nobilis</i> <i>Pycnosorus chrysanthes</i> <i>Rhodanthe corymbiflora</i> <i>R. floribunda</i> <i>Roopera glauca</i> <i>R. iodocarpa</i> <i>Ryidosperma caespitosa</i> <i>Sida trichopoda</i> <i>Sporobolus caroli</i> <i>Tetragonia tetragonioides</i> <i>Xerochrysum bracteatum</i></p> <p>Dwarf Amaranth Barley Mitchell Grass Creeping Saltbush Lagoon Saltbush Hard head Daisy Pale Beauty-heads Windmill Grass Australian Bindweed Australian Carrot Round-leaf Pigface Twin-horned Copperburr Cannon-ball Climbing Saltbush Canegrass Browns Lovagrass Woolly Plover daisy Woolly Buttons Slender Fissure-weed Bush Minuria Woolly Minuria Smooth Minuria Sago weed Regal Foxtail Golden Billy-buttons Grey Sunray Common White Sunray Pale Twinleaf Violet Twinleaf White-top High Sida Fairy Grass New Zealand Spinach Golden Everlasting</p>	<p><i>Anthrosachne scaber</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>A. scabra</i> subsp. <i>scabra</i> <i>Chrysocephalum semipapposum</i> <i>Convolvulus erubescens</i> <i>Dianella revoluta</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Lachnagrostis filiformis</i> <i>Lomandra multiflora</i> <i>Minuria integririma</i> <i>Oxalis peremans</i> <i>Ptilotus spathulatus</i> <i>Rhodanthe polygalifolia</i> <i>Ryidosperma caespitosa</i> <i>R. setaceum</i> <i>Sclerolaena brachyptera</i> <i>Sida intricata</i> <i>S. trichopoda</i> <i>Solanum esuriale</i> <i>Thyridolepis mitchelliana</i> <i>Wahlenbergia gracilenta</i> <i>Xerochrysum bracteatum</i></p> <p>Common Wheatgrass Creeping Saltbush Rough Speargrass Speargrass Clustered Everlasting Australian Bindweed Spreading Flax-lily Climbing Saltbush Blown Grass Many-flowered Mat-rush Smooth Minuria Grassland Wood sorrel Pussy tails Brilliant Sunray White-top Smallflower Wallaby Grass Short-winged Copperburr Twiggy Sida High Sida Quena Mulga Grass Annual Bluebell Golden Everlasting</p>	

# HILLSTON (NORTH-WESTERN)



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LANDFORM	Level to Depressed Plains	Undulating Plains, Low Rises and Levees	Sandplains and Low Rises
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.	Belah – Rosewood Woodland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Cobb Highway in vicinity of Toms Tank, Willandra National Park.	Cobb Highway south of Mossgiel.	Crowsnest Travelling Stock Reserve, Mossgiel Trunk Rd east of Mossgiel.
TREES > 8 m	nil	<p><i>Callitris glaucophylla</i><sup>8</sup></p> <p><i>Hakea tephrosperma</i></p> <p>White Cypress Pine</p> <p>Hooked Needlewood</p>	<p><i>Callitris glaucophylla</i></p> <p><i>Casuarina pauper</i></p> <p><i>Geijera parviflora</i></p> <p>White Cypress Pine</p> <p>Black Oak</p> <p>Willga</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i></p> <p><i>Atriplex nummularia</i><sup>4</sup></p> <p><i>Eremophila longifolia</i></p> <p><i>E. sturtii</i></p> <p><i>Senna artemisioides</i> subsp. <i>coriacea</i></p> <p><i>S. artemisioides</i> subsp. <i>petiolaris</i></p>	<p><i>Acacia melvillei</i></p> <p><i>Alectryon oleifolius</i> subsp. <i>canescens</i><sup>8</sup></p> <p><i>Atriplex nummularia</i></p> <p><i>Eremophila longifolia</i></p> <p>Miyall</p> <p>Rosewood</p> <p>Old Man Saltbush</p> <p>Emubush</p>	<p><i>Acacia oswaldii</i></p> <p><i>A. pendula</i></p> <p><i>Alectryon oleifolius</i> subsp. <i>canescens</i></p> <p><i>Apophyllum anomallum</i></p> <p><i>Dodonaea viscosa</i> subsp. <i>angustissima</i></p> <p><i>Eremophila longifolia</i></p> <p>Miljee</p> <p>Boree</p> <p>Rosewood</p> <p>Warrior Bush</p> <p>Narrow leaf Hoppbush</p> <p>Emubush</p>

**SMALL  
SHRUBS  
< 2 m**

	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. spinibractea</i>  <i>A. spongiosa</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Frankenia serpyllifolia</i>  <i>Maireana aplylla</i>  <i>M. erioclada</i>  <i>M. pyramidata</i>  <i>Malacocera tricornis</i>  <i>Osteocarpum acropterum</i> var. <i>deminutum</i>  <i>Rhagodia spinescens</i>  <i>Sclerobolium atriplicinum</i>  <i>S. intricata</i>  <i>S. lanicuspis</i>  <i>S. muricata</i>  <i>S. tricuspis</i></p>	<p>Baldoo  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Spiny-fruit Saltbush  Pop Saltbush  Bladder Saltbush  Ruby Saltbush  Bristly Sea heath  Cottonbush  Fosy Bluebush  Black Bluebush  Soft-horns  Water Weed  Thorny Saltbush  Purple Goosefoot  Tangled Poverty-bush  Woolly Copperburr  Five spined Bassia  Streaked Poverty-bush</p>	<p><i>Atriplex eardleyae</i>  <i>A. leptocarpa</i>  <i>A. stipitata</i>  <i>Chenopodium desertorum</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena birchii</i>  <i>S. diacantha</i>  <i>S. muricata</i>  <i>S. stelligera</i></p>		<p><i>Atriplex semibaccata</i>  <i>A. suberecta</i>  <i>Brachyscome lineariloba</i>  <i>Calceophthalmus sonderi</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Daucus glochidiatus</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Disphyma biflorum</i> var. <i>biflorum</i>  <i>D. paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>4</sup>  <i>E. brownii</i>  <i>Leiocarpa tomentosa</i>  <i>L. panaetioides</i>  <i>Maireana pentagona</i>  <i>Minuria cunninghamii</i>  <i>M. denticulata</i>  <i>M. integerrima</i>  <i>Plantago cunninghamii</i>  <i>Ptilotus nobilis</i>  <i>Pycnosorus chrysanthos</i>  <i>Rhodanthe corymbiflora</i>  <i>R. floribunda</i>  <i>Roepera glauca</i>  <i>R. iodocarpa</i>  <i>Rydidosperma caespitosa</i>  <i>Sida trichopoda</i>  <i>Sporobolus caroli</i>  <i>Tetragonia tetragonioides</i>  <i>Xerochysum bracteatum</i></p>	<p><i>Atriplex semibaccata</i>  <i>A. scabrata</i> subsp. <i>falcata</i>  <i>Calandrinia eremaea</i>  <i>Calceophthalmus sonderi</i>  <i>Crassula colorata</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Dysphania pumilio</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis dielsii</i>  <i>Homopholis prolata</i>  <i>Lachnagrostis filiformis</i>  <i>Lepidium monoplocooides</i>  <i>Minuria cunninghamii</i>  <i>Panicum decompositum</i>  <i>Rhodanthe corymbiflora</i>  <i>Rydidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i></p>	<p><i>Arthropodium minus</i>  <i>Atriplex semibaccata</i>  <i>Brachyscome lineariloba</i>  <i>Bulbine bulbosa</i>  <i>B. semibarbata</i>  <i>Calandrinia eremaea</i>  <i>Calotis hispida</i>  <i>C. lappulaeae</i>  <i>Convolvulus erubescens</i>  <i>Daucus glochidiatus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Erodium cernitum</i>  <i>Gnephosis arachnoidea</i>  <i>Goodenia fascicularis</i>  <i>G. pusilliflora</i>  <i>Hyalosperma glutinosum</i>  <i>H. semisterile</i>  <i>Leiocarpa panaetioides</i>  <i>Maireana enchylaenoides</i>  <i>M. excavata</i>  <i>M. pentagona</i>  <i>Minuria leptophylla</i>  <i>Plantago cunninghamii</i>  <i>Rhodanthe corymbiflora</i>  <i>R. floribunda</i>  <i>R. pygmaea</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>Tetragonia tetragonioides</i>  <i>Triplidiscus pygmaeus</i>  <i>Vittadina cuneata</i>  <i>Wahlenbergia gracilis</i>  <i>W. stricta</i></p>
	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Maireana appressa</i>  <i>M. decalvans</i>  <i>M. pyramidata</i>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Osteocarpum acropterum</i> var. <i>deminutum</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena divaricata</i>  <i>S. intricata</i>  <i>S. muricata</i>  <i>S. tricuspis</i>  <i>Tecticornia tenuis</i></p>	<p>Baldoo  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Bitter Saltbush  Bladder Saltbush  Ruby Saltbush  Grey Bluebush  Black Cottonbush  Black Bluebush  Soft-horns  Dillon Bush  Water Weed  Thorny Saltbush  Pale Poverty-bush  Tangled Poverty-bush  Five spined Bassia  Streaked Poverty-bush  Slender Glasswort</p>	<p><i>Atriplex eardleyae</i>  <i>A. leptocarpa</i>  <i>A. stipitata</i>  <i>Chenopodium desertorum</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena birchii</i>  <i>S. diacantha</i>  <i>S. muricata</i>  <i>S. stelligera</i></p>		<p><i>Amaranthus macrocarpus</i>  <i>Astrelia pectinata</i>  <i>Atriplex semibaccata</i>  <i>A. suberecta</i>  <i>Brachyscome lineariloba</i>  <i>Calceophthalmus sonderi</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Daucus glochidiatus</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Disphyma biflorum</i> var. <i>biflorum</i>  <i>D. paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>4</sup>  <i>E. brownii</i>  <i>Leiocarpa tomentosa</i>  <i>L. panaetioides</i>  <i>Maireana pentagona</i>  <i>Minuria cunninghamii</i>  <i>M. denticulata</i>  <i>M. integerrima</i>  <i>Plantago cunninghamii</i>  <i>Ptilotus nobilis</i>  <i>Pycnosorus chrysanthos</i>  <i>Rhodanthe corymbiflora</i>  <i>R. floribunda</i>  <i>Roepera glauca</i>  <i>R. iodocarpa</i>  <i>Rydidosperma caespitosa</i>  <i>Sida trichopoda</i>  <i>Sporobolus caroli</i>  <i>Tetragonia tetragonioides</i>  <i>Xerochysum bracteatum</i></p>	<p><i>Atriplex semibaccata</i>  <i>A. scabrata</i> subsp. <i>falcata</i>  <i>Calandrinia eremaea</i>  <i>Calceophthalmus sonderi</i>  <i>Crassula colorata</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Dysphania pumilio</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis dielsii</i>  <i>Homopholis prolata</i>  <i>Lachnagrostis filiformis</i>  <i>Lepidium monoplocooides</i>  <i>Minuria cunninghamii</i>  <i>Panicum decompositum</i>  <i>Rhodanthe corymbiflora</i>  <i>Rydidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i></p>	<p>Creeping Saltbush  Balcarra Speargrass  Rough Speargrass  Small Purslane  Pale Beauty-heads  Dense Stonecrop  Round-leaf Pigface  Twin-horned Copperburr  Small Crumbweed  Climbing Saltbush  Mulka  Rigid Panic  Blown Grass  Winged Peppergrass  Bush Minuria  Native Millet  Grey Sunray  White-top  Short-winged Copperburr  Corrugated Sida  Quena</p>
	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. pseudocampanulata</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Enchylaena tomentosa</i>  <i>Maireana appressa</i>  <i>M. decalvans</i>  <i>M. pyramidata</i>  <i>Malacocera tricornis</i>  <i>Nitraria billardierei</i>  <i>Osteocarpum acropterum</i> var. <i>deminutum</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena divaricata</i>  <i>S. intricata</i>  <i>S. muricata</i>  <i>S. tricuspis</i>  <i>Tecticornia tenuis</i></p>	<p>Baldoo  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Mealy Saltbush  Spiny-fruit Saltbush  Pop Saltbush  Bladder Saltbush  Ruby Saltbush  Bristly Sea heath  Cottonbush  Fosy Bluebush  Black Bluebush  Soft-horns  Water Weed  Thorny Saltbush  Purple Goosefoot  Tangled Poverty-bush  Woolly Copperburr  Five spined Bassia  Streaked Poverty-bush</p>	<p><i>Atriplex eardleyae</i>  <i>A. leptocarpa</i>  <i>A. stipitata</i>  <i>Chenopodium desertorum</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena birchii</i>  <i>S. diacantha</i>  <i>S. muricata</i>  <i>S. stelligera</i></p>		<p><i>Amaranthus macrocarpus</i>  <i>Astrelia pectinata</i>  <i>Atriplex semibaccata</i>  <i>A. suberecta</i>  <i>Brachyscome lineariloba</i>  <i>Calceophthalmus sonderi</i>  <i>Chloris truncata</i>  <i>Convolvulus erubescens</i>  <i>Daucus glochidiatus</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Disphyma biflorum</i> var. <i>biflorum</i>  <i>D. paradoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australasica</i><sup>4</sup>  <i>E. brownii</i>  <i>Leiocarpa tomentosa</i>  <i>L. panaetioides</i>  <i>Maireana pentagona</i>  <i>Minuria cunninghamii</i>  <i>M. denticulata</i>  <i>M. integerrima</i>  <i>Plantago cunninghamii</i>  <i>Ptilotus nobilis</i>  <i>Pycnosorus chrysanthos</i>  <i>Rhodanthe corymbiflora</i>  <i>R. floribunda</i>  <i>Roepera glauca</i>  <i>R. iodocarpa</i>  <i>Rydidosperma caespitosa</i>  <i>Sida trichopoda</i>  <i>Sporobolus caroli</i>  <i>Tetragonia tetragonioides</i>  <i>Xerochysum bracteatum</i></p>	<p><i>Atriplex semibaccata</i>  <i>A. scabrata</i> subsp. <i>falcata</i>  <i>Calandrinia eremaea</i>  <i>Calceophthalmus sonderi</i>  <i>Crassula colorata</i>  <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>  <i>Dissocarpus biflorus</i> var. <i>biflorus</i>  <i>Dysphania pumilio</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis dielsii</i>  <i>Homopholis prolata</i>  <i>Lachnagrostis filiformis</i>  <i>Lepidium monoplocooides</i>  <i>Minuria cunninghamii</i>  <i>Panicum decompositum</i>  <i>Rhodanthe corymbiflora</i>  <i>Rydidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Sida corrugata</i>  <i>Solanum esuriale</i></p>	<p>Creeping Saltbush  Balcarra Speargrass  Rough Speargrass  Small Purslane  Pale Beauty-heads  Dense Stonecrop  Round-leaf Pigface  Twin-horned Copperburr  Small Crumbweed  Climbing Saltbush  Mulka  Rigid Panic  Blown Grass  Winged Peppergrass  Bush Minuria  Native Millet  Grey Sunray  White-top  Short-winged Copperburr  Corrugated Sida  Quena</p>

**GROUND  
COVERS**

For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

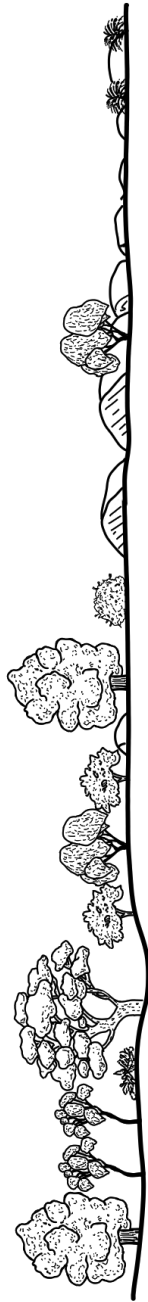
# LOWBIDGEE



LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Shallow Depressions
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.
LOCATION EXAMPLE	Redbank Weir.	McFarlands State Forest, Quandong State Forest, Goonawarra Nature Reserve, Yanga Nature Reserve.	Murrumbidgee River floodplain, Maude Rd south of Maude, Warwaegae Rd, Cobb Highway at One Tree.
TREES > 8 m	<i>Acacia stenophylla</i> <i>Casuarina cunninghamiana</i> <sup>2</sup> <i>Eucalyptus camaldulensis</i> <i>E. largiflorens</i>	<i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia salicina</i> <i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i>	<i>Acacia salicina</i> <i>A. victoriae</i> <i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i>	<i>Atriplex nummularia</i> <i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i>  Old Man Saltbush Nitre Goosefoot Lignum

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Rhagodia spinescens</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Black Bluebush Thorny Saltbush</p>	<p><i>Abutilon halophilum</i> <i>Atriplex lindleyi</i> <i>Sclerolaena muricata</i> <i>Sclerolaena tricuspsis</i></p>	<p>Plains Lantern bush Eastern Flat-top Saltbush Five spined Bassia Streaked Poverty-bush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachycome basalica</i> var. <i>gracilis</i> <i>Calostemma purpureum</i> <i>Carex appressa</i> <i>C. inversa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>5</sup> <i>Glinus toloides</i> <i>Juncus aridicola</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Oxalis perennans</i> <i>Paspalum jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Poa tordeana</i> <i>Sida trichopoda</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>5</sup></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Calandrinia eremaea</i> <i>Centipeda cunninghamii</i> <i>Crassula colorata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Haloragis aspera</i> <i>Lobelia concolor</i> <i>Mimulus gracilis</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonioides</i> <i>Vittadina cervicalaris</i></p>	<p>Lesser Joyweed Creeping Saltbush Small Purslane Common Sneezeweed Dense Stonecrop Climbing Saltbush Rough Raspwort Poison Pratia Slender Monkey flower Quena New Zealand Spinach Annual New Holland Daisy</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Juncus flavidus</i> <i>Lachnogrostis filiformis</i> <i>Malva preissiana</i> <i>Limosella australis</i> <i>Lythrum hyssopifolia</i> <i>Marsilea drummondii</i> <i>Ryidosperma caespitosa</i> <i>Rumex crystallinus</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i></p>	<p>Dwarf Amaranth Creeping Saltbush Lagoon Saltbush Rough Speargrass Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Yellow Rush Blown Grass Australian Hollyhock Australian Mudwort Hyssop Loosestrife Common Nardoo White-top Shiny Dock Bushy Groundsel Cumbungi Cumbungi</p>

## LOWBIDGEE

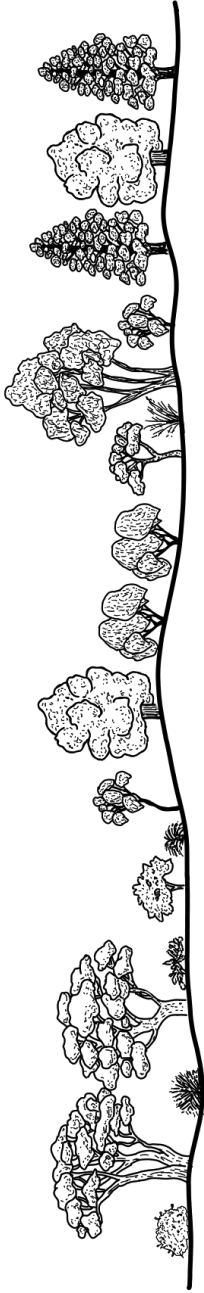


LANDFORM	Creeklines and Secondary Floodplains	Undulating Plains, Low Rises and Levees	Level to Depressed Plains
<b>VEGETATION TYPE</b>	Black Box Woodland.	Black / Pearl Bluebush Chenopod Shrubland.	Bladder Saltbush Chenopod Shrubland.
<b>GEOLOGY &amp; SOILS</b>	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
<b>LOCATION EXAMPLE</b>	McFarlands State Forest, Queensland State Forest, Goonawarra Nature Reserve, Yanga Nature Reserve.	Jim Barron exclusion plot on the Oxley Rd, Jeraly Hill on the Sturt Highway west of Hay, Maude Rd approx. 5 km east of Maude.	Corrong Rd, Nullagong Rd, northern part of Craigielea Rd, western part of Theelangerin Rd.
<b>TREES &gt; 8 m</b>	<i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i>	<i>Callitris glaucophylla</i> <i>Hakea tephrosperma</i>	<i>Acacia homalophylla</i>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<i>Acacia salicina</i> <i>A. victoriae</i> <i>Chenopodium nitriariaceum</i> <i>Duma florulenta</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i>	<i>Acacia melvillei</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <sup>†</sup> <i>Eremophila longifolia</i>	<i>Atriplex nummularia</i> <sup>†</sup> <i>Eremophila sturtii</i>
	Cooba Prickly Wattle Nitre Goosefoot Lignum Moonah Butterbush	Myall Rosewood Old Man Saltbush Emubush	Old Man Saltbush Turpentine
	River Cooba Black Box	White Cypress Pine Hooked Needlewood	Yarran



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Rhagodia spinescens</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Black Bluebush Thorny Saltbush</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana appressa</i> <i>M. decalvans</i> <i>M. pyramidata</i> <i>M. turbinata</i> <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. intricata</i> <i>S. muricata</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i><sup>6</sup></p> <p>Baldoo Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Grey Bluebush Black Cottonbush Black Bluebush Pearl Bluebush Soft-horns Dillon Bush Thorny Saltbush Pale Poverty-bush Tangled Poverty-bush Five spined Bassia Streaked Poverty-bush Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> <i>A. stipitata</i> <i>A. vesicaria</i> <i>Chenopodium curvispicatum</i> <i>Enchylaena tomentosa</i> <i>Frankenia connata</i><sup>6</sup> <i>Maireana decalvans</i> <i>M. pyramidata</i> <i>M. turbinata</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena stelligera</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i><sup>6</sup></p> <p>Eastern Flat-top Saltbush Bitter Saltbush Bladder Saltbush Cottony Saltbush Ruby Saltbush Clustered Sea-heath Black Cottonbush Black Bluebush Satiny Bluebush Soft-horns Thorny Saltbush Star Copperburr Streaked Poverty-bush Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Calandrinia eremaea</i> <i>Centipeda cunninghamii</i> <i>Crassula colorata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Haloragis aspera</i> <i>Lobelia concolor</i> <i>Mimulus gracilis</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonioides</i> <i>Vittadinia cervicularis</i></p> <p>Lesser Joyweed Creeping Saltbush Small Purslane Common Sneezeweed Dense Stonecrop Climbing Saltbush Rough Raspwort Poison Pratia Slender Monkey flower Quena New Zealand Spinach Annual New Holland Daisy</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nitida</i> <i>A. scabra</i> ssp. <i>falcata</i> <i>Calandrinia eremaea</i> <i>Crassula colorata</i> <i>Disphyma crassifolium</i><sup>6</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis dielsii</i> <i>Homopholis prolata</i> <i>Lachnagrostis filiformis</i> <i>Minuria cunninghamii</i> <i>Panicum decompositum</i> <i>Rhodanthe corymbiflora</i> <i>Flyidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>Solanum esuriale</i></p> <p>Creeping Saltbush Balcarra Speargrass Rough Speargrass Small Purslane Dense Stonecrop Round-leaf Pigface Climbing Saltbush Mulka Rigid Panic Blown Grass Bush Minuria Native Millet Grey Sunray White-top Short-winged Copperburr Corrugated Sida Quena</p>	<p><i>Calcephalus sonderi</i> <i>Calotis cuneifolia</i> <i>Chloris truncata</i> <i>Convolvulus erubescens</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i><sup>6</sup> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i><sup>6</sup> <i>Hyalosperma glutinosum</i> <i>Juncus radula</i> <i>Leiocarpa tomentosa</i> <i>Minuria cunninghamii</i> <i>Plantago drummondii</i> <i>Pycnosorus chrysanthes</i> <i>Rhodanthe corymbiflora</i> <i>Flyidosperma caespitosa</i> <i>Senecio gossanthus</i> <i>Sida trichopoda</i> <i>Sporobolus caroli</i> <i>Triptilodiscus pygmaeus</i> <i>Velleia paradoxa</i></p> <p>Pale Beauty-heads Purple Burr-daisy Windmill Grass Australian Bindweed Round-leaf Pigface Cannon-ball Climbing Saltbush Canegrass Golden Sunray Hoary Rush Woolly Plover daisy Bush Minuria Dark Sago weed Golden Billy-buttons Grey Sunray White-top Slender Groundsel High Sida Fairy Grass Common Sunray Spur Velleia</p>

# LOWBIDGEE (WESTERN)



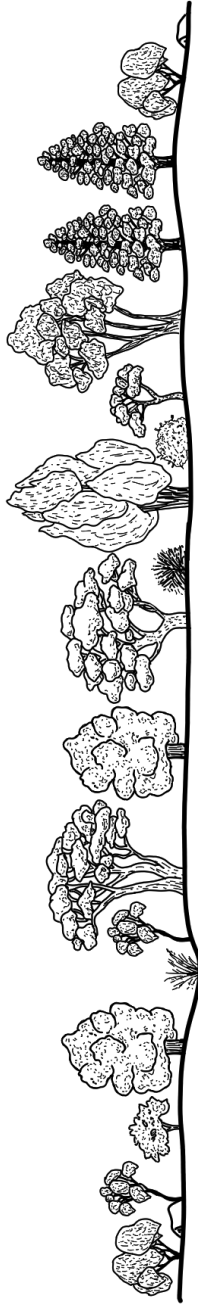
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Sandplains and Low Rises	Sandplains, Swales and Dune Crests
VEGETATION TYPE	Black Box Woodland.	Belah – Rosewood Woodland.	Mallee Woodland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
LOCATION EXAMPLE	McFarlands State Forest, Quandong State Forest, Goonawarra Nature Reserve, Yanga Nature Reserve.	Formerly a small area east of Kieeta Creek near Bairanald, nearest example is on the Sturt Highway west of The Willows.	Hatfield Rd approx 10km north of Bairanald to Penarie.
TREES > 8 m	<p><i>Acacia stenophylla</i> <i>Eucalyptus largiflorens</i></p> <p>River Cooba Black Box</p>	<p><i>Callitris glaucophylla</i> <i>Casuarina pauper</i> <i>Geijera parviflora</i> <i>Myoporum platycarpum</i></p> <p>White Cypress Pine Black Oak Wilga Sugarwood</p>	<p><i>Acacia homalophylla</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i></p> <p>Yarran Hooked Needlewood Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i> <i>A. victoriae</i> <i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i></p> <p>Cooba Prickly Wattle Nitre Goosefoot Lignum Moonah Butterbush</p>	<p><i>Acacia colletioides</i> <i>A. melvillei</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Chenopodium nitirariaceum</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Exocarpos aphyllus</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egrena</i></p> <p>Spine Bush Myall Miljee Needle Wattle Rosewood Nitre Goosefoot Narrow leaf Hoppbush Erubush Turpentine Leafless Cherry Butterbush Quandong Fine leaf Desert Cassia Phyllodinous Desert Cassia Narrow leaf Desert Cassia Desert Broombush</p>	<p><i>Acacia oswaldii</i> <i>A. victoriae</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> <i>Eucalyptus dumosa</i> <i>E. gracilis</i> <i>E. oleosa</i> <i>E. porosa</i> <i>E. socialis</i> <i>Melaleuca lanceolata</i></p> <p>Miljee Prickly Wattle Old Man Saltbush Erubush Congo Mallee Yorrell Red Mallee Quorn Mallee Pointed Mallee Moonah</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Maireana pyramidata</i> <i>Rhagodia spinescens</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Black Bluebush Thorny Saltbush</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. eardleyae</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. vesicaria</i> <i>Chenopodium curvispicatum</i> <i>C. desertorum</i> <i>Enchylaena tomentosa</i> <i>Eremophila glabra</i> <i>Lycium australe</i> <i>Maireana</i> spp. <i>Nitraria billardierei</i> <i>Olearia magniflora</i> <i>O. muelleri</i> <i>O. pimeleoides</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Roepora eremaea</i> <i>Scleroblitum atriplicinum</i> <i>S. diacantha</i> <i>S. divaricata</i> <i>Sclerolaena obliquicuspis</i> <i>S. tricuspsis</i></p> <p>Baldoo Small Saltbush Slender-fruited Saltbush Eastern Flat-top Saltbush Bladder Saltbush Cottony Saltbush Desert Goosefoot Ruby Saltbush Tar Bush Australian Boxthorn Bluebush Dillon Bush Splendid Daisy-bush Mueller Daisy-bush Showy Daisy-bush Water Weed Thorny Saltbush Climbing Twinleaf Purple Goosefoot Grey Copperburr Pale Poverty-bush Limestone Copperburr Streaked Poverty-bush</p>	<p><i>Atriplex acutibractea</i> subsp. <i>acutibractea</i> <i>Atriplex salpicata</i> <i>A. vesicaria</i> <i>Chenopodium curvispicatum</i> <i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>M. erioclada</i> <i>M. pentatropis</i> <i>M. pyramidata</i> <i>M. radiata</i> <i>M. turbinata</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Roepora eremaea</i> <i>Sclerolaena diacantha</i> <i>S. obliquicuspis</i> <i>Sclerolaena patentiscuspis</i> <i>Westringia rigida</i></p> <p>Pointed Saltbush Bitter Saltbush Bladder Saltbush Cottony Saltbush Ruby Saltbush Yangia Bush Rosy Bluebush Erect Mallee Bluebush Black Bluebush Grey Bluebush Three winged Bluebush Saitny Bluebush Dillon Bush Thorny Saltbush Climbing Twinleaf Grey Copperburr Limestone Copperburr Spear fruit Copperburr Stiff Western Rosemary</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Calandrinia eremaea</i> <i>Centipeda cunninghamii</i> <i>Crassula colorata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Haloragis aspera</i> <i>Lobelia concolor</i> <i>Mimulus gracilis</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonoides</i> <i>Vittadina cervicularis</i></p> <p>Lesser Joyweed Creeping Saltbush Small Purslane Common Sneezeweed Dense Stonecrop Climbing Saltbush Rough Raspwort Poison Prata Slender Monkey flower Quena New Zealand Spinach Annual New Holland Daisy</p>	<p><i>Actinobole uliginosum</i> <i>Atriplex semibaccata</i> <i>Austrostipa elegantissima</i> <i>A. nitida</i> <i>A. nodosa</i> <i>Brachycome lineariloba</i> <i>Calandrinia eremaea</i> <i>Calocephalus sonderi</i> <i>Calotis hispida</i> <i>Convolvulus erubescens</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Geococcus pusillus</i> <i>Goodenia pinnatifida</i> <i>G. pusilliflora</i> <i>Lachnogrostis filiformis</i> <i>Leucochrysum molle</i> <i>Maireana ciliata</i> <i>M. sclerolaenoides</i> <i>Malva preissiana</i> <i>Minuria cunninghamii</i> <i>Omphalolappula concava</i> <i>Ptilotus spathulatus</i> <i>Rhodanthe corymbiflora</i> <i>R. floribunda</i> <i>R. polygalifolia</i> <i>R. stuartiana</i> <i>Roepora amimophilum</i> <i>R. apiculata</i> <i>R. aurantiaca</i> subsp. <i>aurantiaca</i> <i>R. iodocarpa</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio glossanthus</i> <i>Sida corrugata</i> <i>Tetragonia tetragonoides</i> <i>Triptilodiscus pygmaeus</i> <i>Vittadina condyloides</i> <i>Xerochrysum bracteatum</i></p> <p>Flamel Cudweed Creeping Saltbush Feather Speargrass Balcarra Speargrass Knotty Speargrass Hard head Daisy Small Purslane Pale Beauty-heads Bogan Flea Australian Bindweed Cannon-ball Climbing Saltbush Spider Grass Earth Grass Scrambled Eggs Small-flowered Goodenia Blown Grass Hoary Sunray Hairy Fissure weed Woolly fruit Copperburr Australian Hollyhock Bush Minuria Burr Sticksseed Pussy tails Grey Sunray Common White Sunray Brilliant Sunray Clay Sunray Sand Twinleaf Shrubby Twinleaf Violet Twinleaf White-top Short-winged Copperburr Slender Groundsel Corrugated Sida New Zealand Spinach Common Sunray Club hair New Holland Daisy Golden Everlasting</p>	<p><i>Austrostipa nitida</i> <i>A. nodosa</i> <i>Calandrinia eremaea</i> <i>Calotis hispida</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Elachanthus pusillus</i> <i>Haloragis aspera</i> <i>Maireana pentagona</i> <i>M. sclerolaenoides</i> <i>Omphalolappula concava</i> <i>Oxalis peremans</i> <i>Rhodanthe stuartiana</i> <i>Roepora apiculata</i> <i>R. amorphila</i> <i>R. aurantiaca</i> subsp. <i>aurantiaca</i> <i>R. crenata</i> <i>R. iodocarpa</i> <i>R. simile</i> <i>Senecio glossanthus</i> <i>Tetragonia tetragonoides</i> <i>Vittadina cervicularis</i></p> <p>Balcarra Speargrass Knotty Speargrass Small Purslane Bogan Flea Cannon-ball Climbing Saltbush Elachanth Rough Raspwort Slender Fissure-weed Woolly fruit Copperburr Burr Sticksseed Grassland Wood sorrel Clay Sunray Gall Weed Sand Twinleaf Shrubby Twinleaf Lobed Twinleaf Violet Twinleaf White Twinleaf Slender Groundsel New Zealand Spinach Annual New Holland Daisy</p>

# MERRIWAGGA



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Valleys and Floodplains	Sandplains and Minor Dunefields
VEGETATION TYPE	Black Box Woodland.	Bimble Box Woodland.	Callitris Mixed Woodland.
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open Bimble Box woodland on floodplains and wide valleys with grassy understorey. Alluvial, red loams.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.
LOCATION EXAMPLE	Lachlan River Rd opposite Dalkeith.	Kidman Way east of Hillston.	Kidman Way roadside south of the Lachlan River, Hillston – Merriwagga Rd, Monia Gap Rd approx. 8 km east of Hillston.
TREES > 8 m	<p>Acacia stenophylla                      Allocasuarina luehmannii                      Callitris glaucophylla                      Casuarina cristata                      Eucalyptus intertexta                      E. largiflorens                      E. populnea subsp. bimbil</p>	<p>Allocasuarina luehmannii                      Brachychiton populneus subsp. trilobus                      Casuarina pauper                      Eremophila mitchellii                      Eucalyptus populnea subsp. bimbil                      Geijera parviflora                      Hakea tephrosperma</p>	<p>Brachychiton populneus subsp. trilobus                      Callitris glaucophylla                      Casuarina cristata                      C. pauper                      Eucalyptus intertexta                      E. populnea subsp. bimbil                      Geijera parviflora                      Hakea tephrosperma</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia pendula                      A. salicina                      Alectryon oleifolius subsp. canescens                      Atriplex nummularia                      Chenopodium nitriaceum                      Duma florulenta                      Eremophila longifolia                      Pittosporum phylliracoides</p>	<p>Bull Oak                      Kurralong                      Black Oak                      Budda                      Bimble Box                      Wilga                      Hooked Needlewood</p>	<p>Kurralong                      White Cypress Pine                      Belah                      Black Oak                      Red Box                      Bimble Box                      Wilga                      Hooked Needlewood</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena lanicuspis</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Woolly Copperburr</p>	<p><i>Atriplex pseudocampanulata</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena lanicuspis</i></p> <p>Mealy Saltbush Ruby Saltbush Woolly Copperburr</p>	<p><i>Sclerolaena patentiscuspis</i></p> <p>Spear fruit Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Aristida behriana</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Calottis lappulacea</i> <i>C. scabiosifolia</i> <i>Chloris truncata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Marsilea drummondii</i> <i>Minuria leptophylla</i> <i>Sida cunninghamii</i> <i>Triplodiscus pygmaeus</i> <i>Vittadinia condyloides</i> <i>V. gracilis</i></p> <p>Bunch Wiregrass Creeping Saltbush Rough Speargrass Yellow Burr daisy Rough Burr-daisy Windmill Grass Climbing Saltbush Common Nardoo Minnie Daisy Ridge Sida Common Sunray Club hair New Holland Daisy Woolly New Holland Daisy</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Chrysocephalum semipapposum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana humillima</i> <i>Ryidosperma caespitosa</i> <i>Sida cunninghamii</i> <i>Xerochrysum bracteatum</i></p> <p>Creeping Saltbush Rough Speargrass Clustered Everlasting Climbing Saltbush Spider Grass Dwarf Bluebush White-top Ridge Sida Golden Everlasting</p>	<p><i>Anthrosachne scaber</i> <i>Atriplex semibaccata</i> <i>Chrysocephalum semipapposum</i> <i>Rhodanthe corymbiflora</i> <i>R. polygalifolia</i> <i>Ryidosperma caespitosa</i> <i>Xerochrysum bracteatum</i> <i>X. viscosum</i></p> <p>Common Wheatgrass Creeping Saltbush Clustered Everlasting Grey Sunray Brilliant Sunray White-top Golden Everlasting Sticky Everlasting</p>

# MERRIWAGGA



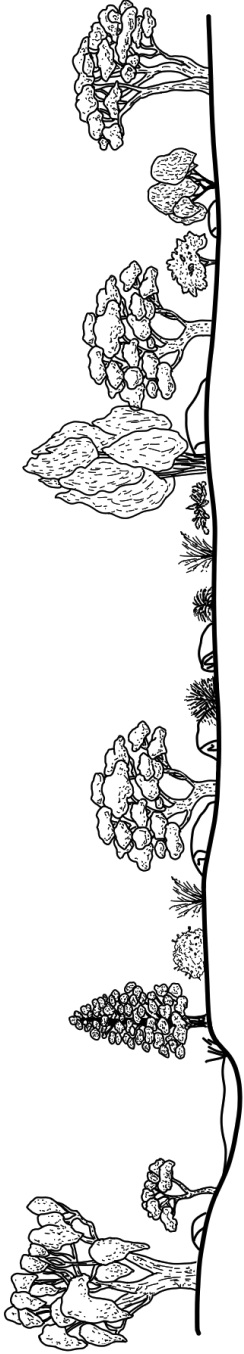
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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM VEGETATION TYPE	Sandplains and Low Rises	Sandplains and Minor Dunefields	Sandplains, Swales and Dune Crests
<b>GEOLOGY &amp; SOILS</b>	Belah – Rosewood Woodland.	Callitris Mixed Woodland (Sandplains and minor dunefields).	Mallee Woodland.
<b>LOCATION EXAMPLE</b>	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
<b>TREES &gt; 8 m</b>	McKinley Rd, Gunbar, Kidman Way between Merriwagga and Goolgowi.	Kidman Way roadside south of the Lachlan River, Hillston – Merriwagga Rd, Monia Gap Rd approx. 8 km east of Hillston.	Pulletpop Nature Reserve, western end of Andersons Rd, Loughnan Nature Reserve south of Hillston.
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p><i>Acacia homalophylla</i>  <i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p><i>Acacia oswaldii</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Apophyllum anomalum</i>  <i>Eremophila longifolia</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>coriacea</i></p>	<p><i>Brachychiton populineus</i> subsp. <i>trilobus</i>  <i>Callitris glaucophylla</i>  <i>Casuarina cristata</i>  <i>C. pauper</i>  <i>Eucalyptus intertexta</i>  <i>E. populnea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p><i>Acacia calamifolia</i>  <i>Acacia deanei</i> subsp. <i>paucijuga</i>  <i>Acacia hakeoides</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Apophyllum anomalum</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>Senna artemisioides</i> subsp. <i>zygophylla</i></p>	<p><i>Brachychiton populineus</i> subsp. <i>trilobus</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus intertexta</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i>  <i>Myoporum platycarpum</i></p> <p><i>Acacia brachybotrya</i>  <i>A. buxifolia</i>  <i>A. colletioides</i>  <i>A. deanei</i> subsp. <i>paucijuga</i>  <i>A. hakeoides</i>  <i>A. montana</i>  <i>A. oswaldii</i>  <i>A. rigens</i>  <i>Beyeria techenaultii</i>  <i>Bossiaea walkeri</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eucalyptus dumosa</i>  <i>E. socialis</i>  <i>E. viridis</i>  <i>Melaleuca uncinata</i>  <i>Myoporum montanum</i>  <i>Pimelea microcephala</i>  <i>Pittosporum phylliraeoides</i>  <i>Prostanthera nivea</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>petiolaris</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Atriplex stipitata</i>  <i>Enchylaena tomentosa</i>  <i>Maireana pyramidata</i>  <i>Rhagodia spinescens</i></p>	<p>Bitter Saltbush  Ruby Saltbush  Black Bluebush  Thorny Saltbush</p>	<p><i>Sclerolaena patentiscuspis</i></p> <p>Spear fruit Copperburr</p>	<p><i>Acacia lineata</i>  <i>Chenopodium desertorum</i>  <i>Dodonaea viscosa</i> subsp. <i>cuneata</i>  <i>Eremophila glabra</i>  <i>Cleaitia pimeleoides</i>  <i>Sclerolaena diacantha</i></p> <p>Streaked Wattle  Desert Goosefoot  Wedge leaf Hoppbush  Tar Bush  Showy Daisy-bush  Grey Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex semibaccata</i>  <i>Chrysocephalum apiculatum</i>  <i>C. semipapposum</i>  <i>Dianella porraceae</i>  <i>Dioscorea paradoxa</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Rhodanthe corymbiflora</i>  <i>Swainsona formosa</i>  <i>Roepera glauca</i>  <i>Rytidosperma caespitosa</i>  <i>Xerochrysum bracteatum</i></p>	<p>Creeping Saltbush  Yellow Buttons  Clustered Everlasting  Smooth Flax-lily  Cannon-ball  Climbing Saltbush  Grey Sunray  Sturts Desert Pea  Pale Twinleaf  White-top  Golden Everlasting</p>	<p><i>Atriplex semibaccata</i>  <i>Chrysocephalum semipapposum</i>  <i>Anthriscachne scaber</i>  <i>Rhodanthe corymbiflora</i>  <i>R. polygalifolia</i>  <i>Rytidosperma caespitosa</i>  <i>Xerochrysum bracteatum</i>  <i>X. viscosum</i></p> <p>Creeping Saltbush  Clustered Everlasting  Common Wheatgrass  Grey Sunray  Brilliant Sunray  White-top  Golden Everlasting  Sticky Everlasting</p>	<p><i>Auja australis</i>  <i>Austrostipa elegantissima</i>  <i>Austrostipa scabra</i> subsp. <i>scabra</i>  <i>Billiardera scandens</i>  <i>Cassytha melantha</i>  <i>Chrysocephalum apiculatum</i>  <i>Clematis microphylla</i>  <i>Dianella porraceae</i>  <i>D. revoluta</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Goodenia willisiana</i>  <i>Halgania cyanea</i>  <i>Hyalosperma semisterile</i>  <i>Jasminum didymum</i> subsp. <i>lineare</i>  <i>Minuria leptophylla</i>  <i>Parsonia eucalyptophylla</i>  <i>P. erubescens</i>  <i>P. spathulatus</i>  <i>Ptilotus erubescens</i>  <i>Rytidosperma caespitosa</i>  <i>Scaevola humilis</i>  <i>Solanum coactiliferum</i>  <i>Stackhousia monogyna</i>  <i>Triodia scariosa</i><sup>2</sup>  <i>Vittadinia pterochaeta</i>  <i>Waitzia acuminata</i></p> <p>Australian Bugle  Feather Speargrass  Rough Speargrass  Common Apple-berry  Mallee Strangle vine  Yellow Buttons  Small-leaved Clematis  Smooth Flax-lily  Spreading Flax-lily  Climbing Saltbush  Sandhill Goodenia  Mallee Blue flower  Orange Sunray  Native Jasmine  Minnie Daisy  Gargaloo  Hairy tails  Pussy tails  White-top  Sandplain Fan flower  Felted Nightshade  Creamy Candles  Porcupine Grass  Rough Fuzzweed  Orange Immortelle</p>

# MURRAKOOOL



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www revegetation.org.au](http://www revegetation.org.au)

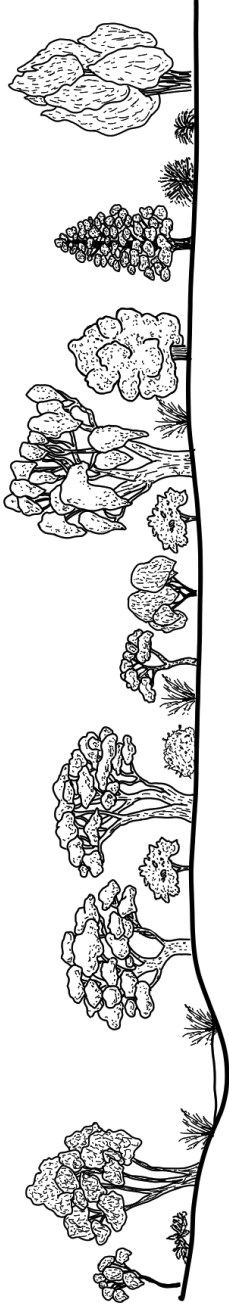
Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Shallow Depressions	Creeklines and Secondary Floodplains
VEGETATION TYPE	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.	Black Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
LOCATION EXAMPLE	Campbells Island State Forest, Murray River frontage.	Wilson's Lake between Swan Hill and Toomah.	Chilvers Lane near Moulamein, Murrabit Rd between Murra Lane and Cobramunga Rd, Coonamit Travelling Stock Reserve.
TREES > 8 m	<p>Acacia dealbata Acacia stenophylla Allocastraria luehmanna Eucalyptus camaldulensis E. largiflorens E. microcarpa<sup>3</sup></p> <p>Silver Wattle River Cooba Bull Oak River Red Gum Black Box Grey Box</p>	<p>Eucalyptus largiflorens</p> <p>Black Box</p>	<p>Acacia homalophylla Eucalyptus camaldulensis<sup>5</sup> E. largiflorens E. leucoxylon subsp. pruinosa E. microcarpa<sup>3</sup></p> <p>Yarran River Red Gum Black Box Yellow Gum Grey Box</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia salicina Chenopodium nitraraceum Duma florulenta Exocarpos strictus Pittosporum phylliraeoides</p> <p>Cooba Nitre Goosefoot Lignum Dwarf Cherry Butterbush</p>	<p>Atriplex nummularia Chenopodium nitraraceum Duma florulenta</p> <p>Old Man Saltbush Nitre Goosefoot Lignum</p>	<p>Acacia oswaldii A. victoriae Alectryon oleifolius subsp. canescens Atriplex nummularia Chenopodium nitraraceum Duma florulenta Exocarpos apophyllus Hakea leucoptera Melaleuca lanceolata Pittosporum phylliraeoides</p> <p>Miljee Prickly Wattle Rosewood Old Man Saltbush Nitre Goosefoot Lignum Leafless Cherry Needlewood Moonah Butterbush</p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> Ruby Saltbush</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena divaricata</i> <i>S. muricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Pale Poverty-bush Five spined Bassia</p>	<p><i>Enchylaena tomentosa</i> <i>Eriemophila divaricata</i> <i>E. maculata</i> <i>Maireana brevifolia</i> <i>Nicotiana</i> spp. <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i></p> <p>Ruby Saltbush Spreading Emubush Spotted Fuchsia Yanga Bush Native Tobacco Dillon Bush Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachycome basaltica</i> var. <i>gracilis</i> <i>Calotis scapigera</i> <i>Carex appressa</i> <i>C. inversa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Cynogeton procerum</i><sup>s</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>s</sup> <i>Glinus lotoides</i> <i>Juncus ingens</i><sup>s</sup> <i>Lachnagrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum crispatum</i> <i>M. papillosum</i><sup>s</sup> <i>Oxalis perennans</i> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>s</sup> <i>Plantago cunninghamii</i> <i>Poa tordeana</i> <i>Rytidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>s</sup> <i>Wahlenbergia fluminalis</i> <i>Xerochrysum bracteatum</i></p> <p>Lesser Joyweed Veined Swamp Wallaby-grass Creeping Saltbush Red Azolla Swamp Daisy Tufted Burr-daisy Tall Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Water-ribbons Climbing Saltbush Common Spike-rush Hairy Carpet-weed Giant Rush Blown Grass Poison Pratia Common Nardoo Common Water-milfoil Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sago weed Sweet Swamp grass Ferry Buttercup White-top Brown back Wallaby Grass Eel-weed River Bluebell Golden Everlasting</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Juncus aridicola</i> <i>J. flavidus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Marsilea drummondii</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i></p> <p>Dwarf Amaranth Creeping Saltbush Lagoon Saltbush Round-leaf Pigface Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Common Nardoo Bushy Groundsel Cumbungi Cumbungi</p>	<p><i>Amphibromus nervosus</i> <i>Austrostipa aristiglumis</i> <i>Boerhavia domini</i> <i>Calostemma purpureum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i> <i>Eryngium ovinum</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Phragmites australis</i> <i>Poa tordeana</i> <i>Stemodia florulenta</i> <i>Typha orientalis</i></p> <p>Veined Swamp Wallaby-grass Plains Grass Tar Vine Wilcannia Lily Climbing Saltbush Canegrass Blue Devil Poison Pratia Wingless Fissure-weed Common Nardoo Common Reed Sweet Swamp grass Blue Rod Cumbungi</p>

# MURRAKOOL (EASTERN)



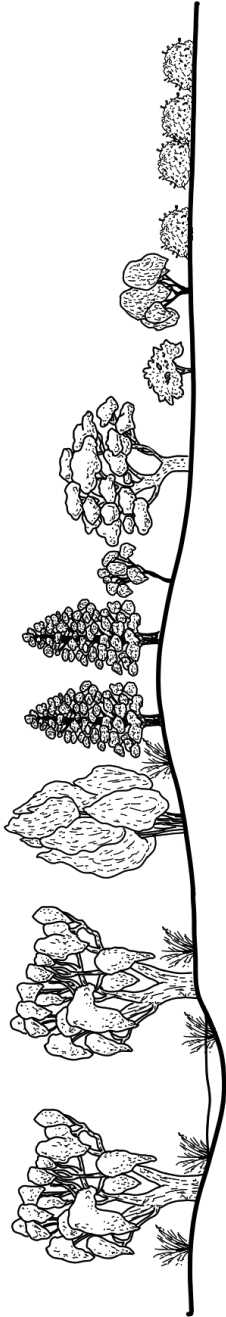
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Plains
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Grey Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.
LOCATION EXAMPLE	Campbells Island State Forest, Murray River frontage.	Chilvers Lane near Moulamein, Murrabit Rd between Murra Lane and Cobramunga Rd, Coonamit Travelling Stock Reserve.	Cockran Creek area along Rangemore Rd.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Allocasuarina luehmanna</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>1</sup></p> <p>River Cooba                      Bull Oak                      River Red Gum                      Black Box                      Grey Box</p>	<p><i>Acacia homalophylla</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i>  <i>E. leucoxylon</i> subsp. <i>pruinosa</i>  <i>E. microcarpa</i><sup>1</sup></p> <p>Yarran                      River Red Gum                      Black Box                      Yellow Gum                      Grey Box</p>	<p><i>Acacia implexa</i>  <i>Allocasuarina luehmanna</i>  <i>Callitris glaucophylla</i>  <i>C. gracilis</i>  <i>Eucalyptus microcarpa</i>  <i>Myoporum platycarpum</i></p> <p>Hickory Wattle                      Bull Oak                      White Cypress Pine                      Murray Pine                      Grey Box                      Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos strictus</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba                      Nitre Goosefoot                      Lignum                      Dwarf Cherry                      Butterbush</p>	<p><i>Acacia oswaldii</i>  <i>A. victoriae</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos aphyllus</i>  <i>Hakea leucoptera</i>  <i>Melaleuca lanceolata</i>  <i>Pittosporum phylliraeoides</i></p> <p>Miljee                      Prickly Wattle                      Rosewood                      Old Man Saltbush                      Nitre Goosefoot                      Lignum                      Leafless Cherry                      Needlewood                      Moonah                      Butterbush</p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. montana</i>  <i>A. pycnantha</i>  <i>Bursaria spinosa</i>  <i>Eremophila longifolia</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>coriacea</i>  <i>S. artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p> <p>Gold-dust Wattle                      Grey Mulga                      Western Black Wattle                      Mallee Wattle                      Golden Wattle                      Native Blackthorn                      Ernubush                      Western Boobialla                      Butterbush                      Broad leaf Desert Cassia                      Fine leaf Desert Cassia                      Narrow leaf Desert Cassia</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Enchylaena tomentosa</i> bush</p>	<p>Ruby Salt-bush</p>	<p><i>Enchylaena tomentosa</i> <i>Eremophila divaricata</i> <i>E. maculata</i> <i>Maireana brevifolia</i> <i>Nicotiana</i> spp. <i>Nitratia billardierei</i> <i>Rhagodia spinescens</i></p>	<p>Ruby Saltbush Spreading Emubush Spotted Fuchsia Yanga Bush Native Tobacco Dillon Bush Thorny Saltbush</p>	<p><i>Dillwynia cinerascens</i> <i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Enchylaena tomentosa</i> <i>Pultenaea largiflorens</i></p>	<p>Grey Parrot-pea Wedge leaf Hoppbush Ruby Saltbush Twiggy Bush-pea</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>5</sup> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachycome basalica</i> var. <i>gracilis</i> <i>Calotis scapigera</i> <i>Carex appressa</i> <i>C. inversa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>5</sup> <i>Glinus lotoides</i> <i>Juncus ingens</i><sup>5</sup> <i>Lachnagrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum crispatum</i> <i>M. papillosum</i><sup>5</sup> <i>Oxalis perennans</i> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Plantago cunninghamii</i> <i>Poa tordeana</i> <i>Ranunculus pumilio</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>5</sup> <i>Wahlenbergia fluminalis</i> <i>Xerochysum bracteatum</i></p>	<p>Lesser Joyweed Venet Swamp Wallaby-grass Creeping Saltbush Red Azolla Swamp Daisy Tufted Burr-daisy Tail Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Water-ribbons Climbing Saltbush Common Spike-rush Hairy Carpet-weed Giant Rush Blown Grass Poison Pratia Common Nardoo Common Water-milfoil Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sago weed Sweet Swamp grass Ferny Buttercup White-top Brown back Wallaby Grass Eel-weed River Bluebell Golden Everlasting</p>	<p><i>Amphibromus nervosus</i> <i>Austrostipa aristiglumis</i> <i>Boerhavia dominii</i> <i>Calostemma purpureum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis australasica</i> <i>Eryngium ovatum</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Phragmites australis</i> <i>Poa tordeana</i> <i>Sternodia florulenta</i> <i>Typha orientalis</i></p>	<p>Venet Swamp Wallaby-grass Plains Grass Tar Vine Wilcannia Lily Climbing Saltbush Canegrass Blue Devil Poison Pratia Wingless Fissure-weed Common Nardoo Common Reed Sweet Swamp grass Blue Rod Cumbungi</p>	<p><i>Anthrosachne scaber</i> <i>Atriplex semibaccata</i> <i>Austrostipa aristiglumis</i> <i>Calocephalus citreus</i> <i>Chloris truncata</i> <i>Dianella porraceae</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Homopholis prolata</i> <i>Pycnosorus globosus</i> <i>Ryidosperma caespitosa</i> <i>R. setaceum</i></p>	<p>Common Wheatgrass Creeping Saltbush Plains Grass Lemon Beauty-heads Windmill Grass Smooth Flax-lily Climbing Saltbush Rigid Panic Drumsticks White-top Smallflower Wallaby Grass</p>

# MURRAKOOL (NORTHERN)



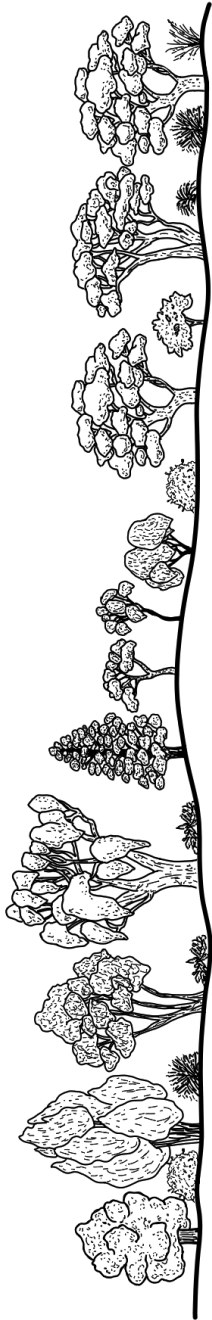
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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Shallow Wetland	Lunettes and Sand Ridges	Level to Depressed Plains
VEGETATION TYPE	Shallow Wetland.	Callitris Mixed Woodland (Prior Streams / Lunettes).	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Seasonal or intermittent wetland, meadow, marsh, lake or lagoon with fringing River Red Gum and/or Grey Box. Alluvial, heavy grey clays.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian: well drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Lake Genoe, Lake Poon Boon, wetlands along the Niemur River.	Barham – Moulamein Rd between Colenso Park Rd and Wakool River, eastern part of Coonamit Travelling Stock Reserve.	No intact examples remain south of Billabong Creek, formerly occurred between Swan Hill and Kyalite.
TREES > 8 m	<i>Eucalyptus camaldulensis</i> <sup>o</sup> River Red Gum	<i>Acacia homalophylla</i> <i>Allocasuarina lehmannii</i> <i>Callitris glaucophylla</i> <i>C. gracilis</i> <i>Casuarina pauper</i> <i>Geijera parviflora</i> <i>Haakea tephrosperma</i> <i>Myoporum platycarpum</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	nil	<i>Acacia brachybotrya</i> <i>A. haekooides</i> <i>A. oswaldii</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Bursaria spinosa</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila deserti</i> <i>Eremophila longifolia</i> <i>Haakea leucoptera</i> <i>Pittosporum phylliraeoides</i> <i>Santalum lanceolatum</i> <i>Senna artemisioides</i> subsp. <i>petiolaris</i>	<i>Acacia melvillei</i> <i>Atriplex nummularia</i> <sup>o</sup> <i>Chenopodium nitratiaceum</i>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p><i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>M. pyramidata</i> <i>Rhagodia spinescens</i></p> <p>Ruby Saltbush Yanga Bush Black Bluebush Thorny Saltbush</p>	<p><i>Atriplex leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampanulata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i><sup>10</sup> <i>M. brevifolia</i> <i>M. decalvans</i> <i>Malacocera tricornis</i> <i>Nitratia billardierei</i><sup>10</sup> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. muricata</i> <i>S. stelligera</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i><sup>6</sup></p> <p>Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Yanga Bush Black Cottonbush Soft-horns Dillon Bush Thorny Saltbush Pale Poverty-bush Five spined Bassia Star Copperburr Streaked Poverty-bush Slender Glasswort</p>
<p><b>GROUND COVERS</b></p>	<p><i>Centipeda cunninghamii</i> <i>Cynogeton procerum</i> <i>Cyperus gymnocaulos</i> <i>Eleocharis sphacelata</i> <i>Eragrostis australasica</i><sup>8</sup> <i>Juncus flavidus</i> <i>J. ingens</i> <i>Lobelia concolor</i> <i>Ludwigia peploides</i> subsp. <i>montevicensis</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i> <i>Nymphoides crenata</i> <i>Ottelia ovalifolia</i> <i>Paspalidium jubiflorum</i> <i>Persicaria decipiens</i> <i>Phragmites australis</i> <i>Potamogeton crispus</i> <i>Pseudoraphis spinescens</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i> <i>Vallisneria australis</i></p> <p>Common Sneezeweed Water-ribbons Spiny Sedge Tall Spike-rush Canegrass Yellow Rush Giant Rush Poison Pratia Water Primrose Common Nardoo Water-milfoil Wavy Marshwort Swamp Lily Warrego Summer-grass Slender Knotweed Common Reed Curly Pondweed Spiny Mud-grass Bushy Groundsel Cumbungi Eel-weed</p>	<p><i>Aristida jerichoensis</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enneapogon nigricans</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Lomandra effusa</i> <i>L. leucocephala</i> <i>Rytidosperma caespitosa</i></p> <p>No. 9 Wiregrass Creeping Saltbush Rough Speargrass Climbing Saltbush Pappus Grass Native Jasmine Scented Mat-rush Woolly-head Mat-rush White-top</p>	<p><i>Atriplex semibaccata</i> <i>Calocephalus sonderi</i> <i>Chamaesyce drummondii</i> <i>Chloris truncata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i><sup>8</sup> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Eragrostis australasica</i><sup>8</sup> <i>Hyalosperma glutinosum</i> <i>Leiocarpa tomentosa</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>M. pentagona</i> <i>Minuria cunninghamii</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sporobolus caroli</i></p> <p>Creeping Saltbush Pale Beauty-heads Flat Spurge Windmill Grass Round-leaf Pigface Climbing Saltbush Spider Grass Canegrass Golden Sunray Woolly Plover daisy Hairy Fissure weed Wingless Fissure-weed Slender Fissure-weed Bush Minuria White-top Short-winged Copperburr Fairy Grass</p>

# MURRAKOOOL



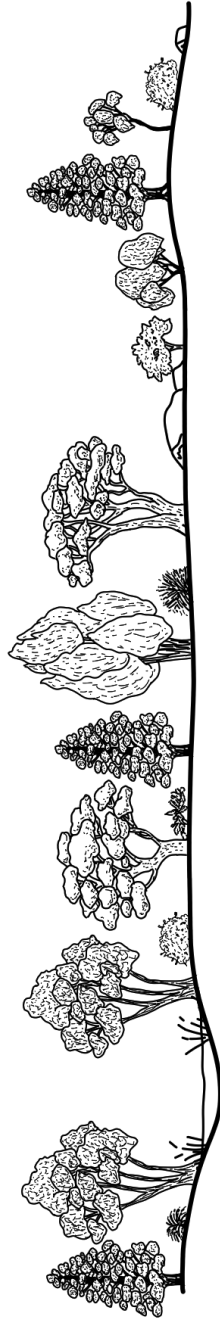
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM VEGETATION TYPE	Creeklines and Secondary Floodplains	Sandplains and Low Rises	Sandplains, Swales and Dune Crests
<b>GEOLOGY &amp; SOILS</b>	Black Box Woodland.  Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Belah – Rosewood Woodland.  Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.	Mallee Woodland.  Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
<b>LOCATION EXAMPLE</b>	Chilvers Lane near Moulamein, Murrabit Rd between Murra Lane and Cobramunga Rd, Coonamit Travelling Stock Reserve.	Browns Rd near Tooleybuc.	Browns Rd near Tooleybuc.
<b>TREES &gt; 8 m</b>	<p>Yarran River Red Gum Black Box Yellow Gum Grey Box</p> <p><i>Acacia homalophylla</i> <i>Eucalyptus camaldulensis</i><sup>5</sup> <i>E. largiflorens</i> <i>Eucalyptus leucoxylon</i> subsp. <i>pruinosa</i> <i>E. microcarpa</i><sup>3</sup></p>	<p>White Cypress Pine Black Oak Wilga Hooked Needlewood Sugarwood</p> <p><i>Callitris glaucophylla</i> <i>Casuarina pauper</i> <i>Geijera parviflora</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i></p>	<p>Bull Oak White Cypress Pine Wilga Hooked Needlewood Sugarwood</p> <p><i>Allocasuarina luehmannii</i> <i>Callitris glaucophylla</i> <i>Geijera parviflora</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i></p>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p>Miljee Prickly Wattle Rosewood Old Man Saltbush Nitre Goosefoot Lignum Leafless Cherry Needlewood Moonah Butterbush</p> <p><i>Acacia oswaldii</i> <i>A. victoriae</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Chenopodium nitriaceum</i> <i>Duma florulenta</i> <i>Exocarpos aphyllus</i> <i>Hakea leucoptera</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliraeoides</i></p>	<p>Spine Bush Myall Miljee Needle Wattle Rosewood Nitre Goosefoot Narrow leaf Hoppush Erubush Turpentine Leafless Cherry Butterbush Quandong Broad leaf Desert Cassia Fine leaf Desert Cassia Phyllonoides Desert Cassia Narrow leaf Desert Cassia Desert Broombush</p> <p><i>Acacia colletioides</i> <i>A. melvillei</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Chenopodium nitriaceum</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>E. sturtii</i> <i>Exocarpos aphyllus</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>Senna artemisioides</i> subsp. <i>coriacea</i> <i>S. artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egena</i></p>	<p>Spine Bush Western Black Wattle Sandhill Wattle Manna Wattle Mallee Wattle Miljee Wilhelms Wattle Rosewood Old Man Saltbush Cactus Pea Narrow leaf Hoppush Gooseberry Mallee Lerp Mallee Congo Mallee Yorrell Red Mallee Pointed Mallee Leafless Cherry Needlewood Moonah Shrubby Rice-flower Butterbush Quandong Bitter Quandong Fine leaf Desert Cassia Phyllonoides Desert Cassia Narrow leaf Desert Cassia Desert Broombush</p> <p><i>Acacia colletioides</i> <i>A. hakeoides</i> <i>A. ligulata</i> <i>A. microcarpa</i> <i>A. montana</i> <i>A. oswaldii</i> <i>A. wilhelmiana</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <i>Atriplex nummularia</i> <i>Bossiaea walkeri</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eucalyptus calycogona</i> <i>E. costata</i> <i>E. dumosa</i> <i>E. gracilis</i> <i>E. oleosa</i> <i>E. socialis</i> <i>Exocarpos aphyllus</i> <i>Hakea leucoptera</i> <i>Melaleuca lanceolata</i> <i>Pimelea microcephala</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>S. murrayanum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egena</i></p>

SMALL SHRUBS < 2 m			
<p>Amphibromus nervosus  <i>Austrostipa aristigulumis</i>  <i>Boerhavia dominii</i>  <i>Calostemma purpureum</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Eragrostis australis</i>  <i>Eryngium ovinum</i>  <i>Lobelia concolor</i>  <i>Maireana encyphaenoides</i>  <i>Marsilea drummondii</i>  <i>Phragmites australis</i>  <i>Poa tordeana</i>  <i>Stemodia florulenta</i>  <i>Typha orientalis</i></p>	<p>Ruby Saltbush  Spreading Emubush  Spotted Fuchsia  Yanga Bush  Native Tobacco  Dillon Bush  Thorny Saltbush</p>	<p><i>Enchylaena tomentosa</i>  <i>Eremophila divaricata</i>  <i>E. maculata</i>  <i>Maireana brevifolia</i>  <i>Nicotiana</i> spp.  <i>Nitraria billardierei</i>  <i>Rhagodia spinescens</i></p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>  <i>A. eardleyae</i>  <i>A. leptocarpa</i>  <i>A. lindleyi</i>  <i>A. vesicaria</i>  <i>Chenopodium curvispicatum</i>  <i>C. desertorum</i>  <i>Enchylaena tomentosa</i>  <i>Eremophila glabra</i>  <i>Lycium australe</i>  <i>Maireana</i> spp.  <i>Nitraria billardierei</i>  <i>Oleaia magniflora</i>  <i>O. muelleri</i>  <i>O. pimeleoides</i>  <i>Osteocarpum acropterum</i> var. <i>deminutum</i>  <i>Rhagodia spinescens</i>  <i>Roepera eremaea</i>  <i>Scleroblitum atriplicinum</i>  <i>Sclerolaena diacantha</i>  <i>S. divaricata</i>  <i>S. obliquispis</i>  <i>S. tricuspis</i></p>
<p><i>Enchylaena tomentosa</i>  <i>Eremophila divaricata</i>  <i>E. maculata</i>  <i>Maireana brevifolia</i>  <i>Nicotiana</i> spp.  <i>Nitraria billardierei</i>  <i>Rhagodia spinescens</i></p>	<p>Veined Swamp Wallabygrass  Plains Grass  Tar Vine  Wilcannia Lily  Climbing Saltbush  Canegrass  Blue Devil  Poison Pratia  Wingless Fissure-weed  Common Nardoo  Common Reed  Sweet Swamp grass  Blue Rod  Cumbungi</p>	<p><i>Actinobole uliginosa</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa elegantissima</i>  <i>A. nitida</i>  <i>A. nodosa</i>  <i>Brachycome lineariloba</i>  <i>Calandrinia eremaea</i>  <i>Calocephalus sonderi</i>  <i>Calotis hispida</i>  <i>Convolvulus erubescens</i>  <i>Dissocarpus parodoxus</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Enteropogon acicularis</i>  <i>Geococcus pusillus</i>  <i>Goodenia pinnatifida</i>  <i>G. pusilliflora</i>  <i>Lachnagrostis filiformis</i>  <i>Leucochrysum molle</i>  <i>Maireana ciliata</i>  <i>M. sclerolaenoides</i>  <i>Minuria cunninghamii</i>  <i>Omphalolappula concava</i>  <i>Ptilotus spathulatus</i>  <i>Rhodanthe corymbiflora</i>  <i>R. floribunda</i>  <i>R. polygalifolia</i>  <i>R. stuartiana</i>  <i>Roepera apiculata</i>  <i>R. ammophila</i>  <i>R. auranitaca</i> subsp. <i>aurantiaca</i>  <i>R. todocarpa</i>  <i>Ryidosperma caespitosa</i>  <i>Sclerolaena brachyptera</i>  <i>Senecio glossanthus</i>  <i>Sida corrugata</i>  <i>Tetragonia tetragonoides</i>  <i>Tripliodiscus pygmaeus</i>  <i>Vittadinia condyloides</i>  <i>Xerochrysum bracteatum</i></p>	<p>Baldoo  Small Saltbush  Slender-fruited Saltbush  Eastern Flat-top Saltbush  Bladder Saltbush  Cottony Saltbush  Desert Goosefoot  Ruby Saltbush  Tar Bush  Australian Boxthorn  Bluebush  Dillon Bush  Splendid Daisy-bush  Mueller Daisy-bush  Showy Daisy-bush  Water Weed  Thorny Saltbush  Climbing Twinleaf  Purple Goosefoot  Grey Copperburr  Pale Poverty-bush  Limestone Copperburr  Streaked Poverty-bush</p>
<p>Creeping Saltbush  Feather Speargrass  Balcarra Speargrass  Hard head Daisy  Small Purslane  Bogan Flea  Mallee Strangle vine  Spreading Flax-lily  Cannon-ball  Climbing Saltbush  Satin Everlasting  Grass Cushion  Native Jasmine  Shrubby Peppercress  Woolly-head Mat-rush  Woolly fruit Copperburr  Doubah  Burr  Stickyseed  Showy Copper wire Daisy  Regal Foxtail  Rabbit tails  Pussy tails  P. spathulatus  Rhodanthe stuartiana  Roepera apiculata  R. auranitaca subsp. <i>aurantiaca</i>  R. glauca  R. todocarpa  Ryidosperma setacea  Senecio glossanthus  Tetragonia tetragonoides  Triodia scarlosa*  Wahlenbergia fluminalis</p>	<p>Fiannel Cudweed  Creeping Saltbush  Feather Speargrass  Balcarra Speargrass  Knotty Speargrass  Hard head Daisy  Small Purslane  Pale Beauty-heads  Bogan Flea  Australian Bindweed  Cannon-ball  Climbing Saltbush  Spider Grass  Earth Grass  Scrambled Eggs  Small-flowered Goodenia  Blown Grass  Hoary Sunray  Hairy Fissure weed  Woolly fruit Copperburr  Bush Minuria  Burr Stickyseed  Pussy tails  Grey Sunray  Common White Sunray  Brilliant Sunray  Clay Sunray  Gall Weed  Sand Twinleaf  Shrubby Twinleaf  Violet Twinleaf  White-top  Short-winged Copperburr  Slender Groundsel  Corrugated Sida  New Zealand Spinach  Common Sunray  Club hair New Holland Daisy  Golden Everlasting</p>	<p>Acacia acanthoclada  <i>A. sclerophylla</i>  <i>Atriplex acutibracteata</i> subsp. <i>acutibracteata</i>  <i>A. eardleyae</i>  <i>A. lindleyi</i>  <i>A. stipitata</i>  <i>A. vesicaria</i>  <i>Beyeria opaca</i>  <i>Chenopodium curvispicatum</i>  <i>C. desertorum</i>  <i>Daviesia arenaria</i>  <i>Enchylaena tomentosa</i>  <i>Eremophila glabra</i>  <i>Eutaxia microphylla</i>  <i>Grevillea huegelii</i>  <i>Maireana</i> spp.  <i>Nicotiana</i> spp.  <i>Nitraria billardierei</i>  <i>Oleaia pimeleoides</i>  <i>Rhagodia spinescens</i>  <i>Roepera eremaea</i>  <i>Sclerolaena bicornis</i> var. <i>bicornis</i>  <i>S. diacantha</i>  <i>S. obliquispis</i>  <i>Templetonia sulcata</i>  <i>Westringia rigida</i></p>	

# PENARIE



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Sandplains and Low Rises
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Belah – Rosewood Woodland
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Kyalite State Forest, Balranald Weir, Murrumbidgee River frontage.	Murrumbidgee River floodplain, depressions on the Balranald – Moulamein Rd north of Kyalite Rd, Sturt Highway between Yanga Creek and Waugorah Rd.	Formerly west of Balranald and south of the river, only known example is north of Weimby.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geliera parviflora</i>  <i>Myoporum platycarpum</i></p> <p>White Cypress Pine  Black Oak  Wilga  Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i></p> <p>Cooba  Nitre Goosefoot  Lignum</p>	<p><i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i>  <i>Santalum acuminatum</i></p> <p>Rosewood  Old Man Saltbush  Nitre Goosefoot  Lignum  Quandong</p>	<p><i>Acacia colletioides</i>  <i>A. melvillei</i>  <i>A. oswaldii</i>  <i>A. rigens</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Chenopodium nitriaceum</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>E. sturtii</i>  <i>Exocarpos aphyllus</i>  <i>Pittosporum phylliracoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>petiolaris</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i>  <i>Templetonia egena</i></p> <p>Spine Bush  Mvall  Mijjee  Needle Wattle  Rosewood  Nitre Goosefoot  Narrow leaf Hobbush  Emubush  Turpentine  Leafless Cherry  Butterbush  Quandong  Fine leaf Desert Cassia  Phyllonous Desert Cassia  Narrow leaf Desert Cassia  Desert Broombush</p>



<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>nil</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Eremophila debilis</i> <i>E. divaricata</i> <i>E. maculata</i> <i>Rhagodia spinescens</i> <i>Tecticornia tenuis</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Winter Apple Spreading Emubush Spotted Fuchsia Thorny Saltbush Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. vesicaria</i> <i>Chenopodium curvispicatum</i> <i>C. desertorum</i> <i>Enchylaena tomentosa</i> <i>Eremophila glabra</i> <i>Lycium australe</i> <i>Maireana</i> spp. <i>Nitraria billardierei</i> <i>Olearia magniflora</i> <i>O. muelleri</i> <i>O. pimileoides</i> <i>Osteocarpum acropterum</i> var. <i>deminutum</i> <i>Rhagodia spinescens</i> <i>Roepera eremaea</i> <i>Sclerobilium atriplicinum</i> <i>Sclerolaena diacantha</i> <i>S. divaricata</i> <i>S. obliquispis</i> <i>S. tricuspis</i></p> <p>Baldoo Small Saltbush Slender-fruited Saltbush Eastern Flat-top Saltbush Bladder Saltbush Cottony Saltbush Desert Goosefoot Ruby Saltbush Tar Bush Australian Boxthorn Bluebush Dillon Bush Splendid Daisy-bush Mueller Daisy-bush Showy Daisy-bush Water Weed Thorny Saltbush Climbing Twinleaf Purple Goosefoot Grey Copperburr Pale Poverty-bush Limestone Copperburr Streaked Poverty-bush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Asperula gemella</i> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Carex appressa</i> <i>C. inversa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Citrum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Cynodon dactylon</i> <i>Cyperus exaltatus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>5</sup> <i>E. pusilla</i> <i>Glinus lotooides</i> <i>Homopholis prolata</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Poa tordeana</i> <i>Ranunculus pumilio</i> <i>Rytidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>5</sup> <i>Wahlenbergia fluminalis</i></p> <p>Lesser Joyweed Twin-leaf Bedstraw Creeping Saltbush Red Azolla Swamp Daisy Tail Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Darling Lily Water-ribbons Couch Grass Giant Sedge Climbing Saltbush Common Spike-rush Small Spike-rush Hairy Carpet-weed Rigid Panic Blown Grass Poison Pratia Common Nardoo Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass Ferny Buttercup White-top Brown back Wallaby Grass Eel-weed River Bluebell</p>	<p><i>Alternanthera denticulata</i> <i>Atriplex semibaccata</i> <i>Boerhavia dominii</i> <i>Calotis scapigera</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Oxalis peremans</i> <i>Solanum esuriale</i> <i>Roepera glauca</i></p> <p>Lesser Joyweed Creeping Saltbush Tar Vine Tufted Burr-daisy Common Sneezeweed Flat Spurge Climbing Saltbush Grassland Wood sorrel Quena Pale Twinleaf</p>	<p><i>Actinobole uliginosum</i> <i>Atriplex semibaccata</i> <i>Austrostipa elegantissima</i> <i>A. nitida</i> <i>A. nodosa</i> <i>Brachyscome lineariloba</i> <i>Calandrinia eremaea</i> <i>Calocephalus sonderi</i> <i>Calotis hispida</i> <i>Convolvulus erubescens</i> <i>Dissocarpus paradoxus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Geococcus pusillus</i> <i>Goodenia pinnatifida</i> <i>G. pusilliflora</i> <i>Lachnogrostis filiformis</i> <i>Leucochrysum molle</i> <i>Lomandra leucocephala</i> <i>Maireana ciliata</i> <i>M. sclerolaenoides</i> <i>Minuria cunninghamii</i> <i>Omphalolappula concava</i> <i>Ptilotus spathulatus</i> <i>Rhodanthe corymbiflora</i> <i>R. floribunda</i> <i>R. polygallifolia</i> <i>R. stuartiana</i> <i>Roepera ammophila</i> <i>R. apiculata</i> <i>R. aurantiaca</i> subsp. <i>aurantiaca</i> <i>R. todocarpa</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Senecio gossanthus</i> <i>Sida corrugata</i> <i>Tetragonia tetragonioides</i> <i>Triplodiscus pygmaeus</i> <i>Vittadinia condyloides</i> <i>Xerochrysum bracteatum</i></p> <p>Fiannel Cudweed Creeping Saltbush Feather Speargrass Balcarra Speargrass Knotty Speargrass Hard head Daisy Small Purslane Pale Beauty-heads Bogan Flea Australian Bindweed Cannon-ball Climbing Saltbush Spider Grass Earth Grass Scrambled Eggs Small-flowered Goodenia Blown Grass Hoary Sunray Woolly-head Mat-rush Hairy Fissure weed Woolly fruit Copperburr Bush Minuria Burr Stickseed Pussy tails Grey Sunray Common White Sunray Brilliant Sunray Clay Sunray Sand Twinleaf Gall Weed Shrubby Twinleaf Violet Twinleaf White-top Short-winged Copperburr Slender Groundsel Corrugated Sida New Zealand Spinach Common Sunray Club hair New Holland Daisy Golden Everlasting</p>

# PENARIE



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Undulating Plains, Low Rises and Levees	Sanctuaries, Swales and Dune Crests
VEGETATION TYPE	Bladder Saltbush Chenopod Shrubland.	Black / Pearl Bluebush Chenopod Shrubland.	Mallee Woodland.
GEOLOGY & SOILS	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.	Low shrubland to low open shrubland dominated by Pearl Bluebush and/or Black Bluebush. Aeolian, deep calcareous sands and loams, red-brown duplex sandy soils with clay subsoil.	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.
LOCATION EXAMPLE	Southern end of Prungle Mail Rd.	Eastern side of Pitarpunga Lake, eastern side of Macommon Lake.	Paika Lake Rd south east of Penarie, Kyalite – Bairanald Rd, Bairanald – Moulamein Rd, Hatfield Rd approx 10km north of Bairanald to Penarie.
TREES > 8 m	<i>Acacia homalophylla</i> Yarran	<i>Callitris glaucophylla</i> <sup>a</sup> <i>Hakea tephrosperma</i> <sup>a</sup> White Cypress Pine Hooked Needlewood	<i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i> Hooked Needlewood Sugarwood
SHRUBS & SMALL TREES 2 - 8 m	<i>Atriplex nummularia</i> <sup>a</sup> <i>Chenopodium nitraiaceum</i> <i>Eremophila sturtii</i> Old Man Saltbush Nitre Goosefoot Turpentine	<i>Acacia melvillei</i> <i>A. oswaldii</i> <i>Alectryon oleifolius</i> subsp. <i>canescens</i> <sup>a</sup> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i> Myall Miljee Rosewood Old Man Saltbush Erubush	<i>Acacia colletioides</i> <i>A. hakeoides</i> <i>A. halliana</i> <i>A. ligulata</i> <i>A. microcarpa</i> <i>A. oswaldii</i> <i>Atriplex nummularia</i> <i>Bossiaea walkeri</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila deserti</i> <i>Eucalyptus dumosa</i> <i>E. gracilis</i> <i>E. oleosa</i> <i>E. socialis</i> <i>Exocarpos aphyllus</i> <i>Hakea leucoptera</i> <i>Pittosporum phylliracoides</i> <i>Santalum murrayanum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>petiolaris</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i> <i>Templetonia egena</i> Spine Bush Western Black Wattle Manna Wattle Sandhill Wattle Manna Wattle Miljee Old Man Saltbush Cactus Pea Narrow leaf Hoppbush Ellangowan Poison-bush Congo Mallee Yorrell Red Mallee Pointed Mallee Leafless Cherry Needlewood Butterbush Bitter Quandong Fine leaf Desert Cassia Phyllocinous Desert Cassia Narrow leaf Desert Cassia Desert Broombush

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			
<p><i>Atriplex lindleyi</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana decalvans</i> <i>M. pyramidata</i> <i>M. turbinata</i> <i>Malacocera tricornis</i> <i>Rhagodia spinescens</i> <i>Sclerolaena bicornis</i> var. <i>bicornis</i> <i>S. intricata</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i><sup>6</sup></p>	<p>Eastern Flat-top Saltbush Bladder Saltbush Ruby Saltbush Black Cottonbush Black Bluebush Satin Bluebush Soft-horns Thorny Saltbush Goathead Burr Tangled Poverty-bush Streaked Poverty-bush Slender Glasswort</p>	<p><i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> <i>A. leptocarpa</i> <i>A. lindleyi</i> <i>A. pseudocampaulata</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana appressa</i> <i>M. decalvans</i> <i>M. georgei</i> <i>M. pyramidata</i> <i>M. sedifolia</i><sup>1</sup> <i>Malacocera tricornis</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena divaricata</i> <i>S. intricata</i> <i>S. muricata</i> <i>S. tricuspis</i> <i>Tecticornia tenuis</i></p>	<p><i>Acacia sclerophylla</i> <i>Atriplex acutibractea</i> subsp. <i>acutibractea</i> <i>At. eardleyae</i> <i>A. lindleyi</i> <i>A. stipitata</i> <i>A. vesicaria</i> <i>Beyeria opaca</i> <i>Chenopodium curvispicatum</i> <i>Chenopodium desertorum</i> <i>Daviesia arenaria</i> <i>Enchylaena tomentosa</i> <i>Eremophila glabra</i> <i>Eutaxia microphylla</i> <i>Grevillea huegelii</i> <i>Maireana</i> spp. <i>Nitraria billardierei</i> <i>Olearia pimeleoides</i> <i>Rhagodia spinescens</i> <i>Roepora eremaea</i> <i>Sclerolaena bicornis</i> var. <i>bicornis</i> <i>Sclerolaena diacantha</i> <i>S. obliquicuspis</i> <i>Westringia rigida</i></p>
<p><i>Brachycome lineariloba</i> <i>Calocephalus sonderi</i> <i>Calotis cuneifolia</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i><sup>6</sup> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>D. paradoxus</i> <i>Eragrostis australasica</i><sup>4</sup> <i>Hyalosperma glutinosum</i> <i>Lachnagrostis filiformis</i> <i>Plantago drummondii</i> <i>Pycnosorus chrysanthus</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Senecio glossanthus</i> <i>Triptilodiscus pygmaeus</i> <i>Velleia paradoxax</i></p>	<p>Hard head Daisy Pale Beauty-heads Purple Burr-daisy Round-leaf Pigface Twin-horned Copperburr Cannon-ball Canegrass Golden Sunray Blown Grass Dark Sago weed Golden Billy-buttons Grey Sunray White-top Slender Groundsel Common Sunray Spur Velleia</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa elegantissima</i> <i>Austrostipa nitida</i> <i>A. nodosa</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Brachycome lineariloba</i> <i>Calandrinia eremaea</i> <i>Calocephalus sonderi</i> <i>Dysphania pumilio</i> <i>Crassula colorata</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eragrostis dielsii</i> <i>Homopholis prolata</i> <i>Lachnagrostis filiformis</i> <i>Lepidium monophloecoides</i> <i>Minuria cunninghamii</i> <i>M. leptophylla</i> <i>Panicum decompositum</i> <i>Rhodanthe corymbiflora</i> <i>R. floribunda</i> <i>Rytidosperma caespitosa</i> <i>Sclerolaena brachyptera</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonioides</i></p>	<p>Creeping Saltbush Feather Speargrass Balcarra Speargrass Hard head Daisy Small Purslane Cannon-ball Einadia nutans subsp. <i>nutans</i> Erodium crinitum Goodenia willisiana Helichysum leucopsideum Isoetopsis graminifolia Leptidium leptopetalum Lomandra leucocephala Maireana sclerolaenoides Marsdenia australis Omphalappula concava Podolepis jaceoides Ptilotus nobilis <i>P. seminudus</i> <i>P. spathulatus</i> Rhodanthe corymbiflora <i>R. stuartiana</i> Roepora apiculata <i>R. aurantiaca</i> subsp. <i>aurantiaca</i> <i>R. glauca</i> <i>R. iococarpa</i> Rytidosperma setacea Senecio glossanthus Tetragonia tetragonioides Triodia scariosa<sup>2</sup> Wahlenbergia fluminalis</p>

**GROUND  
COVERS**

# ROTO (SOUTHERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Valleys and Floodplains	Sandplains and Minor Dunefields	Sandplains and Low Rises
VEGETATION TYPE	Bimble Box Woodland.	Callitris Mixed Woodland	Belah – Rosewood Woodland
GEOLOGY & SOILS	Open Bimble Box woodland on floodplains and wide valleys with grassy understorey. Alluvial, red loams.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah. Alluvial, red loams.	Low woodland to low open woodland dominated by Belah and Rosewood, with and open shrubby understorey on sandplains and lunettes. Alluvial or aeolian, red or brown calcareous loams or loamy sands.
LOCATION EXAMPLE	Euabolong – Hillston Rd, approximately 7.1 km east of the Kidman Way.	Trida – Roto Rd at the base of Warranary Hill, Hillston – Matakana Rd north of Willandra Creek.	Trida area, adjacent to Willandra Ck floodplain
TREES > 8 m	<p><i>Casuarina pauper</i>  <i>Eremophila mitchellii</i>  <i>Eucalyptus populinea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p>Black Oak                      Budda                      Bimble Box                      Wilga                      Hooked Needlewood</p>	<p><i>Acacia doratxyylon</i>  <i>A. homalophylla</i>  <i>Allocasuarina luehmannii</i>  <i>Brachychiton populineus</i> subsp. <i>trilobus</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus dwyeri</i>  <i>E. intertexta</i>  <i>E. populinea</i> subsp. <i>bimbil</i>  <i>Geijera parviflora</i>  <i>Hakea tephrosperma</i></p> <p>Currawang                      Yarran                      Bull Oak                      Kurratong                      White Cypress Pine                      Dwyers Mallee Gum                      Red Box                      Bimble Box                      Wilga                      Hooked Needlewood</p>	<p><i>Callitris glaucophylla</i>  <i>Casuarina pauper</i>  <i>Geijera parviflora</i>  <i>Myoporum platycarpum</i></p> <p>White Cypress Pine                      Black Oak                      Wilga                      Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i>  <i>Eremophila longifolia</i></p> <p>Cooba                      Ernubush</p>	<p><i>Acacia calamifolia</i>  <i>A. deanei</i> subsp. <i>paucijuga</i>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>Alectryon oleifolius</i> subsp. <i>canescens</i>  <i>Bertya cunninghamii</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>D. v.</i> subsp. <i>spatulata</i>  <i>Eremophila longifolia</i>  <i>Pitiosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>zygophylla</i></p> <p>Wallowa                      Green Wattle                      Western Black Wattle                      Miljee                      Rosewood                      Gooma Bush                      Narrow leaf Hopbush                      Spoon leaf Hopbush                      Ernubush                      Butterbush                      Narrow leaf Desert Cassia</p>	<p><i>Acacia melvillei</i>  <i>Acacia victoriae</i>  <i>Alectryon oleifolius</i>  <i>Apophyllum anomalum</i>  <i>Eremophila sturtii</i>  <i>Exocarpos aphyllus</i>  <i>Myoporum montanum</i>  <i>Senna artemisioides</i> subsp. <i>petiolaris</i></p> <p>Mvail                      Prickly Wattle                      Rosewood                      Warrior Bush                      Turpentine                      Leafless Cherry                      Western Boobialla                      Phylloclinous Desert Cassia</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Atriplex pseudocampanulata</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena lanicuspis</i></p>	<p>Mealy Saltbush Ruby Saltbush Woolly Copperburr</p>	<p><i>Chenopodium desertorum</i> <i>Eriemophila glabra</i> <i>Goodenia ovata</i> <i>Rhagodia spinescens</i> <i>Sclerolaena stelligera</i> <i>S. tricuspidis</i></p>	<p>Desert Goosefoot Tar Bush Hop Goodenia Thorny Saltbush Star Copperburr Streaked Poverty-bush</p>	<p><i>Enchylaena tomentosa</i> <i>Maireana brevifolia</i> <i>M. erioclada</i> <i>M. pyramidata</i> <i>Sclerolaena diacantha</i> <i>S. patenticuspis</i></p> <p>Ruby Saltbush Yanga Bush Rosy Bluebush Black Bluebush Grey Copperburr Spear-fruit Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Chrysocephalum semipapposum</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Maireana humilima</i> <i>Rytidosperma caespitosa</i> <i>Sida cunninghamii</i> <i>Xerochrysum bracteatum</i></p>	<p>Creeping Saltbush Rough Speargrass Clustered Everlasting Climbing Saltbush Spider Grass Dwarf Bluebush White-top Ridge Sida Golden Everlasting</p>	<p><i>Ajuga australis</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>scabra</i> <i>Cassytha melantha</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Convulvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Minuria integririma</i> <i>Podolepis arachnoidea</i> <i>Rytidosperma caespitosa</i> <i>Sida trichopoda</i> <i>Solanum esuriale</i> <i>Stypandra glauca</i></p>	<p>Australian Bugle Creeping Saltbush Rough Speargrass Mallee Strangle vine Yellow Buttons Clustered Everlasting Australian Bindweed Climbing Saltbush Native Jasmine Smooth Minuria Clustered Copper-wire Daisy White-top High Sida Quena Nodding Blue-lily</p>	<p><i>Atriplex suberecta</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Tetragonia tetragonioidea</i> <i>Triptilodiscus pygmaeus</i> <i>Vittadinia gracilis</i></p> <p>Lagoon Saltbush Rough Speargrass Climbing Saltbush Grey Sunray White-top Corrugated Sida Quena New Zealand Spinach Common Sunray Woolly New Holland Daisy</p>

# ROTO



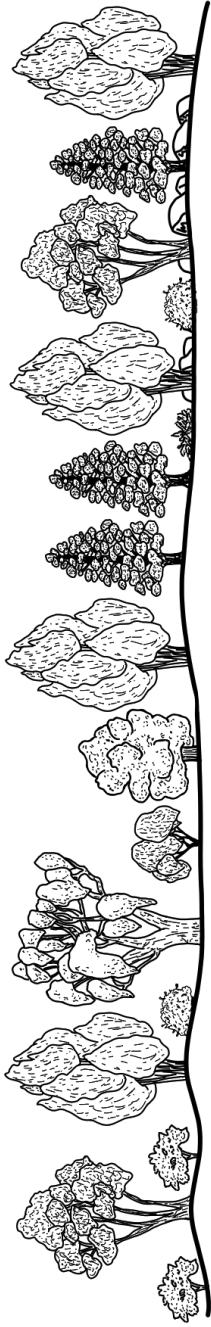
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Sandplains, Swales and Dune Crests	Sandplains and Minor Dunefields	Rocky Outcrops
VEGETATION TYPE	Mallee Woodland.	Callitris Mixed Woodland	Rocky Outcrop Woodland
GEOLOGY & SOILS	Tall shrubland to low woodland dominated by multi-stemmed mallee eucalypts. Aeolian, sandy red loams.	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.	Low open woodland with exposed rock and sparse groundcover. Sedimentary, sandstone – conglomerate, sands and loams with a gravelly surface.
LOCATION EXAMPLE	South of Roto on the Hillston Rd, Roto – Matakana Rd.	Trida – Roto Rd at the base of Warranary Hill, Hillston – Matakana Rd north of Willandra Creek.	Warranary Hill, Keginni Range.
TREES > 8 m	<p><i>Callitris glaucophylla</i></p> <p>White Cypress Pine</p>	<p>Currawang</p> <p>Yarran</p> <p>Bull Oak</p> <p>Kurrajong</p> <p>White Cypress Pine</p> <p>Dwyers Mallee Gum</p> <p>Red Box</p> <p>Bimble Box</p> <p>Wilga</p> <p>Hooked Needlewood</p>	<p>Currawang</p> <p>Kurrajong</p> <p>White Cypress Pine</p> <p>Black Oak</p> <p>Budda</p> <p>Red Box</p> <p>Bimble Box</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia colletioides</i></p> <p><i>A. flexifolia</i></p> <p><i>Dodonaea viscosa</i> subsp. <i>angustissima</i></p> <p><i>Eucalyptus dumosa</i></p> <p><i>E. gracilis</i></p> <p><i>E. leptophylla</i></p> <p><i>E. socialis</i></p> <p><i>Senna artemisioides</i> subsp. <i>filifolia</i></p> <p><i>S. artemisioides</i> subsp. <i>petiolaris</i></p> <p><i>S. artemisioides</i> subsp. <i>zygophylla</i></p>	<p><i>Acacia calamifolia</i></p> <p><i>A. deanei</i> subsp. <i>paucijuga</i></p> <p><i>A. hakeoides</i></p> <p><i>A. oswaldii</i></p> <p><i>Alectryon oleifolius</i> subsp. <i>canescens</i></p> <p><i>Bertya cunninghamii</i></p> <p><i>Dodonaea viscosa</i> subsp. <i>angustissima</i></p> <p><i>D. v. subsp. spatulata</i></p> <p><i>Eremophila longifolia</i></p> <p><i>Pittosporum phylliraeoides</i></p> <p><i>Senna artemisioides</i> subsp. <i>zygophylla</i></p>	<p><i>Acacia aneura</i></p> <p><i>A. decora</i><sup>4</sup></p> <p><i>Alectryon oleifolius</i></p> <p><i>Beyeria viscosa</i></p> <p><i>Dodonaea lobulata</i></p> <p><i>D. viscosa</i> subsp. <i>angustissima</i><sup>5</sup></p> <p><i>Eremophila serrulata</i></p> <p><i>E. sturtii</i><sup>5</sup></p> <p><i>E. morrisii</i></p> <p><i>E. vicina</i><sup>16</sup></p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Daviesia arenaria</i>  <i>Olearia pimeleoides</i>  <i>Rhagodia spinescens</i>  <i>Roeperia eremaea</i>  <i>Sclerolaena dicrantha</i>  <i>Westringia rigida</i></p> <p>Sandhill Bitter-pea  Showy Daisy-bush  Thorny Saltbush  Climbing Twinleaf  Grey Copperburr  Stiff Western Rosemary</p>	<p><i>Chenopodium desertorum</i>  <i>Eriemophila glabra</i>  <i>Goodenia ovata</i>  <i>Rhagodia spinescens</i>  <i>Sclerolaena stelligera</i>  <i>S. tricuspidis</i></p> <p>Desert Goosefoot  Tar Bush  Hop Goodenia  Thorny Saltbush  Star Copperburr  Streaked Poverty-bush</p>	<p><i>Philothea linearis</i>  <i>Phyllanthus tuernrohrii</i></p> <p>Narrow-leaf Waxflower  Sand Spurge</p>
<p><b>GROUND COVERS</b></p>	<p><i>Austrostipa scabra</i> subsp. <i>scabra</i>  <i>Goodenia wilisiana</i>  <i>Maireana sclerolaenoides</i>  <i>Minuria leptophylla</i>  <i>Ptilotus exaltatus</i> var. <i>exaltatus</i>  <i>Triodia scariosa</i><sup>2</sup>  <i>Vittadinia pterochaeta</i></p> <p>Rough Speargrass  Sandhill Goodenia  Woolly fruit Copperburr  Minnie Daisy  Showy Foxtail  Porcupine Grass  Rough Fuzzweed</p>	<p><i>Ajuga australis</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa scabra</i> subsp. <i>scabra</i>  <i>Cassyltha melantha</i>  <i>Chrysocephalum apiculatum</i>  <i>C. semipapposum</i>  <i>Convolvulus erubescens</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Jasminum didymum</i> subsp. <i>lineare</i>  <i>Minuria integririma</i>  <i>Podolepis arachnoidea</i>  <i>Rytidosperma caespitosa</i>  <i>Sida trichopoda</i>  <i>Solanum esuriale</i>  <i>Stypantra glauca</i></p> <p>Australian Bugle  Creeping Saltbush  Rough Speargrass  Mallee Strangle vine  Yellow Buttons  Clustered Everlasting  Australian Bindweed  Climbing Saltbush  Native Jasmine  Smooth Minuria  Clustered Copper-wire Daisy  White-top  High Sida  Quena  Nodding Blue-ily</p>	<p><i>Arthropodium minus</i>  <i>Calotis cuneifolia</i>  <i>C. hispidula</i>  <i>Cheilanthes australenuifolia</i>  <i>Eragrostis lacunaria</i>  <i>Geococcus pusillus</i>  <i>Gonocarpus elatus</i>  <i>Hybanthus monopetalus</i>  <i>Isotoma axillaris</i>  <i>Lomandra multiflora</i>  <i>Pandorea pandorana</i>  <i>Pleurosorus ruitifolius</i>  <i>Sigesbeckia orientalis</i>  <i>Situarina muelleri</i>  <i>Thyridolepis mitchelliana</i></p> <p>Small Vanilla-ily  Purple Burr-daisy  Bogan Flea  Rock Fern  Purple Lovegrass  Earth Cress  Hill Raspwort  Slender Violet  Showy Isotome  Many-flowered Mat-rush  Inland Wonga Vine  Blanket Fern  Indian Weed  Spoon Cudweed  Mulga Grass</p>

# ROTO (EASTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

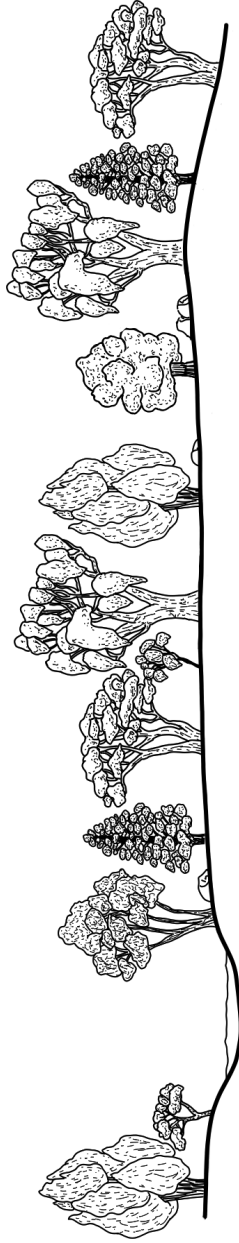
Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Sandplains and Minor Dunefields	Lower Slopes and Hills	Rocky Outcrops
VEGETATION TYPE	Callitris Mixed Woodland (Sandplains and minor dunefields).	Box - Callitris Woodland	Rocky Outcrop Woodland
GEOLOGY & SOILS	Woodlands to tall woodland dominated by White Cypress Pine with emergent eucalypts and Belah on sandplains and minor dunefields. Alluvial, red loams.	Woodland to open forest on low hills and slopes with Bimble Box and other eucalypts and a predominantly herbaceous understorey. Alluvial, loamy red earths.	Low open woodland with exposed rock and sparse groundcover. Sedimentary, sandstone - conglomerate, sands and loams with a gravelly surface.
LOCATION EXAMPLE	Trida – Roto Rd at the base of Warranary Hill, Hillston – Matakana Rd north of Willandra Creek.	Warranary Range, Keginni Range.	Warranary Hill, Keginni Range.
TREES > 8 m	<p>Acacia doratoxylon A. homalophylla Allocasuarina luehmanna Brachychiton populneus subsp. trilobus Callitris glaucophylla Eucalyptus divyeri E. intertexta E. populnea subsp. bimbil Geijera parviflora Hakea tephrosperma</p> <p>Currawang Yarran Bull Oak Kurrajong White Cypress Pine Dwyer's Mallee Gum Red Box Bimble Box Wilga Hooked Needlewood</p>	<p>Acacia homalophylla Allocasuarina luehmanna Brachychiton populneus Callitris glaucophylla Eremophila mitchellii Eucalyptus divyeri E. intertexta E. populnea ssp. bimbil Geijera parviflora Hakea tephrosperma Myoporum platycarpum</p> <p>Yurran Bull Oak Kurrajong White Cypress Pine Budda Dwyer's Mallee Gum Red Box Bimble Box Wilga Hooked Needlewood Sugarwood</p>	<p>Acacia doratoxylon Brachychiton populneus subsp. trilobus Callitris glaucophylla Casuarina pauper Eremophila mitchellii Eucalyptus intertexta E. populnea subsp. bimbil</p> <p>Currawang Kurrajong White Cypress Pine Black Oak Budda Red Box Bimble Box</p>
SHRUBS & SMALL TREES 2 - 8 m	<p>Acacia calamifolia A. deanei subsp. paucijuga A. hakeoides A. oswaldii Alectryon oleifolius subsp. canescens Berya cunninghamii Dodonaea viscosa subsp. angustissima D. v. subsp. spatulata Eremophila longifolia Pitopsisporum phylliraeoides Senna artemisioides subsp. zygophylla</p> <p>Wallowa Green Wattle Western Black Wattle Miljee Rosewood Gooma Bush Narrow leaf Hoppush Spoon leaf Hoppush Emubush Butterbush Narrow leaf Desert Cassia</p>	<p>Acacia calamifolia A. deanei subsp. paucijuga A. decora A. oswaldii A. pendula Alectryon oleifolius Dodonaea viscosa subsp. spatulata Eremophila longifolia Hakea leucopetra Pitopsisporum phylliraeoides Senna artemisioides subsp. zygophylla</p> <p>Wallowa Green Wattle Western Silver Wattle Miljee Boree Rosewood Spoon-leaf Hoppush Emubush Needlewood Butterbush Narrow-leaf Desert Cassia</p>	<p>Acacia aneura A. decora<sup>2</sup> Alectryon oleifolius Berya viscosa Dodonaea lobulata D. viscosa subsp. angustissima<sup>2</sup> Eremophila serrulata E. sturtii<sup>2</sup> Eucalyptus morrisii E. vicina<sup>16</sup></p> <p>Mulga Western Silver Wattle Rosewood Sticky Wallaby-bush Lobed-leaf Hoppush Narrow-leaf Hoppush Green Fuchsia-bush Turpentine Grey Mallee Hills Red Gum</p>



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p><i>Chenopodium desertorum</i> <i>Eremophila glabra</i> <i>Goodenia ovata</i> <i>Rhagodia spinescens</i> <i>Sclerolaena stelligera</i> <i>S. tricuspidis</i></p> <p>Desert Goosefoot Tar Bush Hop Goodenia Thorny Saltbush Star Copperburr Streaked Poverty-bush</p>	<p><i>Dodonaea viscosa</i> ssp. <i>cuneata</i> <i>Enchylaena tomentosa</i> <i>Maireana microphylla</i> <i>Melichrus urceolatus</i> <i>Olearia pimeleoides</i> <i>Senna artemisioides</i> subsp. <i>artemisioides</i></p> <p>Wedge-leaf Hoppbush Ruby Saltbush Eastern Cottonbush Urn Heath Showy Daisy-Bush Punty Bush</p>	<p><i>Phllotheca linearis</i> <i>Phyllanthus tuernrohrii</i></p> <p>Narrow-leaf Waxflower Sand Spurge</p>
<p><b>GROUND COVERS</b></p>	<p><i>Ajuga australis</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>scabra</i> <i>Cassyltha melantha</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Convolvulus erubescens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Jasminum didymum</i> subsp. <i>lineare</i> <i>Minuria integririma</i> <i>Podolepis arachnoidea</i> <i>Fytidosperma caespitosa</i> <i>Sida trichopoda</i> <i>Solanum esuriale</i> <i>Stypania glauca</i></p> <p>Australian Bugle Creeping Saltbush Rough Speargrass Mallee Strangle vine Yellow Buttons Clustered Everlasting Australian Bindweed Climbing Saltbush Native Jasmine Smooth Minuria Clustered Copper Wire Daisy White-top High Sida Quena Nodding Blue-lily</p>	<p><i>Aristida behriana</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Cheilanthes sieberi</i> <i>Chloris truncata</i> <i>Chrysocephalum apiculatum</i> <i>C. semipapposum</i> <i>Lomandra multiflora</i> <i>Poa sieberiana</i> var. <i>sieberiana</i> <i>Xerochrysum bracteatum</i> <i>X. viscosum</i></p> <p>Bunch Wiregrass Rough Speargrass Mulga Fern Windmill Grass Yellow Buttons Clustered Everlasting Many-flowered Mat-rush Fine-leaf Tussock Grass Golden Everlasting Sticky Everlasting</p>	<p><i>Arthropodium minus</i> <i>Calotis cuneifolia</i> <i>C. hispidula</i> <i>Cheilanthes australenuifolia</i> <i>Eragrostis lacunaria</i> <i>Geococcus pusillus</i> <i>Gonocarpus elatus</i> <i>Hybanthus monopetalus</i> <i>Isotoma axillaris</i> <i>Lomandra multiflora</i> <i>Pandorea pandorana</i> <i>Pleurosoros rutifolius</i> <i>Sigesbeckia orientalis</i> <i>Stuartina muelleri</i> <i>Thyridolepis mitchelliana</i></p> <p>Small Vanilla-lily Purple Burr-daisy Bogan Flea Rock Fern Purple Lovegrass Earth Cress Hill Raspwort Slender Violet Snowy Isotome Many-flowered Mat-rush Inland Wonga Vine Blanket Fern Indian Weed Spoon Cudweed Mulga Grass</p>

# SAVERNAKE



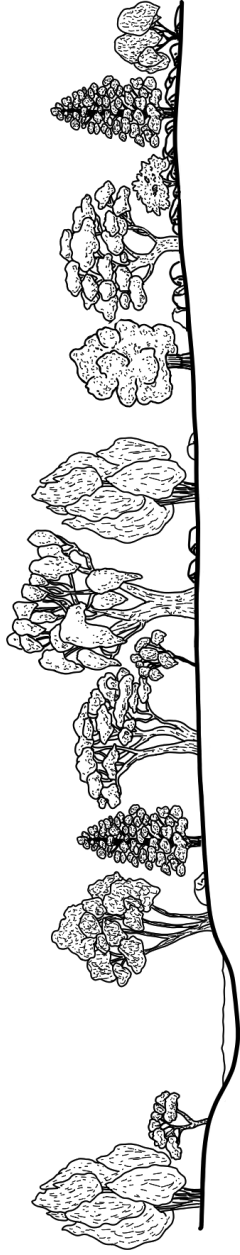
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Plains	Lunettes and Sand Ridges
VEGETATION TYPE	Riverine Forest.	Grey Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian: well drained sandy-loams and loams.
LOCATION EXAMPLE	Murray River frontage, Cottadidda State Forest, Mulwala State Forest, Boomanoomana State Forest.	Savernake area, Fergusons Tank Travelling Stock Reserve, Wangamong Travelling Stock Reserve.	Wahgunyah State Forest.
TREES > 8 m	<p><i>Acacia implexa</i>  <i>Allocasuarina luehmannii</i><sup>?</sup>  <i>Callitris glaucophylla</i><sup>?</sup>  <i>Eucalyptus camaldulensis</i>  <i>E. melliodora</i>  <i>E. microcarpa</i><sup>?</sup></p>	<p><i>Allocasuarina luehmannii</i><sup>?</sup>  <i>Callitris glaucophylla</i><sup>?</sup>  <i>Eucalyptus melliodora</i><sup>?</sup>  <i>E. microcarpa</i></p>	<p><i>Acacia homalophylla</i>  <i>Allocasuarina luehmannii</i>  <i>Banksia marginata</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus blakeyi</i>  <i>E. melliodora</i>  <i>E. microcarpa</i><sup>?</sup>  <i>Hakea tephrosperma</i></p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia acinacea</i>  <i>A. pycnantha</i>  <i>Exocarpos strictus</i></p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. pycnantha</i>  <i>Bursaria spinosa</i>  <i>Dodonaea viscosa</i> subsp. <i>spatulata</i>  <i>Eremophila longifolia</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. pycnantha</i>  <i>Calytrix tetragona</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Hakea leucoptera</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>petiolaris</i></p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>				
	<p>Cassinia sifton Dillwynia cinerascens Eutaxia microphylla</p>	<p>Dolly Bush Grey Parrot-pea Mallee Bush-pea</p>	<p>Dodonaea viscosa subsp. cuneata Maireana microphylla Sclerolaena muricata</p>	
	<p>Altermanthera denticulata Azolla filiculoides Brachycome basaltica var. gracilis Calotis hispidula Carex appressa C. tereticaulis Centipeda cunninghamii Citrum flaccidum Cynogeton procerum<sup>5</sup> Dianella porraceae Dichondra repens Eleocharis acuta<sup>5</sup> Geranium solanderi Goodenia heteromera Isoplepis victoriensis Juncus ingens<sup>5</sup> Lachnogrostis filiformis Lobelia concolor Marsilea drummondii Myosurus minimus var. australis Myriophyllum papillosum<sup>5</sup> Oxalis perenmans Paspalidium jubiflorum Poa tordeana Pycnosorus globosus Ranunculus pumilio Rydidosperma caespitosa R. duttoniana Scleranthus minusculus Vallisneria australis Wahlenbergia fluminalis<sup>5</sup></p>	<p>Lesser Joyweed Red Azolla Swamp Daisy Bogan Flea Tail Sedge Rush Sedge Common Sneezeweed Darling Lily Water-ribbons Smooth Flax-lily Kidneyweed Common Spike-rush Australian Cranesbill Spreading Goodenia Victorian Club sedge Giant Rush Blown Grass Poison Pratia Common Nardoo Mouse tail Water-milfoil Grassland Wood sorrel Warrego Summer-grass Sweet Swamp grass Drumsticks Ferry Buttercup White-top Brown back Wallaby Grass Cushion Knawel Eel-weed River Bluebell</p>	<p>Acacia lineata Chenopodium desertorum Dodonaea viscosa subsp. cuneata Lissanthe strigosa Pimelea linifolia P. stricta</p>	
		<p>Altermanthera denticulata Anthriscachne scaber Arthropodium minus Atriplex semibaccata Austrostipa scabra subsp. falcata Carex inversa Einadia nutans subsp. nutans Enteropogon acicularis Lachnogrostis filiformis Leiocarpa panaetoides Leptorhynchus elongatus Pycnosorus globosus Rhodanthe corymbiflora Rydidosperma caespitosa Sida corrugata</p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Rough Speargrass Knob Sedge Climbing Saltbush Spider Grass Blown Grass Woolly Buttons Lanky Buttons Drumsticks Grey Sunray White-top Corrugated Sida</p>	<p>Actinobole uliginosum Anthriscachne scaber Aristida behriana A. jerichoensis Arthropodium limbricatum A. minus Austrostipa densiflora A. scabra subsp. falcata Chamaesyce drummondii Cheilanthes australenuifolia Chrysocephalum apiculatum Cynodon dactylon Einadia nutans subsp. nutans Enteropogon avenaceus E. nigricans Enteropogon acicularis E. ramosus Eragrostis lacunaria Geranium retrosum G. solanderi Glycine clandestina Goodenia fascicularis G. pinnatifida Homopholis prolata Lomandra leucocephala Maireana enclytaenoides Microtis unifolia Rydidosperma caespitosa Senecio quadridentatus Sida corrugata Swainsona phacoides Triptilodiscus pygmaeus Vittadinia cuneata V. gracilis Wahlenbergia communis Wurmbea dioica subsp. dioica</p>
	<p><b>GROUND COVERS</b></p>		<p>Flannel Cudweed Common Wheatgrass Bunch Wiregrass No. 9 Wiregrass Nodding Chocolate-lily Small Vanilla-lily Foxtail Speargrass Rough Speargrass Flat Spurge Rock Fern Yellow Buttons Couch Grass Climbing Saltbush Common Bottlewashers Pappus Grass Spider Grass Curly Windmill Grass Purple Lovegrass Common Cranesbill Australian Cranesbill Twining Glycine Silky Goodenia Scrambled Eggs Rigid Panic Woolly-head Mat-rush Wingless Fissure-weed Common Onion Orchid White-top Cotton Fireweed Corrugated Sida Lilac Darling Pea Common Sunray Fuzzweed Woolly New Holland Daisy Tufted Bluebell Early Nancy</p>	

# SAVERNAKE (SOUTH-WESTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Rivers, Floodplains and Levees	Plains	Rocky Outcrops
VEGETATION TYPE	Riverine Forest.	Grey Box Woodland.	Rocky Outcrop Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Low open woodland with exposed rock and sparse groundcover. Volcanic or metamorphic, granitic or metasedimentary coarse sands.
LOCATION EXAMPLE	Murray River frontage, Cottadidda State Forest, Mulwala State Forest, Boomanoomana State Forest.	Savernake area, Fergusons Tank Travelling Stock Reserve, Wangamong Travelling Stock Reserve.	Mt Boomanoomah (metamorphic), The Boat Hill (volcanic).
TREES > 8 m	<p><i>Acacia implexa</i>  <i>Allocasuarina luehmannii</i><sup>§</sup>  <i>Callitris glaucophylla</i><sup>§</sup>  <i>Eucalyptus camaldulensis</i>  <i>E. melliodora</i>  <i>E. microcarpa</i><sup>§</sup></p> <p>Hickory Wattle  Bull Oak  White Cypress Pine  River Red Gum  Yellow Box  Grey Box</p>	<p><i>Allocasuarina luehmannii</i><sup>§</sup>  <i>Callitris glaucophylla</i><sup>§</sup>  <i>Eucalyptus melliodora</i><sup>§</sup>  <i>E. microcarpa</i></p> <p>Bull Oak  White Cypress Pine  Yellow Box  Grey Box</p>	<p><i>Acacia doratoxylon</i>  <i>A. implexa</i>  <i>Allocasuarina luehmannii</i>  <i>A. verticillata</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus dwyeri</i>  <i>E. melliodora</i>  <i>E. microcarpa</i>  <i>Exocarpos cupressiformis</i></p> <p>Currawang  Hickory Wattle  Bull Oak  Drooping Sheoak  White Cypress Pine  Dwyers Mallee Gum  Yellow Box  Grey Box  Native Cherry</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia acinacea</i>  <i>A. pycnantha</i>  <i>Exocarpos strictus</i></p> <p>Gold-dust Wattle  Golden Wattle  Dwarf Cherry</p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. pycnantha</i>  <i>Bursaria spinosa</i>  <i>Dodoniaea viscosa</i> subsp. <i>spatulata</i>  <i>Eremophila longifolia</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p> <p>Gold-dust Wattle  Grey Mulga  Western Black Wattle  Golden Wattle  Native Blackthorn  Spoon leaf Hopbush  Erubush  Western Boobialla  Butterbush  Quandong  Fine leaf Desert Cassia  Narrow leaf Desert Cassia</p>	<p><i>Acacia pycnantha</i>  <i>Calytrix tetragona</i>  <i>Hakea leucoptera</i>  <i>Pittosporum phylliraeoides</i></p> <p>Golden Wattle  Common Fringe-myrtle  Needlewood  Butterbush</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Cassinia sifton Dillwynia cinerascens Eutaxia microphylla</p>	<p>Dolly Bush Grey Parrot-pea Mallee Bush-pea</p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Maireana microphylla</i> <i>Sclerolaena muricata</i></p>	<p>Wedge leaf Hoppbush Eastern Cottonbush Five spined Bassia</p>	<p>Cassinia sifton Dillwynia sericea <i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Indigofera australis</i></p>	<p>Dolly Bush Showy Parrot-pea Wedge leaf Hoppbush Hill Indigo</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Azolla filiculoides</i> <i>Brachycome basaltica</i> var. <i>gracilis</i> <i>Calotis hispida</i> <i>Carex appressa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Dianella porraceae</i> <i>Dichondra repens</i> <i>Eleocharis acuta</i><sup>5</sup> <i>Geranium solanderi</i> <i>Goodenia heteromera</i> <i>Isolepis victoriensis</i> <i>Juncus ingens</i><sup>5</sup> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myosurus minimus</i> var. <i>australis</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Oxalis perennans</i> <i>Paspalidium jubiflorum</i> <i>Poa tordeana</i> <i>Pycnosorus globosus</i> <i>Ranunculus pumilio</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Scleranthus minusculus</i> <i>Vallisneria australis</i> <i>Wahlenbergia fluminalis</i><sup>5</sup></p>	<p>Lesser Joyweed Red Azolla Swamp Daisy Bogan Flea Tall Sedge Rush Sedge Common Sneezeweed Darling Lily Water-ribbons Smooth Flax-lily Kidneyweed Common Spike-rush Australian Cranesbill Spreading Goodenia Victorian Club sedge Giant Rush Blown Grass Poison Pratia Common Nardoo Mouse tail Water-milfoil Grassland Wood sorrel Warrego Summer-grass Sweet Swamp grass Drumsticks Ferny Buttercup White-top Brown back Wallaby Grass Cushion Knawel Eel-weed River Bluebell</p>	<p><i>Alternanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Anthropodium minus</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Carex inversa</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lachnogrostis filiformis</i> <i>Leiocarpa panaetioides</i> <i>Leptorhynchos elongatus</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Rough Speargrass Knob Sedge Climbing Saltbush Spider Grass Blown Grass Woolly Buttons Lanky Buttons Drumsticks Grey Sunray White-top Corrugated Sida</p>	<p><i>Anthrosachne scaber</i> <i>Anthropodium minus</i> <i>Austrostipa densiflora</i> <i>A. elegantissima</i> <i>A. nodosa</i> <i>A. scabra</i> subsp. <i>scabra</i> <i>Bulbine semibarbata</i> <i>Calandrinia eremaea</i> <i>Carex inversa</i> <i>Centipeda cunninghamii</i> <i>Cheilanthes austrateniuifolia</i> <i>Dianella revoluta</i> <i>Drosera glanduligera</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Geranium solanderi</i> <i>Gonocarpus elatus</i> <i>Homopholis prolata</i> <i>Isotoma axillaris</i> <i>Juncus subsecundus</i> <i>Lepidosperma laterale</i> <i>Lomandra filiformis</i> <i>L. multiflora</i> <i>Pandorea pandorana</i> <i>Poa sieberiana</i> var. <i>sieberiana</i> <i>Pterostylis revoluta</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i> <i>Thysanotus patersonii</i> <i>Vittadinia gracilis</i></p>	<p>Common Wheatgrass Small Vanilla-lily Foxtail Speargrass Feather Speargrass Knotty Speargrass Rough Speargrass Leek Lily Small Purslane Knob Sedge Common Sneezeweed Rock Fern Spreading Flax-lily Scarlet Sundew Climbing Saltbush Australian Cranesbill Hill Raspwort Rigid Panic Showy Isotome Finger Rush Variable Sword-sedge Wattle Mat-rush Many-flowered Mat-rush Inland Wonga Vine Fine leaf Tussock Grass Autumn Greenhood White-top Corrugated Sida Twining Fringe lily Woolly New Holland Daisy</p>

For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

# SAVERNAKE



LANDFORM	Plains	Shallow Wetland	Deep Wetland
VEGETATION TYPE	Grey Box Woodland.	Shallow Wetland.	Deep Wetland.
GEOLOGY & SOILS	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Seasonal or intermittent wetland, meadow, marsh, lake or lagoon with fringing River Red Gum and/or Grey Box. Alluvial, heavy grey clays.	Semi-permanent wetland, billabong, lake or old creek bed often with fringing River Red Gum. Alluvial, heavy grey clays.
LOCATION EXAMPLE	Savername area, Fergusons Tank Travelling Stock Reserve, Wangamong Travelling Stock Reserve.	Native Dog Swamp.	No example known.
TREES > 8 m	<p><i>Allocasuarina luehmanni</i><sup>2</sup>  <i>Callitris glaucophylla</i><sup>2</sup>  <i>Eucalyptus melliodora</i><sup>2</sup>  <i>E. microcarpa</i></p> <p>Bull Oak            White Cypress Pine            Yellow Box            Grey Box</p>	<p><i>Eucalyptus camaldulensis</i><sup>2</sup>  <i>E. microcarpa</i></p> <p>River Red Gum            Grey Box</p>	<p><i>Eucalyptus camaldulensis</i><sup>2</sup></p> <p>River Red Gum</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. pycnantha</i>  <i>Bursaria spinosa</i>  <i>Dodonaea viscosa</i> subsp. <i>spatulata</i>  <i>Eremophila longifolia</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p> <p>Gold-dust Wattle            Grey Mulga            Western Black Wattle            Golden Wattle            Native Blackthorn            Spoon leaf Hopbush            Ernubush            Western Boobialla            Butterbush            Quandong            Fine leaf Desert Cassia            Narrow leaf Desert Cassia</p>	<p><i>Duma florulenta</i><sup>2</sup></p> <p>Lignum</p>	<p>nil</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i>  <i>Maireana microphylla</i>  <i>Sclerolaena muricata</i></p> <p>Wedge leaf Hopbush  Eastern Cottonbush  Five spined Bassia</p>	<p>nil</p>	<p>nil</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i>  <i>Arthropodium minus</i>  <i>Atriplex semibaccata</i>  <i>Austrostipa scabra</i> subsp. <i>falcata</i>  <i>Carex inversa</i>  <i>Einadia nutans</i> subsp. <i>nutans</i>  <i>Anthrosachne scaber</i>  <i>Enteropogon acicularis</i>  <i>Lachnagrostis filiformis</i>  <i>Leiocarpa panaetioides</i>  <i>Leptorhynchos elongatus</i>  <i>Pycnosorus globosus</i>  <i>Rhodanthe corymbiflora</i>  <i>Ryidosperma caespitosa</i>  <i>Sida corrugata</i></p> <p>Lesser Joyweed  Small Vanilla-lily  Creeping Saltbush  Rough Speargrass  Knob Sedge  Climbing Saltbush  Common Wheatgrass  Spider Grass  Blown Grass  Woolly Buttons  Lanky Buttons  Drumsticks  Grey Sunray  White-top  Corrugated Sida</p>	<p><i>Alisma plantago-aquatica</i>  <i>Alternanthera denticulata</i>  <i>Amphibromus macrorhinus</i>  <i>A. nervosus</i>  <i>Carex tereticaulis</i>  <i>Centipeda cunninghamii</i>  <i>Elatine gratioloides</i>  <i>Eleocharis acuta</i>  <i>Eragrostis australasica</i><sup>o</sup>  <i>Juncus ingens</i>  <i>Lythrum hyssopifolia</i>  <i>Marsilea drummondii</i>  <i>Myriophyllum crispatum</i>  <i>Nymphoides crenata</i>  <i>Paspalidium jubiflorum</i>  <i>Persicaria hydropper</i>  <i>P. prostrata</i>  <i>Wahlenbergia fluminalis</i></p> <p>Water Plantain  Lesser Joyweed  Long-rosed Swamp Wallaby-grass  Veined Swamp Wallaby-grass  Swamp Daisy  Rush Sedge  Common Sneezeweed  Waterwort  Common Spike-rush  Canegrass  Giant Rush  Hyssop Loosestrife  Common Nardoo  Common Water-milfoil  Wavy Marshwort  Warrego Summer-grass  Waterpepper  Creeping Knotweed  River Bluebell</p>	<p><i>Cynogelton procerum</i>  <i>Cyperus gymnocaulos</i>  <i>Eleocharis sphacelata</i>  <i>Eragrostis australasica</i><sup>o</sup>  <i>Juncus ingens</i>  <i>Ludwigia peploides</i> subsp. <i>montevidensis</i>  <i>Myriophyllum papillosum</i>  <i>Nymphoides crenata</i>  <i>Otella ovalifolia</i>  <i>Paspalidium jubiflorum</i>  <i>Persicaria decipiens</i>  <i>Phragmites australis</i>  <i>Potamogeton crispus</i>  <i>P. ochreatus</i>  <i>Pseudoraphis spinescens</i>  <i>Typha domingensis</i>  <i>T. orientalis</i>  <i>Vallisneria australis</i></p> <p>Water-ribbons  Spiny Sedge  Tall Spike-rush  Canegrass  Giant Rush  Water Primrose  Water-milfoil  Wavy Marshwort  Swamp Lily  Warrego Summer-grass  Slender Knotweed  Common Reed  Curly Pondweed  Blunt Pondweed  Spiny Mud-grass  Cumbungi  Cumbungi  Eel-weed</p>

# SAVERNAKE



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Plains	Shallow Depressions	Level to Depressed Plains
VEGETATION TYPE	Grey Box Woodland.	Lignum – Goosefoot / Canegrass Swamp.	Boree Woodland.
GEOLOGY & SOILS	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.
LOCATION EXAMPLE	Savernake area, Fergusons Tank Travelling Stock Reserve, Wangamamong Travelling Stock Reserve.	Native Dog Travelling Stock Reserve.	Daysdale area.
TREES > 8 m	<i>Allocasuarina luehmannii</i> <sup>3</sup> <i>Callitris glaucophylla</i> <sup>8</sup> <i>Eucalyptus melliodora</i> <sup>8</sup> <i>E. microcarpa</i>	<i>Eucalyptus camaldulensis</i> <i>E. microcarpa</i>	nil
SHRUBS & SMALL TREES 2 - 8 m	<i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>Acacia hakeoides</i> <i>A. pycnantha</i> <i>Bursaria spinosa</i> <i>Dodonaea viscosa</i> subsp. <i>spatulata</i> <i>Eremophila longifolia</i> <i>Myoporum montanum</i> <i>Pittosporum phylliraeoides</i> <i>Santalum acuminatum</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i>	<i>Atriplex nummularia</i> <i>Chenopodium nitrariaceum</i> <i>Duma florulenta</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i>  Miljee Boree Cooba Old Man Saltbush Emubush



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			
<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Maireana microphylla</i> <i>Sclerolaena muricata</i></p>	<p>Wedge leaf Hopbush Eastern Cottonbush Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Glycyrrhiza acanthocarpa</i> <i>Maireana decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Native Liquorice Black Cottonbush Thorny Saltbush Five spined Bassia</p>
<p><i>Alternanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Arthropodium minus</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Carex inversa</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lachnognostis filiformis</i> <i>Leiocarpa panaetioides</i> <i>Leptorhynchus elongatus</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Rough Speargrass Knob Sedge Climbing Saltbush Spider Grass Blown Grass Woolly Buttons Lanky Buttons Drumsticks Grey Sunray White-top Corrugated Sida</p>	<p><i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Boerhavia dominii</i> <i>Calocephalus sonderi</i> <i>Chamaesyce drummondii</i> <i>Chenopodium melanocarpum</i> <i>Gressa australis</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Dissocarpus biflorus</i> var. <i>biflorus</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>5</sup> <i>E. pallens</i> <i>E. plana</i> <i>Eragrostis australasica</i> <i>Geranium solanderi</i> <i>Juncus arcticola</i> <i>J. flavivus</i> <i>J. raclula</i> <i>Limosella australis</i> <i>Maireana ciliata</i> <i>M. enchylaenoides</i> <i>Marsilea drummondii</i> <i>Sclerolaena brachyptera</i> <i>Senecio cunninghamii</i> <i>Sida corrugata</i> <i>Solanum esuriale</i> <i>Typha domingensis</i> <i>T. orientalis</i> <i>Vittadinia cuneata</i></p>	<p>Creeping Saltbush Lagoon Saltbush Tar Vine Pale Beauty-heads Flat Spurge Black Crumbweed Rosinweed Round-leaf Pigface Twin-horned Copperburr Climbing Saltbush Common Spike-rush Pale Spike-rush Ribbed Spike-rush Canegrass Australian Cranesbill Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Hairy Fissure weed Wingless Fissure-weed Common Nardoo Short-winged Copperburr Bushy Groundsel Corrugated Sida Quena Cumbungi Cumbungi Fuzzweed</p>
			<p><i>Atriplex leptocarpa</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i></p>
<p><b>GROUND COVERS</b></p>			<p>Creeping Saltbush Knotty Speargrass Rough Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Climbing Saltbush Spider Grass Slender Fissure-weed Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Australian Bluebell Early Nancy</p>

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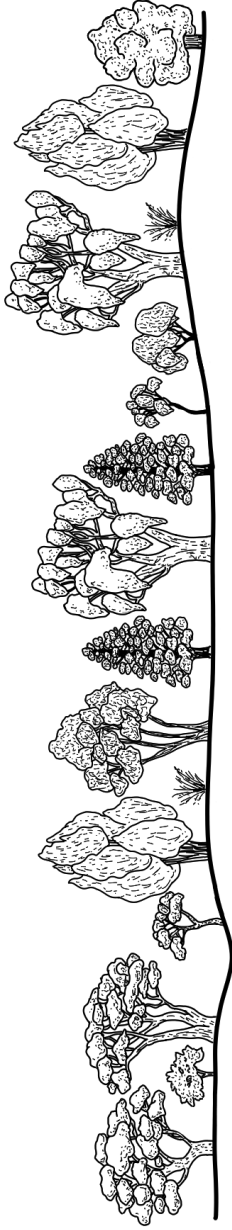
# TUPPAL



LANDFORM VEGETATION TYPE	Rivers, Floodplains and Levees	Shallow Wetland	Deep Wetland
<b>GEOLOGY &amp; SOILS</b>	Riverine Forest.  River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Shallow Wetland.  Seasonal or intermittent wetland, meadow, marsh, lake or lagoon with fringing River Red Gum and/or Grey Box. Alluvial, heavy grey clays.	Deep Wetland.  Semi-permanent wetland, billabong, lake or old creek bed often with fringing River Red Gum. Alluvial, heavy grey clays.
<b>LOCATION EXAMPLE</b>	Millewa State Forest, Tuppall State Forest, Gulpha State Forest, Moira State Forest.	Reed beds north, Duck Lagoon.	Moira Lake.
<b>TREES &gt; 8 m</b>	<p>Acacia implexa Allocasuarina lehmannii<sup>§</sup> Callitris glaucophylla<sup>§</sup> Eucalyptus camaldulensis E. melliodora E. microcarpa<sup>§</sup></p> <p>Hickory Wattle Bull Oak White Cypress Pine River Red Gum Yellow Box Grey Box</p>	Eucalyptus camaldulensis <sup>§</sup>  River Red Gum	Eucalyptus camaldulensis <sup>§</sup>  River Red Gum
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p>Acacia acinacea A. pycnantha Exocarpos strictus</p> <p>Gold-dust Wattle Golden Wattle Dwarf Cherry</p>	Duma florulenta <sup>§</sup>  Lignum	nil

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Cassinia sifton Dillwynia cinerascens Eutaxia microphylla</p>	<p>Dolly Bush Grey Parrot-pea Maillee Bush-pea</p>	<p>nil</p>		
<p><b>GROUND COVERS</b></p>	<p>Alternanthera denticulata Azolla filiculoides Brachycome basaltica var. gracilis Calotis hispida Carex appressa C. tereticaulis Centipeda cunninghamii Crinum fiacoidum Cynogeton procerum<sup>5</sup> Dianella porraceae Dichondra repens Eleocharis acuta<sup>5</sup> Geranium solanderi Goodenia heteromera Isoplepis victoriensis Juncus ingens<sup>5</sup> Lachnagrostis filiformis Lobelia concolor Marsilea drummondii Mycosurus minimus var. australis Myriophyllum papillosum<sup>5</sup> Oxalis perenans Paspalidium jubiflorum Phragmites australis<sup>5</sup> Poa tordeana Pycnosorus globosus Ranunculus pumilio Rytidosperma caespitosa R. duttoniana Scleranthus minusculus Vallisneria australis<sup>5</sup> Wahlenbergia fluminalis</p>	<p>Lesser Joyweed Red Azolla Swamp Daisy Bogan Flea Tall Sedge Rush Sedge Common Sneezeweed Darling Lily Water-ribbons Smooth Flax-lily Kidneyweed Common Spike-rush Australian Cranesbill Spreading Goodenia Victorian Club sedge Giant Rush Blown Grass Poison Pratia Common Nardoo Mouse tail Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Ferry Buttercup White-top Brown back Wallaby Grass Cushion Knawel Eel-weed River Bluebell</p>	<p>Alisma plantago-aquatica Alternanthera denticulata Amphibromus macrorrhinus A. nervosus Brachycome basaltica var. gracilis Carex tereticaulis Centipeda cunninghamii Elatine gratioloides Eleocharis acuta Eragrostis australasica<sup>9</sup> Juncus ingens J. usitatus Lythrum hyssopifolia Marsilea drummondii Myriophyllum crispatum Nymphoides crenata Paspalidium jubiflorum Persicaria hydropper P. prostrata Typha domingensis T. orientalis Wahlenbergia fluminalis</p>	<p>Water Plantain Lesser Joyweed Longrossed Swamp Wallaby-grass Veined Swamp Wallaby-grass Swamp Daisy Rush Sedge Common Sneezeweed Waterwort Common Spike-rush Canegrass Giant Rush Common Rush Hysop Loosestrife Common Nardoo Common Water-milfoil Wavy Marshwort Warrego Summer-grass Waterpepper Creeping Knotweed Cumbungi Cumbungi River Bluebell</p>	<p>Common Sneezeweed Water-ribbons Spiny Sedge Tall Spike-rush Canegrass Yellow Rush Giant Rush Poison Pratia Water Primrose Common Nardoo Water-milfoil Wavy Marshwort Swamp Lily Warrego Summer-grass Slender Knotweed Common Reed Curly Pondweed Spiny Mud-grass Bushy Groundsel Cumbungi Cumbungi Eel-weed</p>
			<p>Centipeda cunninghamii Cynogeton procerum Cyperus gymnocaulos Eleocharis sphacelata Eragrostis australasica<sup>9</sup> Juncus flavidus J. ingens Lobelia concolor Ludwigia peploides subsp. montevidensis Marsilea drummondii Myriophyllum papillosum Nymphoides crenata Ottelia ovalifolia Paspalidium jubiflorum Persicaria decipiens Phragmites australis Potamogeton crispus Pseudoraphis spinescens Senecio cunninghamii Typha domingensis T. orientalis Vallisneria australis</p>		

# TUPPAL



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Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Creeklines and Secondary Floodplains	Plains	Lunettes and Sand Ridges
VEGETATION TYPE	Black Box Woodland.	Grey Box Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).
GEOLOGY & SOILS	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understorey. Aeolian: well drained sandy-loams and loams.
LOCATION EXAMPLE	Horseshoe Lagoon near Lower River Rd, Arrawatta Travelling Stock Reserve, Tuppal Travelling Stock Reserve.	Millewa State Forest, Wait-A-While Travelling Stock Reserve, Mains Travelling Stock Reserve, Tocumwal 3-Mile Travelling Stock Reserve.	Millewa State Forest.
TREES > 8 m	<p><i>Allocasuarina luehmanni</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i>  <i>E. melliodora</i>  <i>E. microcarpa</i><sup>3</sup>  <i>Hakea tephrosperma</i></p>	<p><i>Acacia implexa</i>  <i>Allocasuarina luehmanni</i>  <i>Brachychiton populineus</i> subsp. <i>trilobus</i>  <i>Callitris glaucophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i>  <i>E. melliodora</i><sup>3</sup>  <i>E. microcarpa</i>  <i>Myoporum platycarpum</i></p>	<p><i>Acacia homalophylla</i>  <i>Allocasuarina luehmanni</i>  <i>Banksia marginata</i>  <i>Callitris glaucophylla</i>  <i>C. gracilis</i>  <i>Eucalyptus melliodora</i>  <i>E. microcarpa</i><sup>3</sup>  <i>Hakea tephrosperma</i></p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia acinacea</i>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>A. pendula</i>  <i>A. pycnantha</i>  <i>A. salicina</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i></p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>Bursaria spinosa</i>  <i>Dodonaea viscosa</i> subsp. <i>spatulata</i>  <i>Eremophila longifolia</i>  <i>Duma florulenta</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. oswaldii</i>  <i>A. salicina</i>  <i>Calytrix tetragona</i>  <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>  <i>Eremophila longifolia</i>  <i>Hakea leucoptera</i>  <i>Pittosporum phylliraeoides</i>  <i>Santalum acuminatum</i>  <i>Senna artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>petiolaris</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Cassinia sifton Enchylaena tomentosa Maireana aphylla Rhogodia spinescens</p>	<p>Dolly Bush Ruby Saltbush Cottonbush Thorny Saltbush</p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Maireana microphylla</i> <i>Sclerolaena muricata</i></p>	<p>Wedge leaf Hopbush Eastern Cottonbush Five spined Bassia</p>	<p><i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Rhogodia spinescens</i></p>	<p>Wedge leaf Hopbush Thorny Saltbush</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>s</sup> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Calostemma purpureum</i> <i>Carex inversa</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Lipocarpha microcephala</i> <i>Maireana enchylaenoides</i> <i>M. pentagona</i> <i>Marsilea drummondii</i> <i>Poa tordeana</i> <i>Sida corrugata</i> <i>Rytidosperma caespitosa</i></p>	<p>Lesser Joyweed Vehed Swamp Walaby-grass Creeping Saltbush Rough Speargrass Tar Vine Wilcannia Lily Knob Sedge Climbing Saltbush Button Rush Wingless Fissure-weed Slender Fissure-weed Common Nardoo Sweet Swamp grass Corrugated Sida White-top</p>	<p><i>Alternanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Arthropodium minus</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Carex inversa</i> <i>Cotula australis</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Lipocarpha microcephala</i> <i>Ptilotus spathulatus</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i> <i>Wahlenbergia fluminalis</i></p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Rough Speargrass Knob Sedge Common Cotula Climbing Saltbush Spider Grass Button Rush Pussy tails Drumsticks Grey Sunray White-top Corrugated Sida River Bluebell</p>	<p><i>Ajuga australis</i> <i>Aristida behriana</i> <i>A. jerichoensis</i> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Chrysocephalum apiculatum</i> <i>Clematis microphylla</i> <i>Dianella porraceae</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon nigricans</i> <i>E. acicularis</i> <i>Eragrostis lacunaria</i> <i>Homopholis proluta</i> <i>Lomandra effusa</i> <i>L. leucocephala</i> <i>Rytidosperma caespitosa</i></p>	<p>Australian Bugle Bunch Wiregrass No. 9 Wiregrass Creeping Saltbush Rough Speargrass Tar Vine Yellow Buttons Small-leaved Clematis Smooth Flax-lily Climbing Saltbush Pappus Grass Spider Grass Purple Lovegrass Rigid Panic Scented Mat-rush Woolly-head Mat-rush White-top</p>

# TUPPAL (NORTH-WESTERN)

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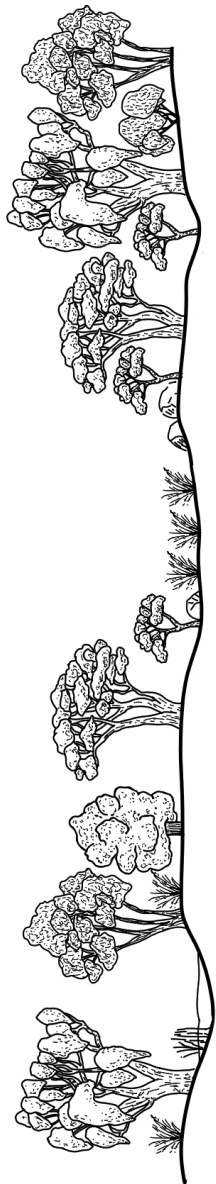
Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.



LANDFORM VEGETATION TYPE	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Level to Depressed Plains
<b>GEOLOGY &amp; SOILS</b>	Riverine Forest.	Black Box Woodland.	Boree Woodland.
<b>LOCATION EXAMPLE</b>	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils. Millewa State Forest, Tuppal State Forest, Gulpha State Forest, Moira State Forest.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact. Horseshoe Lagoon near Lower River Rd, Arrawatta Travelling Stock Reserve, Tuppal Travelling Stock Reserve.	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths. No intact examples remain, formerly south of Deniliquin, nearest examples are in the vicinity of Walliston Rd south of Wilson Lane.
<b>TREES &gt; 8 m</b>	<i>Acacia implexa</i> <i>Allocasuarina luehmannii</i> <sup>†</sup> <i>Callitris glaucophylla</i> <sup>†</sup> <i>Eucalyptus camaldulensis</i> <i>E. melliodora</i> <i>E. microcarpa</i> <sup>‡</sup>	<i>Allocasuarina luehmannii</i> <i>Eucalyptus camaldulensis</i> <sup>‡</sup> <i>E. largiflorens</i> <i>E. melliodora</i> <i>E. microcarpa</i> <sup>‡</sup> <i>Hakea tephrosperma</i>	nil
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<i>Acacia acinacea</i> <i>A. pycnantha</i> <i>Exocarpos strictus</i>	<i>Acacia acinacea</i> <i>A. haakeoides</i> <i>A. oswaldii</i> <i>A. pendula</i> <i>A. pycnantha</i> <i>A. salicina</i> <i>Chenopodium nitirariaceum</i> <i>Duma florulenta</i>	<i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eriemophila longifolia</i> Miljee Boree Cooba Old Man Saltbush Erubush

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p><i>Cassinia sifton</i> <i>Dillwynia cinerascens</i> <i>Eutaxia microphylla</i></p>	<p>Dolly Bush Grey Parrot-pea Mallee Bush-pea</p>	<p><i>Cassinia sifton</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>Rhagodia spinescens</i></p>	<p>Dolly Bush Ruby Saltbush Cottonbush Thorny Saltbush</p>	<p><i>Atriplex leptocarpa</i> <i>A. vesicaria</i> <i>Enchylaena tomentosa</i> <i>Maireana aphylla</i> <i>M. decalvans</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i> <i>S. stelligera</i></p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Azolla filiculoides</i> <i>Brachyscome basaltica</i> var. <i>gracilis</i> <i>Calotis hispidula</i> <i>Carex appressa</i> <i>C. tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>5</sup> <i>Dianella porraceae</i> <i>Dichondra repens</i> <i>Eleocharis acuta</i><sup>5</sup> <i>Geranium solanderi</i> <i>Goodenia heteromera</i> <i>Isolepis victoriensis</i> <i>Juncus ingens</i><sup>5</sup> <i>Lachnagrostis filiformis</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myosurus minimus</i> var. <i>australis</i> <i>Myriophyllum papillosum</i><sup>5</sup> <i>Oxalis perennans</i> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>5</sup> <i>Poa tordeana</i> <i>Pycnosorus globosus</i> <i>Ranunculus pumilio</i> <i>Rytidosperma caespitosa</i> <i>R. duttoniana</i> <i>Scleranthus minusculus</i> <i>Vallisneria australis</i><sup>5</sup> <i>Wahlenbergia fluminalis</i></p>	<p>Lesser Joyweed Red Azolla Swamp Daisy Bogan Flea Tail Sedge Rush Sedge Common Sneezeweed Darling Lily Water-ribbons Smooth Flax-lily Australian Cranesbill Kidneyweed Common Spike-rush Spreading Goodenia Victorian Club sedge Giant Rush Blown Grass Poison Pratia Common Nardoo Mouse tail Water-milfoil Grassland Wood sorrel Warrego Summer-grass Common Reed Sweet Swamp grass Drumsticks Ferry Buttercup White-top Brown back Wallaby Grass Cushion Knawel Eel-weed River Bluebell</p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i><sup>5</sup> <i>Atriplex semibaccata</i> <i>Austrostipa scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Carex inversa</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Lipocarpha microcephala</i> <i>Maireana enchylaenoides</i> <i>M. pentagona</i> <i>Marsilea drummondii</i> <i>Poa tordeana</i> <i>Rytidosperma caespitosa</i> <i>Sida corrugata</i></p>	<p>Lesser Joyweed Venet Swamp Wallaby-grass Creeping Saltbush Rough Speargrass Tar Vine Wilcannia Lily Knob Sedge Climbing Saltbush Button Rush Wingless Fissure-weed Slender Fissure-weed Common Nardoo Sweet Swamp grass White-top Corrugated Sida</p>	<p><i>Atriplex semibaccata</i> <i>Austrostipa nodosa</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Calotis hispidula</i> <i>Chrysocephalum apiculatum</i> <i>Cotula australis</i> <i>Cotula colorata</i> <i>Crassula colorata</i> <i>C. decumbens</i> var. <i>decumbens</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eriopogon acicularis</i> <i>Maireana pentagona</i> <i>Myrioccephalus rhizocephalus</i> <i>Plantago turfifera</i> <i>Ptilotus erubescens</i> <i>Rhodanthe corymbiflora</i> <i>Rumex tenax</i> <i>Rytidosperma caespitosa</i> <i>R. setaceum</i> <i>Sida corrugata</i> <i>Swainsona murrayana</i> <i>Triptilodiscus pygmaeus</i> <i>Vittadina cuneata</i> <i>Wahlenbergia gracilis</i> <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>	<p>Creeping Saltbush Knotty Speargrass Rough Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Climbing Saltbush Spider Grass Slender Fissure-weed Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Australian Bluebell Early Nancy</p>

# WAKOOL



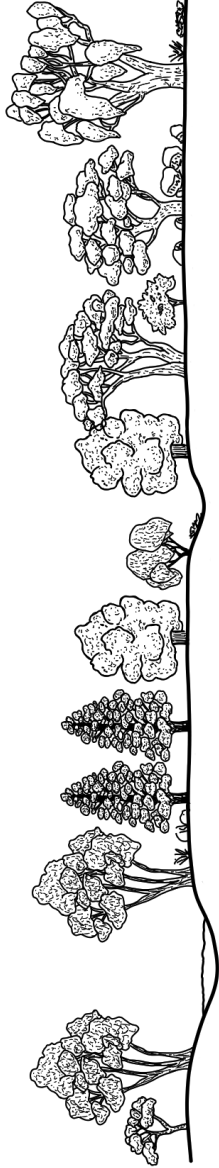
For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

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LANDFORM	Rivers, Floodplains and Levees	Shallow Depressions	Creeklines and Secondary Floodplains
<b>VEGETATION TYPE</b>	Riverine Forest.	Lignum – Goosefoot / Canegrass Swamp.	Black Box Woodland.
<b>GEOLOGY &amp; SOILS</b>	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Open scrub to tussock grassland in depressions and low lying areas subject to intermittent flooding. Alluvial, heavy grey, cracking clays, sometimes slightly saline.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.
<b>LOCATION EXAMPLE</b>	Werai State Forest, Stevens Weir State Forest, Benjee State Forest.	Wakool River, Yallakool Creek, Jackson Weir on Eight Mile Creek.	Werai State Forest, Cobb Highway Travelling Stock Reserve north of Deniliquin, Cockran Creek near Rangemore Rd, Forest Creek on the Conargo Rd.
<b>TREES &gt; 8 m</b>	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Eucalyptus largiflorens</i></p> <p>Black Box</p>	<p><i>Acacia homalophylla</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>8</sup></p> <p>Yarran  River Red Gum  Black Box  Grey Box</p>
<b>SHRUBS &amp; SMALL TREES 2 - 8 m</b>	<p><i>Acacia salicina</i>  <i>Chenopodium nitriaceum</i>  <i>Exocarpos strictus</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba  Nitre Goosefoot  Dwarf Cherry  Butterbush</p>	<p><i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i></p> <p>Nitre Goosefoot  Lignum</p>	<p><i>Acacia salicina</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos aphyllus</i>  <i>Melaleuca lanceolata</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba  Old Man Saltbush  Nitre Goosefoot  Lignum  Leafless Cherry  Moonah  Butterbush</p>



<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>	<p>nil</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Sclerolaena muricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Eremophila debilis</i> <i>E. maculata</i> <i>Maireana brevifolia</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p> <p>Slender-fruited Saltbush Ruby Saltbush Winter Apple Spotted Fuchsia Yanga Bush Dillon Bush Thorny Saltbush Five spined Bassia</p>
<p><b>GROUND COVERS</b></p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i> <i>Arthropodium fimbriatum</i> <i>Atriplex semibaccata</i> <i>Azolla filiculoides</i> <i>Brachycome basaltica</i> var. <i>gracilis</i> <i>Carex appressa</i> <i>C. inversa</i> <i>Carex tereticaulis</i> <i>Centipeda cunninghamii</i> <i>Chamaesyce drummondii</i> <i>Cotula australis</i> <i>Crinum flaccidum</i> <i>Cynogeton procerum</i><sup>s</sup> <i>Einaelia nutans</i> subsp. <i>nutans</i> <i>Eleocharis acuta</i><sup>s</sup> <i>Glinus lotoides</i> <i>Lachnogrostis filiformis</i> <i>Lipocarpha microcephala</i> <i>Lobelia concolor</i> <i>Marsilea drummondii</i> <i>Myriophyllum papillosum</i><sup>s</sup> <i>Paspalidium jubiflorum</i> <i>Phragmites australis</i><sup>s</sup> <i>Poa tordeana</i> <i>Ryidosperma caespitosa</i> <i>R. duttoniana</i> <i>Vallisneria australis</i><sup>s</sup> <i>Wahlenbergia fluminalis</i> <i>Xerochrysum bracteatum</i></p> <p>Lesser Joyweed Veined Swamp Wallaby-grass Nodding Chocolate-lily Creeping Saltbush Red Azolla Swamp Daisy Tall Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Darling Lily Water-ribbons Climbing Saltbush Common Spike-rush Hairy Carpet-weed Blown Grass Button Rush Poison Pratia Common Nardoo Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass White-top Brown back Wallaby Grass Eel-weed River Bluebell Golden Everlasting</p>	<p><i>Amaranthus macrocarpus</i> <i>Atriplex semibaccata</i> <i>A. suberecta</i> <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i> <i>Eleocharis acuta</i> <i>E. pallens</i> <i>Eragrostis australasica</i> <i>Juncus arcticola</i> <i>J. flavidus</i> <i>J. radula</i> <i>Limosella australis</i> <i>Marsilea drummondii</i> <i>Senecio cunninghamii</i> <i>Typha domingensis</i> <i>T. orientalis</i></p> <p>Dwarf Amaranth Creeping Saltbush Lagoon Saltbush Round-leaf Pigface Common Spike-rush Pale Spike-rush Canegrass Tussock Rush Yellow Rush Hoary Rush Australian Mudwort Common Nardoo Bushy Groundsel Cumbungi Cumbungi</p>	<p><i>Alternanthera denticulata</i> <i>Amphibromus nervosus</i> <i>Atriplex semibaccata</i> <i>Austrostipa aristiglumis</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Boerhavia domini</i> <i>Bulbine bulbosa</i> <i>Calocephalus sonderi</i> <i>Centipeda cunninghamii</i> <i>Dianella revoluta</i> <i>Einaelia nutans</i> subsp. <i>nutans</i> <i>Eryngium ovinum</i> <i>Goodenia glauca</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Minuria integririma</i> <i>Oxalis peremans</i> <i>Poa tordeana</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i> <i>Stemodia florulenta</i></p> <p>Lesser Joyweed Veined Swamp Wallaby-grass Creeping Saltbush Plains Grass Rough Speargrass Tar Vine Native Leek Pale Beauty-heads Common Sneezeweed Spreading Flax-lily Climbing Saltbush Blue Devil Pale Goodenia Blown Grass Poison Pratia Wingless Fissure-weed Common Nardoo Smooth Minuria Grassland Wood sorrel Sweet Swamp grass Grey Sunray White-top Corrugated Sida Blue Rod</p>



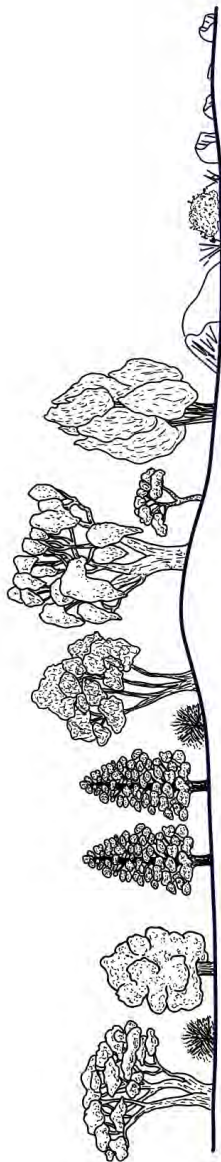
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LANDFORM	Rivers, Floodplains and Levees	Creeklines and Secondary Floodplains	Plains
VEGETATION TYPE	Riverine Forest.	Black Box Woodland.	Grey Box Woodland.
GEOLOGY & SOILS	River Red Gum forest or woodland with understorey of herbs, sedges and grasses; includes weir pools and billabongs. Alluvial, heavy grey, brown or red clay soils.	Black Box woodland with often sparse understorey of grasses or shrubs. Alluvial, heavy brown or grey clays, self-mulching or compact.	Open grassy woodland with Grey Box and Bull Oak. Alluvial, variety of soils – clays, loams, sands and silts.
LOCATION EXAMPLE	Werai State Forest, Stevens Weir State Forest, Benjee State Forest.	Werai State Forest, Cobb Highway Travelling Stock Reserve north of Deniliquin, Cockran Creek near Rangemore Rd, Forest Creek on the Conargo Rd.	Cockran Creek near Rangemore Rd, Moulamein Rd west of Pretty Pines, Cobb Highway Travelling Stock Reserve north of Deniliquin.
TREES > 8 m	<p><i>Acacia stenophylla</i>  <i>Eucalyptus camaldulensis</i>  <i>E. largiflorens</i></p> <p>River Cooba  River Red Gum  Black Box</p>	<p><i>Acacia homalophylla</i>  <i>Eucalyptus camaldulensis</i><sup>5</sup>  <i>E. largiflorens</i>  <i>E. microcarpa</i><sup>3</sup></p> <p>Yarran  River Red Gum  Black Box  Grey Box</p>	<p><i>Acacia implexa</i>  <i>Allocasuarina luehmianii</i>  <i>Brachychiton populineus</i> subsp. <i>populineus</i>  <i>Callitris glaucophylla</i>  <i>C. gracilis</i>  <i>Eucalyptus camaldulensis</i>  <i>E. microcarpa</i>  <i>Myoporum platycarpum</i></p> <p>Hickory Wattle  Bull Oak  Kurrajong  White Cypress Pine  Murray Pine  River Red Gum  Grey Box  Sugarwood</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia salicina</i>  <i>Chenopodium nitriariaceum</i>  <i>Exocarpos strictus</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba  Nitre Goosefoot  Dwarf Cherry  Butterbush</p>	<p><i>Acacia salicina</i>  <i>Atriplex nummularia</i>  <i>Chenopodium nitriariaceum</i>  <i>Duma florulenta</i>  <i>Exocarpos aphyllus</i>  <i>Melaleuca lanceolata</i>  <i>Pittosporum phylliraeoides</i></p> <p>Cooba  Old Man Saltbush  Nitre Goosefoot  Lignum  Leafless Cherry  Moonah  Butterbush</p>	<p><i>Acacia acinacea</i>  <i>A. brachybotrya</i>  <i>A. hakeoides</i>  <i>A. montana</i>  <i>A. oswaldii</i>  <i>A. pycnantha</i>  <i>A. rigens</i>  <i>Bursaria spinosa</i>  <i>Duma florulenta</i>  <i>Eremophila longifolia</i>  <i>Exocarpos aphyllus</i>  <i>Melaleuca lanceolata</i>  <i>Myoporum montanum</i>  <i>Pittosporum phylliraeoides</i>  <i>Senna artemisioides</i> subsp. <i>coriacea</i>  <i>S. artemisioides</i> subsp. <i>filifolia</i>  <i>S. artemisioides</i> subsp. <i>zygophylla</i></p> <p>Gold-dust Wattle  Grey Mulga  Western Black Wattle  Mallee Wattle  Miljee  Golden Wattle  Needle Wattle  Native Blackthorn  Lignum  Erubush  Leafless Cherry  Moonah  Western Boobialla  Butterbush  Broad leaf Desert Cassia  Fine leaf Desert Cassia  Narrow leaf Desert Cassia</p>

SMALL SHRUBS < 2 m	nil	<p><i>Atriplex leptocarpa</i> <i>Enchylaena tomentosa</i> <i>Eremophila debilis</i> <i>E. maculata</i> <i>Maireana brevifolia</i> <i>Nitraria billardierei</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Slender-fruited Saltbush Ruby Saltbush Winter Apple Spotted Fuchsia Yanga Bush Dillon Bush Thorny Saltbush Five spined Bassia</p>	<p><i>Atriplex leptocarpa</i> <i>Dillwynia cinerascens</i> <i>Dodonaea viscosa</i> subsp. <i>cuneata</i> <i>Enchylaena tomentosa</i> <i>Maireana microphylla</i> <i>Pultenaea largiflorens</i> <i>Rhagodia spinescens</i> <i>Sclerolaena muricata</i></p>	<p>Slender-fruited Saltbush Grey Parrot-pea Wedge leaf Hoppbush Ruby Saltbush Eastern Cottonbush Twiggy Bush-pea Thorny Saltbush Five spined Bassia</p>
<p><b>GROUND COVERS</b></p>	<p>Lesser Joyweed Veined Swamp Wallaby-grass Nodding Chocolate-lily Creeping Saltbush Red Azolla Swamp Daisy Tail Sedge Knob Sedge Rush Sedge Common Sneezeweed Flat Spurge Common Cotula Darling Lily Water-ribbons Climbing Saltbush Common Spike-rush Hairy Carpet-weed Blown Rush Poison Pratia Common Nardoo Water-milfoil Warrego Summer-grass Common Reed Sweet Swamp grass White-top Brown back Wallaby Grass Fet-weed River Bluebell Golden Everlasting</p>	<p><i>Altermanthera denticulata</i> <i>Amphibromus nervosus</i> <i>Atriplex semibaccata</i> <i>Austrostipa aristiglumis</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Bulbine bulbosa</i> <i>Calocephalus sonderi</i> <i>Centipeda cunninghamii</i> <i>Dianella revoluta</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eryngium ovinum</i> <i>Goodenia glauca</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Minuria integririma</i> <i>Oxalis perennans</i> <i>Poa tordeana</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i> <i>Stemodia florulenta</i></p>	<p>Lesser Joyweed Veined Swamp Wallaby-grass Creeping Saltbush Plains Grass Rough Speargrass Tar Vine Native Leek Pale Beauty-heads Common Sneezeweed Spreading Flax-lily Climbing Saltbush Blue Devil Pale Goodenia Blown Grass Poison Pratia Wingless Fissure-weed Common Nardoo Smooth Minuria Grassland Wood sorrel Sweet Swamp grass Grey Sunray White-top Corrugated Sida Blue Rod</p>		
	<p><i>Altermanthera denticulata</i> <i>Amphibromus nervosus</i> <i>Atriplex semibaccata</i> <i>Austrostipa aristiglumis</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Boerhavia dominii</i> <i>Bulbine bulbosa</i> <i>Calocephalus sonderi</i> <i>Centipeda cunninghamii</i> <i>Dianella revoluta</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Eryngium ovinum</i> <i>Goodenia glauca</i> <i>Lachnogrostis filiformis</i> <i>Lobelia concolor</i> <i>Maireana enchylaenoides</i> <i>Marsilea drummondii</i> <i>Minuria integririma</i> <i>Oxalis perennans</i> <i>Poa tordeana</i> <i>Rhodanthe corymbiflora</i> <i>Ryidosperma caespitosa</i> <i>Sida corrugata</i> <i>Stemodia florulenta</i></p>	<p>Lesser Joyweed Common Wheatgrass Small Vanilla-lily Creeping Saltbush Plains Grass Rough Speargrass Lemon Beauty-heads Bogan Flea Knob Sedge Windmill Grass Common Cotula Dense Stonecrop Spreading Crassula Smooth Flax-lily Climbing Saltbush Spider Grass Rigid Panic Woolly-heads Small Sago weed Pussy tails Drumsticks Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray River Bluebell Australian Bluebell Early Nancy</p>	<p><i>Altermanthera denticulata</i> <i>Anthrosachne scaber</i> <i>Arthropodium minus</i> <i>Atriplex semibaccata</i> <i>Austrostipa aristiglumis</i> <i>A. scabra</i> subsp. <i>falcata</i> <i>Calocephalus citreus</i> <i>Calotis hispida</i> <i>Carex inversa</i> <i>Chloris truncata</i> <i>Cotula australis</i> <i>Crassula colorata</i> <i>C. decumbens</i> var. <i>decumbens</i> <i>Dianella porraceae</i> <i>Einadia nutans</i> subsp. <i>nutans</i> <i>Enteropogon acicularis</i> <i>Homopholis prolata</i> <i>Myriocephalus rhizocephalus</i> <i>Plantago turfifera</i> <i>Ptilotus spathulatus</i> <i>Pycnosorus globosus</i> <i>Rhodanthe corymbiflora</i> <i>Rumex tenax</i> <i>Ryidosperma caespitosa</i> <i>R. setacea</i> <i>Sida corrugata</i> <i>Swainsona murrayana</i> <i>Triptilodiscus pygmaeus</i> <i>Wahlenbergia fluminalis</i> <i>W. gracilis</i> <i>Wurmbea dioica</i> subsp. <i>dioica</i></p>		

# WAKOOL



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www.revegetation.org.au](http://www.revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Prior Streams, Lunettes and Sand Ridges	Level to Depressed Plains
VEGETATION TYPE	Boree Woodland.	Callitris Mixed Woodland (Prior Streams / Lunettes).	Bladder Saltbush Chenopod Shrubland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understory. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Low woodland to woodland of prior streams, source bordering dunes or lunettes dominated by White Cypress Pine and shrubs scattered over a grassy understory. Aeolian: well drained sandy-loams and loams.	Low shrubland to low open shrubland dominated by Bladder Saltbush and other chenopods. Alluvial, grey, self-mulching and cracking clays to red duplex soils with grey and brown clays, sometimes saline.
LOCATION EXAMPLE	Moulamein No 8 Channel, Rd to Wanganella, Jackson Weir Rd.	Conargo Rd at Tholobin (prior stream), western end of Wanganella Rd (sand ridge).	Most sites are degraded, Moulamein Rd west of Pretty Pine.
TREES > 8 m	<p>nil</p> <p><i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i></p>	<p><i>Allocasuarina leuhmannii</i> <i>Callitris glaucophylla</i> <i>Eucalyptus melliodora</i> <i>E. microcarpa</i> <i>Hakea tephrosperma</i> <i>Myoporum platycarpum</i></p> <p>Bull Oak White Cypress Pine Yellow Box Grey Box Hooked Needlewood Sugarwood</p>	<p>nil</p>
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i> <i>A. pendula</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Eremophila longifolia</i></p> <p>Miljee Boree Cooba Old Man Saltbush Emubush</p>	<p><i>Acacia acinacea</i> <i>A. brachybotrya</i> <i>A. hakeoides</i> <i>A. oswaldii</i> <i>A. rigens</i> <i>A. salicina</i> <i>Atriplex nummularia</i> <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> <i>Eremophila longifolia</i> <i>Exocarpos aphyllus</i> <i>Hakea leucoptera</i> <i>Melaleuca lanceolata</i> <i>Pittosporum phylliracoides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>S. artemisioides</i> subsp. <i>zygophylla</i></p> <p>Gold-dust Wattle Grey Mulga Western Black Wattle Miljee Needle Wattle Cooba Old Man Saltbush Narrow leaf Hobbush Emubush Leafless Cherry Needlewood Moonah Butterbush Fine leaf Desert Cassia Narrow leaf Desert Cassia</p>	<p><i>Atriplex nummularia</i><sup>4</sup> <i>Chenopodium nitriaceum</i></p> <p>Old Man Saltbush Nitre Goosefoot</p>

<p><b>SMALL SHRUBS &lt; 2 m</b></p>	<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhadodia spinescens Scleroaena muricata S. stelligera</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Dodonaea viscosa subsp. cuneata Enchylaena tomentosa Maireana microphylla Rhadodia spinescens</p> <p>Wedge leaf Hoppbush Ruby Saltbush Eastern Cottonbush Thorny Saltbush</p>	<p>Atriplex leptocarpa A. lindleyi A. pseudocampaulata A. vesicaria Enchylaena tomentosa Maireana aphylla M. brevifolia M. decalvans Malacocera tricornis Nitraria billardieri Scleroaena divaricata S. muricata</p> <p>Slender-fruited Saltbush Eastern Flat-top Saltbush Mealy Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Yanga Bush Black Cottonbush Soft-horns Dillon Bush Pale Poverty-bush Five spined Bassia</p>
<p><b>GROUND COVERS</b></p>	<p>Atriplex semibaccata Austrostipa nodosa A. scabra subsp. falcata Calotis hispida Chrysocephalum apiculatum Cotula australis Crassula colorata C. decumbens var. decumbens Einadia nutans subsp. nutans Enteropogon acicularis Lachnagrostis filiformis Maireana pentagona Minuria integririma Myriocephalus rhizocephalus Plantago turritera Ptilotus erubescens Rhodanthe corymbiflora Rumex tenax Rytidosperma caespitosa R. setaceum Sida corrugata Swainsona murrayana Triptilodiscus pygmaeus Vittadina cuneata Wahlenbergia gracilentia Wurmbea dioica subsp. dioica</p>	<p>Creeping Saltbush Knotty Speargrass Rough Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Climbing Saltbush Spider Grass Blown Grass Slender Fissure-weed Smooth Minuria Woolly heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Annual Bluebell Early Nancy</p>	<p>Aristida behriana A. jericohaensis A. semibaccata Austrostipa scabra subsp. falcata Boerhavia domini Chrysocephalum apiculatum Clematis microphylla Einadia nutans subsp. nutans Enneapogon nigricans Enteropogon acicularis Eragrostis lacunaria Homopholis proluta Lomandra effusa Rytidosperma caespitosa</p> <p>Bunch Wiregrass No. 9 Wiregrass Creeping Saltbush Rough Speargrass Tar Vine Yellow Buttons Small-leaved Clematis Climbing Saltbush Pappus Grass Spider Grass Purple Lovegrass Rigid Panic Scented Mat-rush Woolly-head Mat-rush White-top</p>	<p>Atriplex semibaccata Calocephalus sonderi Chamaesyce drummondii Chloris truncata Einadia nutans subsp. nutans Enteropogon acicularis Eragrostis australasica<sup>4</sup> Hyalosperma glutinosum Leiocarpa tomentosa Maireana ciliata M. enclyaeoides Minuria cunninghamii Rhodanthe corymbiflora Scleroaena brachyptera Sida filulifera Sporobolus caroli Tetragonia tetragonoides</p> <p>Creeping Saltbush Pale Beauty-heads Flat Spurge Windmill Grass Climbing Saltbush Spider Grass Canegrass Golden Sunray Woolly Plover daisy Hairy Fissure weed Wingless Fissure-weed Bush Minuria Grey Sunray Short-winged Copperburr Pin Sida Fairy Grass New Zealand Spinach</p>

# WAKOOL (NORTH-EASTERN)



For guidance on planning your revegetation or restoration site (size, shape, species, density of planting) refer to chapters 4 and 5 of this guide, and head to [www revegetation.org.au](http://www revegetation.org.au)

Remember: good quality vegetation sites may not need revegetation at all. Appropriate management can encourage natural regeneration.

LANDFORM	Level to Depressed Plains	Plains	Gilgai Plains
VEGETATION TYPE	Boree Woodland.	Native Grassland.	Gilgai Wetland.
GEOLOGY & SOILS	Low woodland to low open woodland dominated by Boree with a mainly herbaceous understorey. Alluvial, grey and brown clays, or sometimes on red-brown earths.	Treeless grassland on plains with seasonally variable composition of herbs, grasses and low shrubs. Alluvial, mainly red-brown clays and grey-brown cracking clays.	Treeless grassland on seasonally wet plains with mainly herbaceous understorey. Alluvial, heavy grey, cracking clays.
LOCATION EXAMPLE	Moulamein No 8 Channel, Rd to Wanganella, Jackson Weir Rd.	Box Creek Escape Channel, 2 km north of Pretty Pine, Moulamein Rd 13 km west of Pretty Pine, Cobb Highway 4-6 km north of Deniliquin.	No example known, see Four Corners subregion.
TREES > 8 m	nil	nil	nil
SHRUBS & SMALL TREES 2 - 8 m	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>A. salicina</i>  <i>Atriplex nummularia</i>  <i>Eremophila longifolia</i></p> <p>Miljee                      Boree                      Cooba                      Old Man Saltbush                      Emubush</p>	<p><i>Acacia oswaldii</i>  <i>A. pendula</i>  <i>Chenopodium nitriaceum</i>  <i>Duma florulenta</i></p> <p>Miljee                      Boree                      Nitre Goosefoot                      Lignum</p>	<p><i>Acacia pendula</i></p> <p>Boree</p>

<p><b>SMALL SHRUBS</b> <b>&lt; 2 m</b></p>			<p>nil</p>
<p>Atriplex leptocarpa A. vesicaria Enchylaena tomentosa Maireana aphylla M. decalvans Rhogodia spinescens Sclerolaena muricata S. stelligera</p>	<p>Slender-fruited Saltbush Bladder Saltbush Ruby Saltbush Cottonbush Black Cottonbush Thorny Saltbush Five spined Bassia Star Copperburr</p>	<p>Atriplex leptocarpa Maireana aphylla M. decalvans Rhogodia spinescens Sclerolaena muricata S. stelligera</p>	<p>Lesser Joyweed Plains Grass Leek Lily Wilcannia Lily Rough Burr-daisy Smooth Centrolepis Windmill Grass Australian Bindweed Spreading Crassula Yellow Twin heads Pale Spike-rush Canegrass Eryngo Small-flowered Goodenia Rigid Panic Grass Cushion Grassy Club sedge Victorian Club sedge Hoary Rush Blown Grass Winged Peppercress Annual Buttons Slender Fissure-weed Common Nardoo Mouse tail Woolly-heads Common Water-milfoil Showy Foxtail Drumsticks Grey Sunray Dock White-top Brown back Wallaby Grass Corrugated Sida Dwarf Triggerplant Broughton Pea Grey Germander Purple Bladderwort Early Nancy</p>
<p>Atriplex semibaccata Austrostipa nodosa A. scabra subsp. falcata Calotis hispidula Chrysocephalum apiculatum Cotula australis Crassula colorata C. decumbens var. decumbens Einadia nutans subsp. nutans Enteropogon acicularis Lachnagrostis filiformis Maireana pentagona Minuria integririma Plantago turrifera Ptilotus erubescens Rhodanthe corymbiflora Rumex tenax Ryidosperma caespitosa R. setaceum Sida corrugata Swainsona murrayana Tripliodiscus pygmaeus Vittadina cuneata Wahlenbergia gracilenta Wurmbea dioica subsp. dioica</p>	<p>Creeping Saltbush Knotty Speargrass Rough Speargrass Bogan Flea Yellow Buttons Common Cotula Dense Stonecrop Spreading Crassula Climbing Saltbush Spider Grass Blown Grass Slender Fissure-weed Smooth Minuria Woolly-heads Small Sago weed Hairy tails Grey Sunray Dock White-top Smallflower Wallaby Grass Corrugated Sida Slender Darling Pea Common Sunray Fuzzweed Annual Bluebell Early Nancy</p>	<p>Actinobole uliginosum Alternanthera denticulata Arthropodium limbratum A. minus Atriplex semibaccata Austrostipa aristigulmis A. nodosa A. scabra subsp. falcata Brachyscome chrysoglossa<sup>14</sup> Bulbine bulbosa Calocephalus sonderi Calotis scabrisifolia Chamaesyce drummondii Chloris truncata Chrysocephalum apiculatum Convolvulus erubescens Cotula australis Enteropogon acicularis E. ramosus Goodenia fascicularis G. pusilliflora Homopholis prolata Hyaloperma glutinosum Leiocarpa leptolepis L. panaeioides L. squamatus<sup>14</sup> Leucochrysum molle<sup>13</sup> Maireana enchylaenoides M. excavata M. pentagona Myriocephalus rhizocephalus Oxalis peremans Ptilotus exaltatus var. exaltatus P. macrocephalus Pycnosorus globosus Rhodanthe corymbiflora Sida corrugata Ryidosperma caespitosa R. eriantha Solanum esuriale Sporobolus caroli Swainsona murrayana S. plagiotropis<sup>14</sup> S. procumbens S. swainsonioides Teucrium racemosum Tripliodiscus pygmaeus Wahlenbergia luteola</p>	<p>Flannel Cudweed Lesser Joyweed Nodding Chocolate-lily Small Vanilla-lily Creeping Saltbush Plains Grass Knotty Speargrass Rough Speargrass Yellow tongue Daisy Native Leek Pale Beauty-heads Rough Burr-daisy Flat Spurge Windmill Grass Yellow Buttons Australian Bindweed Common Cotula Spider Grass Curly Windmill Grass Silky Goodenia Small-flowered Goodenia Rigid Panic Golden Sunray Stalked Plover-daisy Woolly Buttons Scaly Buttons Hoary Sunray Wingless Fissure-weed Bottle Fissure weed Slender Fissure-weed Woolly-heads Grassland Wood sorrel Showy Foxtail Square headed Foxtail Drumsticks Grey Sunray Corrugated Sida White-top Hill Wallaby Grass Quena Fairy Grass Slender Darling Pea Red Darling Pea Broughton Pea Downy Darling Pea Grey Germander Common Sunray Yellowish Bluebell</p>







**PART THREE**  
Plant Descriptions



Riverina



It is important to note that plant characteristics can vary depending on their origin (or provenance). For example, River Red Gum (*Eucalyptus camaldulensis*) from Alice Springs is quite different from the River Red Gum at Corowa, as the two provenances have adapted to very different conditions. As such, the information provided in this guide should be interpreted as a general guideline rather than a rigid set of rules.

This second edition of this book builds upon the foundation of the first, incorporating updates to taxonomy (kindly reviewed and provided by the Australian National Botanic Gardens, Canberra), and ensuring comprehensive coverage of the more common plant species. We hope this information empowers you to make informed choices in your revegetation endeavours and fosters a deeper appreciation for the rich diversity of plant life in the Riverina region.

## PLANT DESCRIPTIONS

These profiles are organised by the plant's size and growth habits, starting with larger trees (< 8m), followed by smaller trees and shrubs (2 - 8m), and then the small shrubs and groundcovers (including non-woody herbs, climbers, ferns, grasses, and lastly the rushes, sedges and water plants).

To ensure consistency and ease of use, all plant descriptions now follow a standardised format, regardless of the plant category. Each description includes the following sections:

**HABIT:** Provides a general overview of the plant's appearance, including its growth form, size, bark, flowers, fruiting bodies and foliage.

**HABITAT and SITE PREFERENCE:** Describes the plant's natural habitat and ideal growing conditions, encompassing soil type, moisture levels, sunlight exposure, and tolerance to various environmental factors.

**SEED COLLECTION and PROPAGATION:** Offers guidance on the optimal time for seed collection (where known), any specific seed treatments, and related revegetation information.

**VALUES and USES:** Explores the diverse ways in which the plant can be utilised or valued, including its potential for windbreaks, shade, erosion control, fodder, timber, wildlife habitat, cultural significance, ornamental purposes, and other applications.

## THE REVEGETATION WEBSITE

As part of this revision of the original guide, an interactive website ([www.revegetation.org.au](http://www.revegetation.org.au)) has also been created. In addition to providing additional plant information and images, it also provides deeper readings into a range of related revegetation techniques, climate-ready revegetation advice, biodiversity information, and links to other recommended revegetation information sites.







# PLANT DESCRIPTIONS

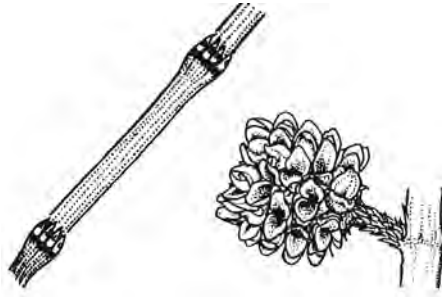
TREES > 8m



Riverina



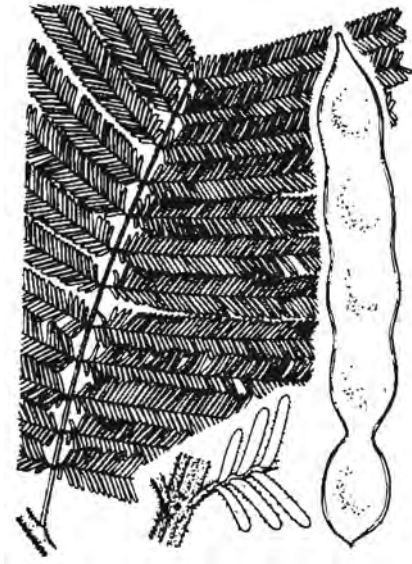
# TREES > 8m



COMMON NAME	BOTANICAL NAME	PAGE
Belah	<i>Casuarina cristata</i>	262
Bimble Box	<i>Eucalyptus populnea</i>	269
Black Box	<i>Eucalyptus largiflorens</i>	266
Black Cypress Pine	<i>Callitris endlicheri</i>	260
Black Oak	<i>Casuarina pauper</i>	263
Blakely's Red Gum	<i>Eucalyptus blakelyi</i>	263
Boree	<i>Acacia pendula</i>	257
Bulloak	<i>Allocasuarina luehmannii</i>	258
Butterbush	<i>Pittosporum angustifolium</i>	273
Congoo Mallee	<i>Eucalyptus dumosa</i>	264
Cooba	<i>Acacia salicina</i>	257
Currawang	<i>Acacia doratoxylon</i>	255
Drooping Sheoak	<i>Allocasuarina verticillata</i>	259
Dwyer's Red Gum	<i>Eucalyptus dwyeri</i>	265
Grey Box	<i>Eucalyptus microcarpa</i>	268
Hickory Wattle	<i>Acacia implexa</i>	256
Hooked Needlewood	<i>Hakea tephrosperma</i>	272
Inland Red Box	<i>Eucalyptus intertexta</i>	265
Kurrajong	<i>Brachychiton populneus</i>	260
Leopardwood	<i>Flindersia maculosa</i>	271
Mugga Ironbark	<i>Eucalyptus sideroxylon</i>	270
Murray Pine	<i>Callitris gracilis</i>	261
Native Cherry	<i>Exocarpos cupressiformis</i>	271
Pointed Mallee	<i>Eucalyptus socialis</i>	270
Quorn Mallee	<i>Eucalyptus porosa</i>	269
Red Mallee	<i>Eucalyptus oleosa</i>	268
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River Cooba	<i>Acacia stenophylla</i>	258
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**REGIONAL SUBSPECIES:** *A. d. subsp. dealbata*, *A. d. subsp. subalpina*

**OTHER NAMES:** n/a



## HABIT:

Erect tree, 6-15 m high, smooth to deeply fissured dark grey to almost black bark. Silvery grey to greenish feathery foliage. Golden-yellow flowers, Jul-Nov, prolific and perfumed. Very fast growing, lifespan up to several decades, matures early (seed at 4-5 yrs).

## HABITAT & SITE PREFERENCE:

Usually River Red Gum forest on a variety of soils, often on slopes and creek banks. Prefers soil moist part of year but not waterlogged, tolerates drier soils. Tolerates wind, moderate frost, and snow. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect Nov-Jan, large crops every 2-3 yrs. Seeds drop soon after maturity. Propagate from scarified seed (45-84 viable/gram), soak in boiling water before sowing. Regenerates from seed or suckers, especially after fire, ploughing, or ripping. Coppices from dormant buds after cutting or burning. Establishes well when direct-seeded. Palatable to stock.

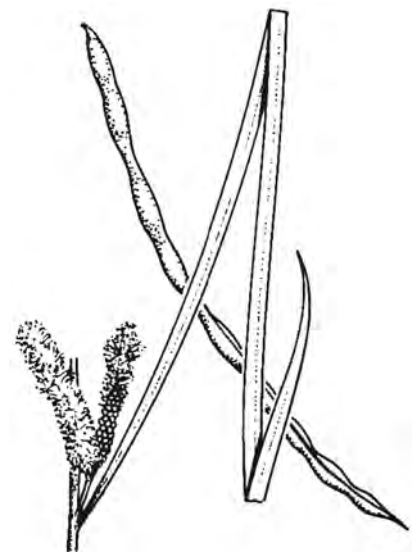
## VALUES & USES:

Fast-growing, medium-level cover for windbreaks. Suckering ensures ongoing cover. Improves soil fertility (legume). Excellent habitat for birds, insects, gliders, and possums. Critical component of streamside vegetation. First Nations used wood for axe handles, gum for fastening and eating. Bark infusions used for indigestion. Ornamental due to foliage and flowers. Leaves produce yellow-fawn or green dye.

# Acacia doratoxylon - Currawang

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** Lancewood, Spearwood, Currawong, Caariwan



## HABIT:

Erect or spreading tree or shrub, 3-8 m high. Dense crown of olive-green narrow 'leaves.' Bright yellow flowers, Aug-Nov. Slow-growing but long-lived.

## HABITAT & SITE PREFERENCE:

Eucalypt and Callitris woodland on rocky ridges and mallee on red sand. Prefers well-drained soil in open situations. Tolerates frost, drought, and semi-shade to full sun. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

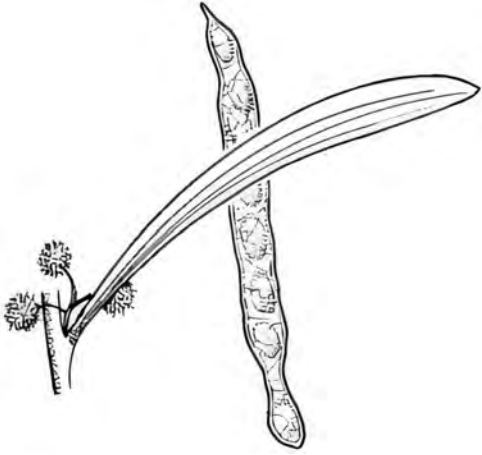
Collect early Dec-late Jan, seeds drop soon after maturity. Propagate from scarified seed ( $\pm 100$  viable/gram), soak in boiling water before drying and sowing. Regenerates from seed, especially after fire.

## VALUES & USES:

Useful low-level cover in windbreaks. Good growth in rocky, erodible soil and recharge areas. Improves soil fertility (legume). Provides pollen and seeds for insects and birds. Excellent fuelwood, hot fire. Timber dark brown, hard, heavy, good for furniture. First Nations used wood for spears. Ornamental garden specimen.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Curly Yarran, Myall, Gidyea, Gidia, Gidgee, Spearwood



**HABIT:**

Shrub or small tree, 5-10 m high. Rough fibrous bark, sturdy trunk. Ashy or greyish-green leaves. Golden-yellow to cream flowers (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Wide variety of soils and vegetation types. Full sun. Tolerates various soils, frost, and drought. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Dec-Jan. Propagate from seed. Regenerates through suckering.

**VALUES & USES:**

Windbreaks, low-level shade/shelter. Nitrogen-fixing legume, improves soil fertility. Prized firewood, hard and durable timber for cabinet making, turning, and fencing. Gum and seeds eaten, wood used for tools by First Nations People. Ornamental. Foliage eaten by livestock in dry periods.

# Acacia implexa - Hickory Wattle

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Lightwood, Screw Pod Wattle, Broad-leaved Wattle, Bastard Myall



**HABIT:**

Erect or spreading tree, 5-12 m high. Greyish bark and sickle-shaped 'leaves.' Pale yellow to almost white flowers, Dec-Apr. Very long-lived, moderate growth rate.

**HABITAT & SITE PREFERENCE:**

Occurs in various vegetation communities. Prefers well-drained soil, including shallow dry soil in hill country. Tolerates frost, fire, drought, and wind. Dislikes poorly-drained soil. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mid-spring to autumn, seeds mature in ~11 months and drop quickly. Propagate from scarified seed ( $\pm 28$  viable/gram), soak in boiling water before drying and sowing. Regenerates by root suckering, from soil-stored seed after disturbance, and from cut stumps.

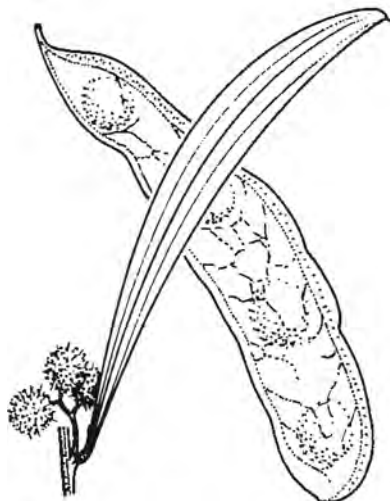
**VALUES & USES:**

Useful medium-level cover in windbreaks, fair shade, and resistant to livestock damage. Excellent for erosion control and soil fertility improvement (legume). Valuable habitat for insects, birds, and other wildlife. Timber similar to Blackwood, suitable for furniture and turning. First Nations used for fibre, fish poison, medicine, and woomearas. Attractive ornamental tree for gardens and rockeries. Leaves produce yellow or brown dye.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Weeping Myall, Myall, Balaar, Nilyah, Bastard Gidgee, Silver-leaf Boree



**HABIT:**

Erect or spreading tree, 5-13 m high. Rounded grey-green crown of drooping 'leaves' and branchlets. Fissured grey bark. Golden-yellow flowers, mainly summer to autumn. Relatively slow-growing.

**HABITAT & SITE PREFERENCE:**

Major river floodplains and Riverine Plain, often in large stands on heavy clay soils. Prefers good soils (alluvial, clays, or black soils) with adequate groundwater. Frost resistant. Prefers 250 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Oct-Jan. Propagate from seed (6-28 viable/gram), immerse in hot water at 90°C for one minute before drying and sowing. Regenerates from seed if livestock excluded, coppices after fire.

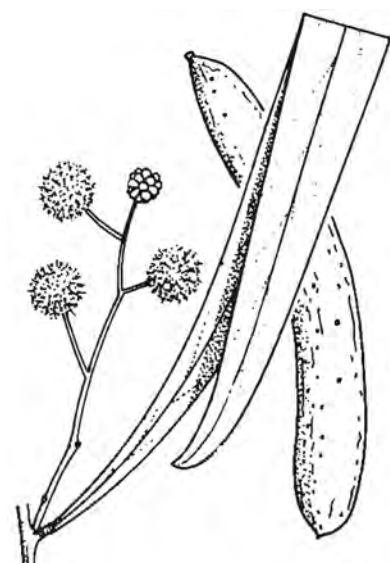
**VALUES & USES:**

Useful medium-level cover in windbreaks. Improves soil fertility (legume). Excellent habitat, providing pollen and seeds for wildlife. Excellent fuelwood. Timber used for fence posts, trinket boxes, and similar items. First Nations used wood for boomerangs. Very attractive ornamental due to weeping foliage. Valuable drought fodder.

# Acacia salicina - Cooba

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Willow, Broughton Willow, Doolan, Umung, Black Sally Wattle



**HABIT:**

Erect or spreading shrub or tree, 3-10 m high. Brownish, finely fissured bark, deep-green foliage on willow-like drooping branches. Often forms dense clumps. Pale yellow to almost white flowers, Feb-Jun. Long-lived and wind-firm.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest, shrubland, and woodland in semi-arid regions. Found on creek banks, alluvial plains, and floodplains. Prefers heavy clay to sandy soils, tolerates inundation, full sun, salt, and drought. Resents frost when young. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

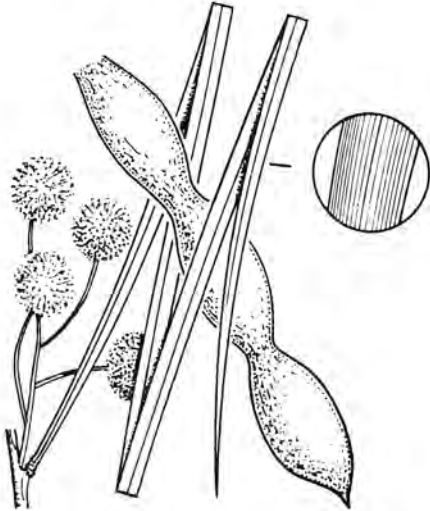
Collect Dec-Jan, good crops every few years. Propagate from seed ( $\pm 8$  viable/gram). Regenerates easily from seed and root suckers. Fencing recommended to protect from livestock.

**VALUES & USES:**

Excellent low to medium-level cover in windbreaks due to bushiness and suckering. Valuable for riverbank stability and erosion control. Improves soil fertility (legume). Provides food for native birds and insects. Good fuelwood. Timber used for furniture, crafts, and historically for bullock yokes and cart shafts. First Nations used bark for fish poison and seeds for food. Attractive ornamental for dry areas, responds well to watering. Excellent drought fodder.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Eumong, River Myall, Belalie, Dunthy, Black Wattle, Dalby Myall



## HABIT:

Erect or spreading tree, 4-10 m high. Fissured, dark grey-brown bark, angled or flattened branchlets. Open crown of long, thin, drooping 'leaves.' Creamy yellow flowers, Mar-Jul, sometimes sporadic. Hardy and long-lived.

## HABITAT & SITE PREFERENCE:

Occurs near watercourses, swamps, or depressions in heavy clay soils. Tolerates poor drainage, inundation, and waterlogging. Frost tolerant. Highly salt tolerant. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Good low to medium-level cover in windbreaks. Useful for soil stabilisation due to suckering. Improves soil fertility (legume). Provides habitat and food for native birds and insects. Produces high-quality, hard, close-grained timber suitable for furniture. Some trees are ornamental for gardens and parks.

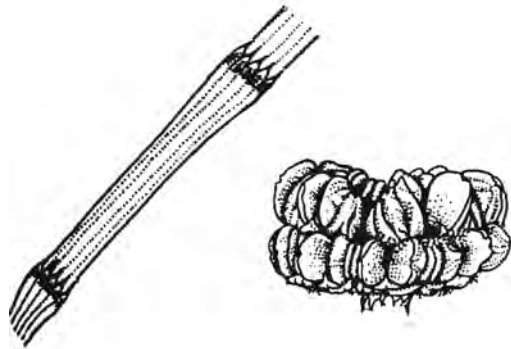
## VALUES & USES:

Collect Oct-Dec, prolific woody pods. Propagate from scarified seed, cuttings, or transplanting suckers. Seeds spread during floods and regenerate easily. Suckering habit aids in regeneration.

# Allocasuarina luehmannii - Bulloak

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Buloke



## HABIT:

Tree 5-15 m high, rough, deeply fissured bark, ascending branches. Yellowish male flower spikes, Oct-Nov. Moderate growth rate, long-lived, fire-sensitive, nitrogen-fixing.

## HABITAT & SITE PREFERENCE:

Woodland on non-calcareous soil, often with White Cypress Pine and Grey Box. Plains, slopes, drier areas, swamp edges. Prefers sandy clays, tolerates inundation, drought, frost, wind, and saline soil. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect mid Dec-mid May. Seeds shed in early autumn. Store in the refrigerator or sow fresh. Germinates in 2-5 weeks from untreated seed (84-119 viable/gram). Can stratify seeds in freezer for 2 weeks before sowing in cooler months. Regenerates from suckers and cut stumps. Seedlings germinate in warm, wet conditions late summer-early autumn or early-mid spring. Protect from livestock and rabbits for 5-7 years.

## VALUES & USES:

Medium-level windbreak cover, partial shade. Leaf litter stabilises soil, improves fertility (nitrogen-fixing). Excellent habitat, food source for birds, roost/nest sites. Excellent fuelwood, strong heat. Timber used for fencing and wood turning. Ornamental for parks and gardens. Potential firewood crop, tolerates lopping for drought fodder.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Small tree, 4-10 m high, rounded crown. Yellow-brown male flower spikes, red female flowers, Mar-Dec. Long-lived (50-100 years), moderately slow-growing.

**HABITAT & SITE PREFERENCE:**

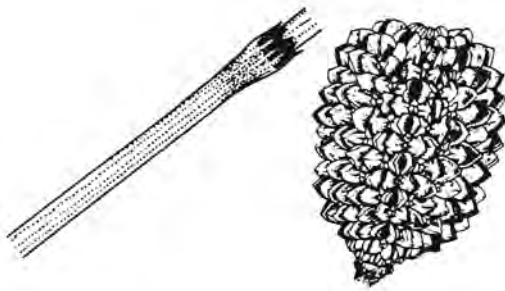
Grassy woodland, forming pure stands or among eucalypts. Dry ridges on poor soils. Prefers well-drained soil, tolerates frost, drought, wind, and some wetness. Prefers 400 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect throughout the year, seeds retained in cones. Dry cones to release seeds. Store in the refrigerator or sow fresh. Germinates in 2-5 weeks at high temperatures (up to 50°C) from untreated seed (120-270 viable/gram). Inoculate seedlings with *Frankia* spp. bacteria from parent tree root nodules for optimal growth. Regenerates from root suckers, seed, and coppicing. Protect seedlings from livestock and rabbits.

**VALUES & USES:**

Medium-level windbreak cover, good shade. Erosion control, improves soil fertility (nitrogen-fixing), leaf litter stabilises soil. Seeds and habitat for birds, perching sites for birds of prey. Excellent fuelwood, glowing charcoal fire. Timber used for firewood, turning, various historical uses. First Nations used wood for boomerangs and digging sticks, consumed young shoots and cones. Ornamental for foliage and flowers, good for orchid cultivation. Useful fodder, withstands lopping.



# *Banksia marginata* - Silver Banksia

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Honeysuckle, Silver Banksia, Warrock, Dwarf Honeysuckle

**HABIT:**

Compact shrub or small tree, up to 12 m high. Pale yellow, honey-scented flowers, Feb-Jul. Fast-growing and long-lived. Fire retardant.

**HABITAT & SITE PREFERENCE:**

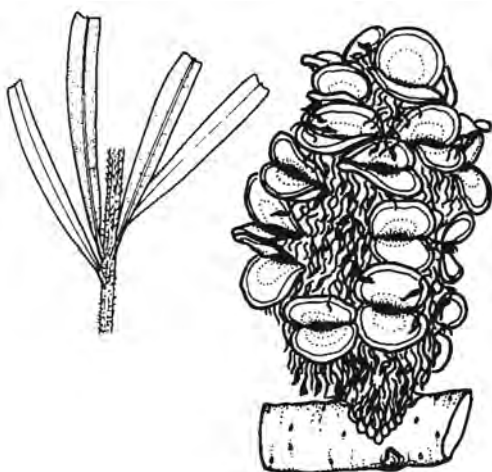
Tolerates various soils, some waterlogging, frost, and wind. Full sun or partial shade, may grow spindly in shade. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Feb-late Apr, seeds released 3-8 weeks after maturity. Propagate from fresh seed (125 viable/gram) or cuttings. Stratify seeds in moist paper or sand in the refrigerator for 6-10 weeks before sowing Oct-Feb. Seedlings susceptible to fungal damage. Regenerates after fire from seed or lignotuber re-shooting. Can be direct-sown but establishes better from tubestock.

**VALUES & USES:**

Medium-level windbreak cover. Produces copious nectar, attracting birds, moths, butterflies, and pygmy possums. Seeds eaten by cockatoos. Not used for fuel. Timber soft, spongy, and red, unsuitable for commercial use. First Nations extracted nectar from flower cones for drinks and used dry cones as strainers. Ornamental specimen for gardens and parks, decorative seed cones, used in bonsai. Leaves produce yellow dye.



**REGIONAL SUBSPECIES:** *B. p. subsp. populneus*, *B. p. subsp. trilobus*

**OTHER NAMES:** n/a

## HABIT:

Evergreen tree to 20 m high. Strongly tapering trunk, dense crown. Creamy-white flowers speckled with dark red, Mar-Dec. Slow-growing initially, then rapid, very long-lived.

## HABITAT & SITE PREFERENCE:

Common in many communities, including Mallee. Prefers well-drained soil, drought tolerant. Sensitive to frost when young, tolerates alkaline soil. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect early Jul-late Jan, seeds released 3-14 days after maturity. Handle with care due to irritating hairs. Propagate from seed ( $\pm 8$  viable/gram), soak in hot water before sowing. Sow in large pots or beds, transplant to temporary beds in winter, then to final site the following winter. Seedlings over 60 cm transplant readily. Regenerates from seed dispersed by birds.

## VALUES & USES:

Excellent shade tree, suitable for clump planting. Medium-level windbreak cover. Useful for recharge control. Attracts nectar-feeding birds and insects. Timber light, soft, used for lattice construction and interiors. First Nations used bark for string and nets, roots for water, seeds for food and flour. Edible grubs. Ornamental tree for gardens, parks, and avenues. Excellent drought fodder, responds well to lopping. Roasted seeds used as coffee substitute. Leaves produce dyes.



# Callitris endlicheri - Black Cypress Pine

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** Black Pine, Black Cypress, Black Callitris

## HABIT:

Tree to 15 m high, with mostly erect or (sometimes) spreading branches, and dark green foliage. Deeply furrowed, tough bark. Hardy, young plants susceptible to grass fires, larger trees tolerant.

## HABITAT & SITE PREFERENCE:

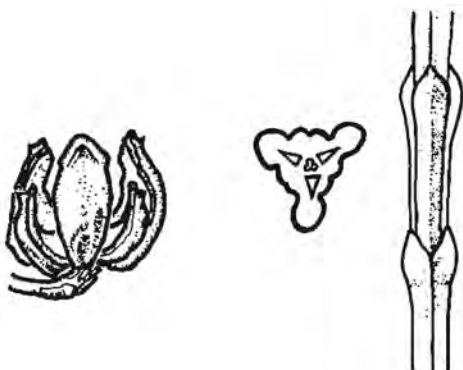
Occurs on stony hills and ridges. Prefers well-drained soil, tolerates frost (to  $-8^{\circ}\text{C}$ ), poor soils, and moderate drought. Prefers 300 - 450 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect early Dec-late Jun, seeds released 3-8 weeks after maturity. Store seeds at  $3-5^{\circ}\text{C}$ . Propagate from seed ( $\pm 281$  viable/gram), sow around Oct due to slow germination. Optimum germination temperature is  $\pm 20^{\circ}\text{C}$ . Regenerates from seed after fire or soil disturbance.

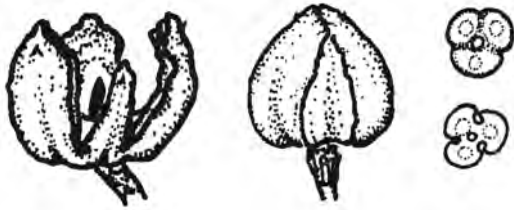
## VALUES & USES:

Excellent medium-level windbreak cover, maintains low foliage for shelter. Useful for catchment protection and erosion control. Seeds eaten by parrots and cockatoos, foliage provides refuge for small birds. Bark habitat for grubs and insects. Suitable fuelwood, high calorific value. Timber comparable to White Cypress Pine, used for fencing, flooring, furniture, and general construction. Bark yields tannin. Ornamental for gardens, parks, and avenues. Resin used in varnishes and as antihelmintic for horses.



**REGIONAL SUBSPECIES:** *A. a.*  
subsp. *anthoclada*

**OTHER NAMES:** Murray Pine, White Pine, Cypress Pine, Marong



## HABIT:

Tree to 20 m high, single trunk, bluish-grey foliage, rough, deeply furrowed bark. Hardy, young plants sensitive to fire, older trees more tolerant. Slow to mature, long-lived.

## HABITAT & SITE PREFERENCE:

Sandy soils, isolated to extensive forests, mainly inland. Prefers well-drained soil, tolerates extended dry periods and frost. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect late Nov-late Apr, seeds released 3-8 weeks after maturity. Collect cones with secateurs, refrigerate seeds. Propagate from seed ( $\pm 20$  viable/gram), sow around Sep for autumn planting or summer for following autumn. Cover with 5 mm potting mix. Can stratify seeds in freezer for 2 weeks before sowing. Regenerates from seed, fencing required to protect seedlings from livestock and rabbits.

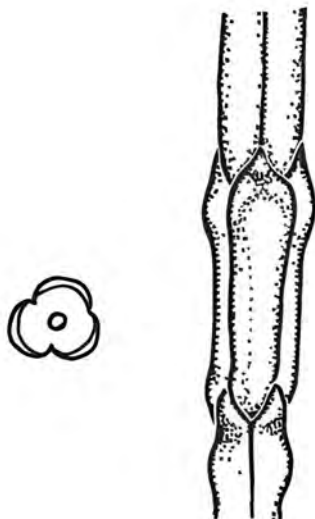
## VALUES & USES:

Long-lived, medium-level windbreak cover, shelter to ground level. Important habitat for birds, especially when co-occurring with Bullock and Grey Box. Thick bark supports insects, food source for birds. Good fuelwood, splits easily, fragrant when burned. Timber valued for decay and termite resistance, used for building, fencing, poles, and beehives. First Nations used resin as adhesive and wood for tools, leaves for medicinal purposes. Ornamental for parks, gardens, avenues, and tubs. Pollen benefits bees.

# Callitris gracilis - Murray Pine

**REGIONAL SUBSPECIES:** *C. g.*  
subsp. *gracilis* and *C. g.* subsp.  
*murrayensis*.

**OTHER NAMES:** Murray Cypress Pine, Native Pine, Slender Cypress Pine



## HABIT:

Tree to 20 m high with spreading branches. Olive green to bluish-green leaves (Sep-Feb). Cones longer than wide when mature (25mm+ diameter), persist on tree for years after maturity.

## HABITAT & SITE PREFERENCE:

Usually on sandy soils, often on sandy ridges. Prefers 300 - 400 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

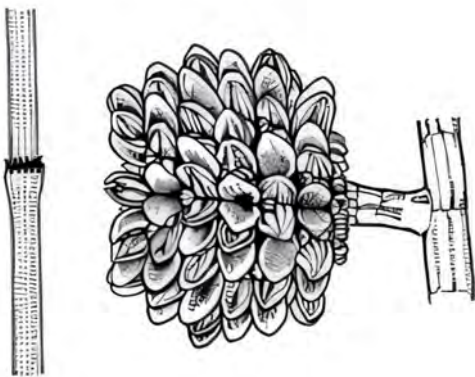
Collect seed late Dec-Apr. Sow fresh seed (germinates in 4-6 weeks). Hardy.

## VALUES & USES:

Long-lived medium-level cover in windbreaks. Good close-grained, termite-resistant timber.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Black Oak, Belar, Scaly-barked Casuarina, Scrub Sheoak, Bulloak



**HABIT:**

Tree approx. 15 m high with many striated slender branches. Woody cones about 20cm long, longer than broad, with prominent protruding valves (Oct-Jan).

**HABITAT & SITE PREFERENCE:**

Black Box and Callitris mixed woodland and riverine forests. Variety of soils. Prefers 200 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Dec. Propagate from root stock and seed.

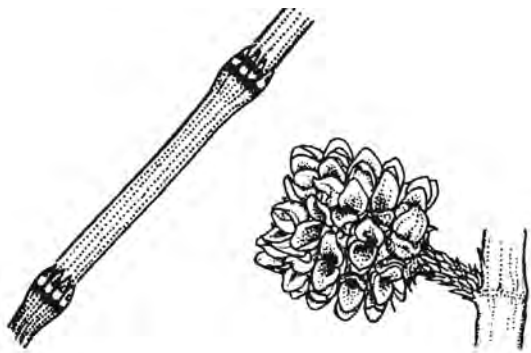
**VALUES & USES:**

Tolerates salt and frost. Useful for erosion control and provides fodder in very bad years. Timber used for fencing and excellent firewood. May regenerate by suckering from roots.

# Casuarina cunninghamiana - River Sheoak

**REGIONAL SUBSPECIES:** *C. c*  
subsp. *cunninghamiana*

**OTHER NAMES:** River Oak, Creek Oak, Fire Oak



**HABIT:**

Medium-sized tree, 15-35 m high, drooping branchlets (in vigorous specimens). Fast-growing, long-lived, improves soil fertility (nitrogen-fixing).

**HABITAT & SITE PREFERENCE:**

Permanent freshwater streambanks, often dominant. Tolerates frost, cold, and slight salinity. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect in early autumn before seed shed. Refrigerate stored seed. Germinates easily in 2-5 weeks (optimum 30°C) from untreated seed. Direct sow into pots, prick out seedlings soon after germination. Inoculate with crushed root nodules from parent trees. Regenerates from seed, suckers, and coppice. Protect seedlings from livestock.

**VALUES & USES:**

Excellent medium to high-level windbreak cover. Protects streambanks from erosion, may form colonies through suckering. Provides habitat and food for birds, good pollen source. Excellent fuelwood, burns hot and evenly. Timber used for ornamental turning, historically for shingles and staves. First Nations used wood for canoes and shelters. Attractive ornamental, suitable for orchid cultivation. Useful drought fodder. Leaves produce various dyes.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Belah

**HABIT:**

Similar to *Casuarina cristata*, but generally smaller and of poorer form. Flowers Oct-Jan.

**HABITAT & SITE PREFERENCE:**

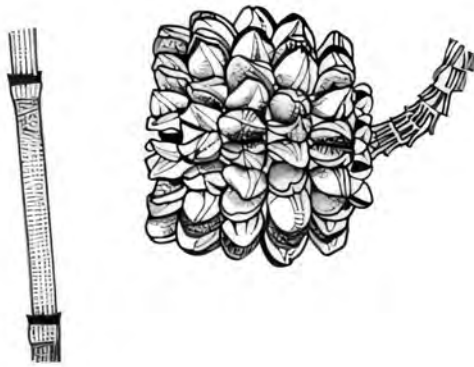
Many woodland communities, often with red-brown soil and light-textured topsoil. Prefers 200 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Dec. Propagate from root stock and seed.

**VALUES & USES:**

Tolerates salt and frost. Useful for erosion control and provides fodder in very bad years. Timber used for fencing and excellent firewood. Regenerates by suckering from roots.



# Eucalyptus blakelyi - Blakely's Red Gum

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Hill Red Gum

**HABIT:**

Tree to 20 m high, smooth, patchy white, grey, brown, or red bark shedding in flakes. Dull green or grey-green leaves. White flowers, mainly summer, heavy flowering every 2-3 years. Moderate growth rate.

**HABITAT & SITE PREFERENCE:**

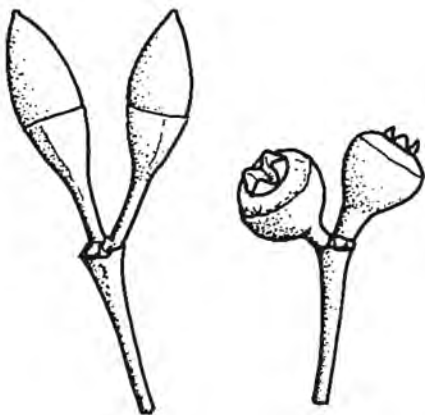
Grassy woodlands on various soils, commonly moderately fertile, below 800 m elevation. Tolerates frost, winter waterlogging, and drought. Prefers 400 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Feb-late May, possibly throughout the year, seeds shed after maturity. Propagate from seed ( $\pm 687$  viable/gram), optimum germination temperature 25-30°C. Regenerates from seed in favourable seasons, recovers well after fire.

**VALUES & USES:**

Medium-level windbreak cover when interspersed with understory plants. Provides fire protection. Useful for gully erosion control. Flowers are food for nectar-feeding birds and insects, hollows provide habitat. Good fuelwood. Timber similar to other Red Gums, used for fencing, construction, and furniture. Ornamental for parks and gardens, best interplanted with native shrubs to minimise pest damage. Leaves produce various dyes.



**REGIONAL SUBSPECIES:** *E. c.* subsp. *acuta*, *E. c.* subsp. *arida*, *E. c.* subsp. *camaldulensis*

**OTHER NAMES:** Dharnya, Biel

## HABIT:

Tree to 30 m high (or taller), smooth bark shedding in ribbons or flakes. Large spreading crown, often twisted branches, dull green or grey-green leaves. White flowers, Dec-Feb, heavy flowering every 2-3 years. Fast-growing initially, very long-lived.

## HABITAT & SITE PREFERENCE:

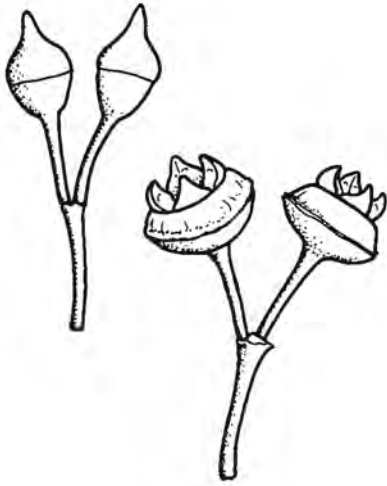
Dominant in grassy woodlands/forests on deep, rich alluvial soils near permanent water. Low-lying areas, occasional inundation, or accessible groundwater. Tolerates wind, some provenances tolerate salinity, drought, flood, and fire. Prefers 300 - 400 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect Mar-Sep, seeds shed soon after maturity. Propagate from seed ( $\pm 700$  seeds/gram), optimum germination temperature 35°C. Regenerates easily from seed, especially in summer rains and along roadsides.

## VALUES & USES:

High-level windbreak cover, grass grows to trunk. Controls gully erosion and underground seepage. Salt-tolerant provenances used in rehabilitation. Excellent habitat, forms base of creek/river habitats, hollows for nesting, pollen/nectar for insects and birds. Important for fish habitat. Timber used for construction, sleepers, flooring, fencing, furniture. First Nations used bark for canoes and dishes, gum for drinks and medicine. Ornamental for large areas, bog gardens, pond edges. Excellent honey tree, leaves produce dyes, gum used medicinally.



# *Eucalyptus dumosa* - Congoo Mallee

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** White Mallee, Waikeri, Weir Mallee, Bunurdu

## HABIT:

Tree or mallee to 8 m high. Rough, flaky persistent bark at the base and bluish-grey leaves. Whitish flowers (Jun-Feb).

## HABITAT & SITE PREFERENCE:

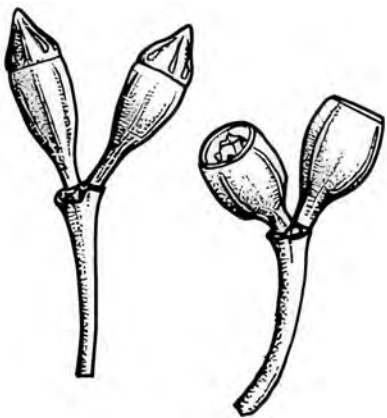
Mainly found in mallee, dry sandy sites with low rainfall. Prefers 250 to 450 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

Collect seed Sep-Feb. Propagates readily from seed. Tolerates moderate frost.

## VALUES & USES:

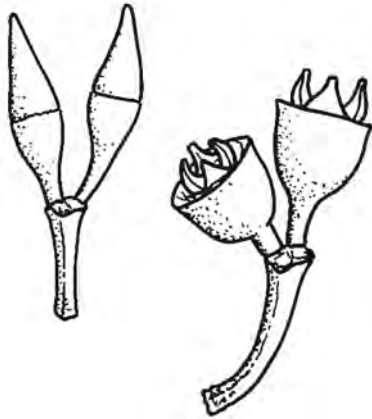
Useful as a windbreak, for soil erosion control, and in honey production.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Dwyer's Mallee Gum



**HABIT:**

Mallee or tree to 15 m high, dull-green leaves, smooth bark shedding in plates or flakes. Creamy white flowers, winter-spring. Flowers regularly.

**HABITAT & SITE PREFERENCE:**

Sclerophyll mallee shrubland, well-drained shallow soils on siliceous ridges. Prefers well-drained soil in full sun. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

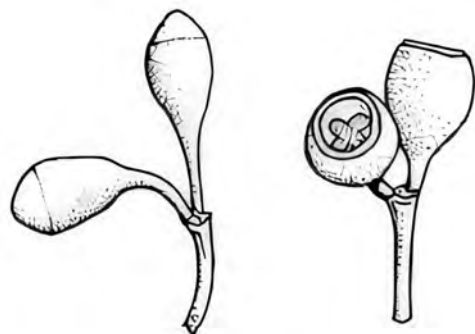
Collect seed capsules when ripe. Propagate from seed.

**VALUES & USES:**

Low to medium-level windbreak cover in hill country. Useful for recharge revegetation. Provides nectar and pollen for insects and birds. Red, reasonably hard timber. Attractive ornamental tree. Significant for apiculture.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Red Box, Gum Coolibah, Gum-barked Coolibah, Smooth-barked Coolibah, Bastard Box, Western Red Box, Yellow Box.



**HABIT:**

Large tree 12-24 m high with several trunks. Bark persistent at base, smooth white, or blotched grey or brown above. Leaves narrow-lanceolate and silver-blue. Creamy-white flowers (Mar-Aug).

**HABITAT & SITE PREFERENCE:**

A variety of soils in Box-Callitris, Callitris mixed, rocky outcrop, Black Box and mallee woodlands. Prefers 300 to 450 mm rainfall in the Riverina region. Tolerates moderate frost, poor soils, and low rainfall.

**SEED COLLECTION & PROPAGATION:**

Collect seeds throughout the year. Propagate from seed.

**VALUES & USES:**

Good windbreak species. An attractive ornamental tree, shade, timber, firewood. Inland Red Box is an extremely fire-resistant species. The timber is red-brown, hard, and moderately durable in the ground; used for farm construction. Pollen/nectar for insects and birds. The seeds were sometimes consumed by First Nations People, though it is doubtful they are eaten nowadays. The wood is also sometimes used locally. A small quantity of essential oil is obtained from the leaves. Attractive ornamental tree. Significant for apiculture.

**REGIONAL SUBSPECIES:** *A. m.*  
*var. macrocarpus.*

**OTHER NAMES:** River Black Box,  
Flooded Box, Swamp Box, Grey Box



## HABIT:

Small to medium-sized tree, 10-20 m high. Rough, dark grey fibrous bark to small branches and a short trunk. White-cream flowers, rarely pink (Sep-Feb). Often flowers spasmodically, one tree may contain both pink and cream flowers.

## HABITAT & SITE PREFERENCE:

Heavy clay soils in areas subject to periodic flooding. Also grows in heavy or poorly drained soils, including alkaline soils. Prefers 250 to 500 mm rainfall in the Riverina region. Resists heavy frost.

## SEED COLLECTION & PROPAGATION:

Collect seed throughout the year. Seed released 3-8 weeks after maturity. Propagate from seed (approx. 400 viable seeds per gram). Available from specialist nurseries. Medium growth rate.

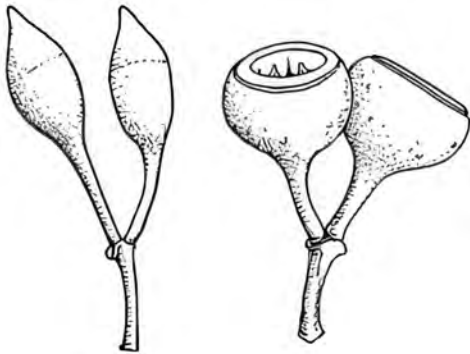
## VALUES & USES:

Useful for windbreaks, shelterbelts, and roadside plantations. Wood is hard, durable, heavy, and reddish, good for posts. Foliage is cattle and sheep fodder. Flowers rich in nectar and pollen, a major honey source, attracting nectar-feeding birds and insects. Distinctive and shapely, the dark trunk contrasts well with light foliage, making it excellent for gardens and parks.

# *Eucalyptus leucoxylon* - Yellow Gum

**REGIONAL SUBSPECIES:** *E. l.*  
*subsp. pruinosa*

**OTHER NAMES:** Blue Gum, White  
Ironbark, South Australian Blue Gum,  
Inland Blue Gum



## HABIT:

Mallee or tree to 25 m high. Coarse, loose, fibrous bark at base, with most of trunk and stems smooth and yellowish. Juvenile leaves and flower-buds glaucous. White-cream flowers (May-Dec).

## HABITAT & SITE PREFERENCE:

Relatively well-watered sites, often on deep soils, but also more rocky sites. Prefers 300 to 500 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

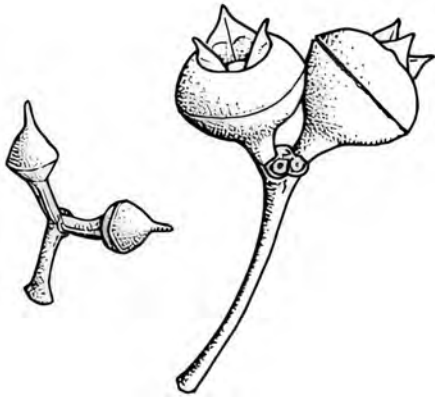
Collect seed mid Feb-late May. Propagate from seed (approx. 600 viable seeds per gram) - available from specialist nurseries. Medium growth rate. Regenerates from stem and coppices after fire.

## VALUES & USES:

Excellent in windbreaks due to its height and dense foliage. Provides relatively sparse crown cover, so does not create heavy shade. Hard, strong, and very durable yellowish timber, suitable for posts, poles, and fuel. Flowers are an excellent food source for honeyeaters and other nectar-feeding birds and insects. Old trees produce many hollows for nesting and habitat. First Nations People used wood to make clubs and shields. Excellent for gardens to attract birds. The cultivated *E. leucoxylon* var. *rosea* is attractive and popular. Good honey production. Juvenile leaves potentially useful for the cut flower industry.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Stringybark



**HABIT:**

Upright tree to 35 m high (often less) with grey to red-brown, rough, stringy bark to small branches. Green adult leaves. Profuse, conspicuous, white-cream flowers (Jan-Jun).

**HABITAT & SITE PREFERENCE:**

On poor, well-drained, shallow soils in low to moderate rainfall zones (300 to 450 mm). Tolerates frost, hot/dry conditions and harsh sites.

**SEED COLLECTION & PROPAGATION:**

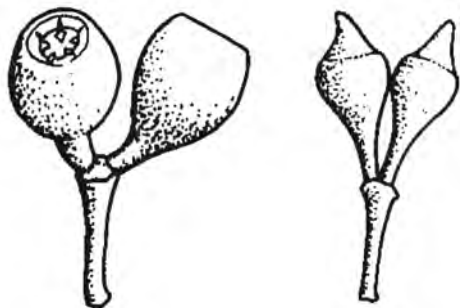
Collect mainly in summer, though seeds are held for many years. Extract seeds from old woody capsules by heating in an oven at 200°C for 15 minutes. Propagate from seed (approx. 68 viable seeds per gram). Optimum germination temperature is 16°C. Adding local soil or leaf litter to potting mix may improve seedling survival. Establishes well when direct seeded. Requires fencing to prevent ringbarking, particularly from cattle seeking roughage.

**VALUES & USES:**

Useful windbreak with medium-level cover. Good shade from dense, compact crown. Useful to revegetate hilly recharge sites. Pale red-brown timber, moderately fine-textured, often with interlocked grain. Used in flooring, furniture, veneers, and fencing. Good habitat, flowers are a nectar source for native insects, birds, and mammals. Native birds use bark for nesting material. Shade for large gardens, but not particularly ornamental. Leaves produce lemon or brown-green dye. Kino from bark is astringent. Leaves are a source of rutin.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Honey Box, Yellow Jacket, Dargan, Yellow Ironbark



**HABIT:**

Tree to 30 m high, spreading dense crown of fine grey-green foliage. Fibrous-flaky 'box' bark, dark to light brown-yellow, shedding in short ribbons. White-cream, honey-scented flowers, Sep-Feb. Long-lived, slow to moderate growth rate.

**HABITAT & SITE PREFERENCE:**

Grassy woodland on moderately fertile, often sandy or alluvial soil. Prefers light to heavy, well-drained, moist soils. Tolerates moderate frost and wind. Dislikes poorly drained, infertile, or alkaline soils, cold districts, and high water tables. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

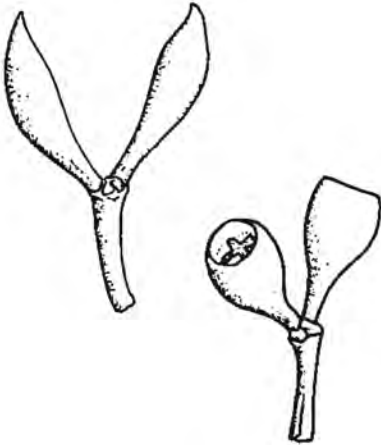
Collect throughout the year. Propagate from seed ( $\pm 530$  viable/gram), optimum germination temperature 27°C. Regenerates from seed in absence of weeds, during wet summers. Seedlings palatable to livestock. Recovers well after fire and coppices readily.

**VALUES & USES:**

Medium to high-level windbreak cover, good shade. Helps stabilise landslips and slumping due to high water use. Excellent habitat, hollows provide nesting/refuge for birds and mammals. Nectar-rich flowers attract various animals. Excellent fuelwood, few sparks, but difficult to split. Timber used for construction, poles, sleepers, fencing, and furniture. Ornamental tree, attractive foliage and form. Leaves produce dyes. Excellent honey tree.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Western Grey Box, Green-leaved Box, Western Grey Box, Black Box, Southern Grey Box, Inland Grey Box, Gum Topped Box



**HABIT:**

Tree to 25 m high, open crown of dull olive-green leaves. Grey, fibrous-flaky 'box' bark with whitish patches, smooth upper branches. White flowers, Feb-Jun. Long-lived, moderate growth rate.

**HABITAT & SITE PREFERENCE:**

Grassy woodland on moderately fertile loamy soils. Prefers heavy loamy soils. Tolerates alkaline soil, frost, wind, flooding, and drought. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect throughout the year, good crops may be irregular. Propagate from seed ( $\pm 729$  seeds/gram). Regenerates from seed in absence of weeds, during wet summers. Coppices vigorously and establishes well when direct seeded.

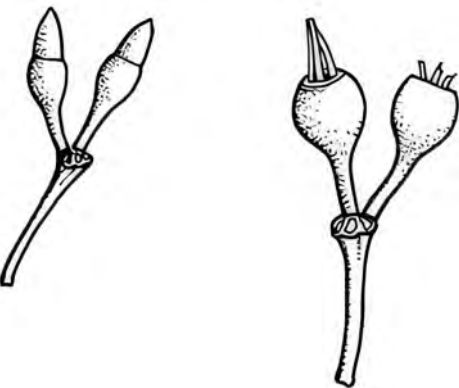
**VALUES & USES:**

Medium-level windbreak cover, good shade. Useful for gully erosion control. Excellent habitat, flowers attract wildlife, hollows provide nesting/refuge. Very good fuelwood. Timber pale, durable, used for posts, poles, fencing, and construction. Ornamental for larger spaces. Leaves produce various dyes.

# *Eucalyptus oleosa* - Red Mallee

**REGIONAL SUBSPECIES:** *E. o.*  
subsp. *oleosa*

**OTHER NAMES:** Giant Mallee, Oily Mallee, Acorn Mallee, Oleosa Mallee, Straggly Gum



**HABIT:**

Mallee or tree, 3-12 m high. Bark fibrous and persistent at base, peeling in ribbons above. Shiny pale or light green leaves. Sporadic, white flowers (Aug-Mar).

**HABITAT & SITE PREFERENCE:**

Often in mallee communities. Well-drained sandy loams and loams. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

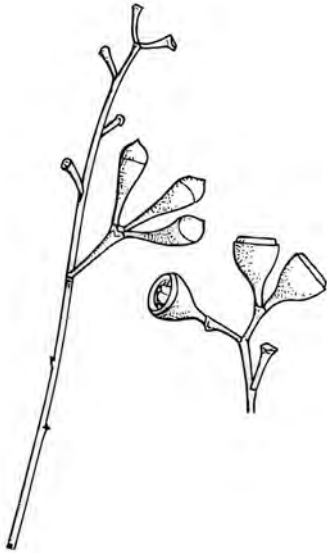
Generally from Dec-Feb. Tolerates drought, some alkalinity, and most frost.

**VALUES & USES:**

Handy for windbreaks, shade trees, and wind erosion control. Valuable in honey production. Medicinal oils can be extracted from the leaves. Timber is hardy and used for fence posts.

**REGIONAL SUBSPECIES:** *E. p.*  
subsp. *bimbil*

**OTHER NAMES:** Poplar Box, Round-leaf Box, Red Box, Bimbil, White Box



**HABIT:**

Tree to 20 m high, with persistent light-grey to grey-brown 'box' bark. Leaves rounded, glossy, and green to dark green. Flowers whitish (Dec-Mar).

**HABITAT & SITE PREFERENCE:**

Variable. Common on red earths of clay loam to sandy loam texture, often with gravel in the profile. Less common on sandplains with deep loamy sand. Also in more arid areas along sandy water-courses and in small terminal drainage depressions. Prefers flat country on heavy soils. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

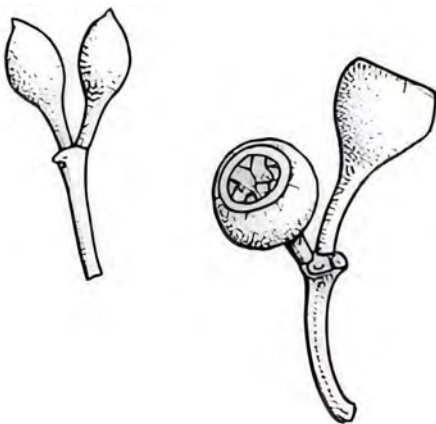
Propagate from seed and perhaps root cuttings. Tolerates light to heavy frost. Readily regenerates from suckering. Fast growth rate.

**VALUES & USES:**

A good windbreak. An attractive good shade plant for properties and stock. Useful in honey production.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Peppermint Box, Black Mallee, Mallee Box, and Whipstick Peppermint.



**HABIT:**

Mallee or small straggly tree to 9 m high. Persistent, rough, and somewhat fibrous greyish-brown bark on the lower trunk, smooth and deciduous above. Flowers white-cream (June-Nov).

**HABITAT & SITE PREFERENCE:**

Various communities (including mallee), mainly those with a sandy surface and with lime at depth. Less common on drainage lines. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

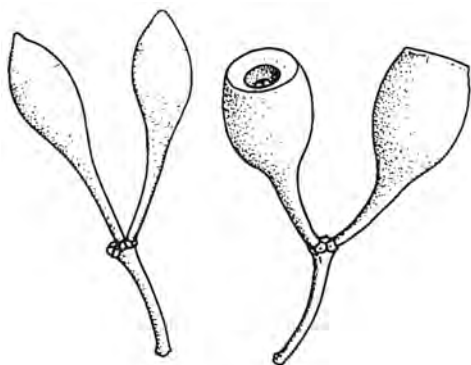
Collect seeds throughout the year. Propagate from seed, which germinates readily. Medium growth rate. Tolerates light to moderate frosts and slightly acidic to alkaline soils. Available from specialist nurseries.

**VALUES & USES:**

Attracts insect-eating birds. Timber can be used for fence posts.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Red Ironbark, Mugga, Red-flowering Ironbark



**HABIT:**

Tree to 35 m high, red-brown to brown-black 'ironbark,' dull green or grey-green adult leaves. Moderate growth rate.

**HABITAT & SITE PREFERENCE:**

Sclerophyll woodland on lighter, poorer soils, including gravels, sands, ironstones, and clays. Tolerates frost and moderate drought. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

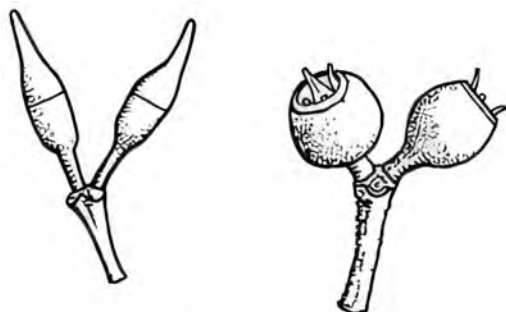
Collect early Aug-late Feb, seeds released 3-8 weeks after maturity. Propagate from seed ( $\pm 226$  viable/gram). Regenerates from seed in absence of weeds, during wet summers.

**VALUES & USES:**

Medium to high-level windbreak cover. Excellent habitat, nectar source for various animals, important winter food. Hollows provide nest sites. Excellent fuelwood. Timber dark red, very hard, strong, and durable, used for heavy construction, railway sleepers, turning, furniture, and fencing. Leaves and bark produce dyes, leaves contain medicinal oil. Valuable honey producer.

**REGIONAL SUBSPECIES:** *E. s.* subsp. *socialis*

**OTHER NAMES:** Red Mallee, Morrel, Willow Mallee, Pointed-Fruit Mallee, Giant Mallee



**HABIT:**

Mallee 2-9 m high. Bark greyish fibrous and persistent on larger stems, smooth and deciduous above, peeling off in ribbons leaving white or greyish bark beneath. Thick bluish-green leaves. Flowers whitish or cream (September to November).

**HABITAT & SITE PREFERENCE:**

Often found in mallee communities. Deep sandy soils or well-drained loams, often containing limestone. Prefers from 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

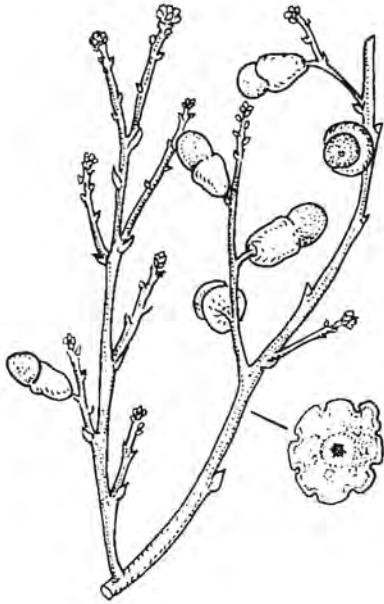
Collect seeds throughout the year. Propagate from seed, which readily germinates.

**VALUES & USES:**

Animal shelter. Useful for wind erosion control. Leaves used for oil extraction. Useful for honey production. Tolerates moderate frost and alkaline soils.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Cherry Ballart, Wild Cherry, Ballee, Ballot



**HABIT:**

Shrub or small tree to 8 m high, dense yellowish-green or bronzy foliage. Cream, inconspicuous flowers, mainly Oct-May, but can occur year-round.

**HABITAT & SITE PREFERENCE:**

Occurs in various habitats and soils, including open forest and woodland. Prefers poor shallow soils. Parasitises roots of surrounding plants when young. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Oct-late Mar, seeds released 3-14 days after maturity. Propagation is difficult, from seed or cuttings. Untreated seed may take 6-18 months to germinate. Germination success seen with bird-ingested seed sown with host plants. Transplant root suckers from damaged roots. Regenerates vigorously from damaged roots.

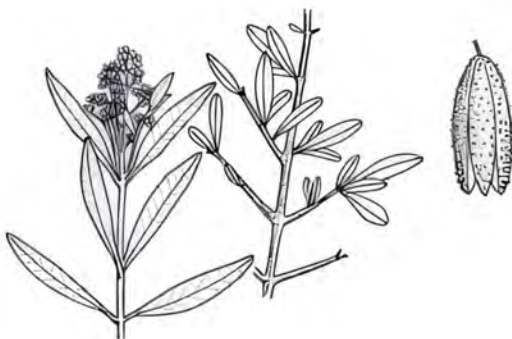
**VALUES & USES:**

Useful low-level windbreak cover, plant on leeward side due to brittle nature. Fruit eaten by various native birds, dense foliage provides shelter. Timber good for turning, historically used for tools and gun stocks. First Nations People ate the fruit and used wood for tools. Excellent ornamental due to foliage, can be pruned or coppiced.

# *Flindersia maculosa* - Leopardwood

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Leopard Tree, Spotted tree, Spotted Dog



**HABIT:**

Medium-sized tree to 12 m high with a pendulous crown. Single trunk with bark shed in patches, creating a leopard-like appearance in white, orange, and light grey. Flowers in November and December.

**HABITAT & SITE PREFERENCE:**

Sandy flats which flood, sandplains, and higher floodplains with calcareous or texture-contrast soils. Only found in the far northern part of the region. Prefers sandy soils in an open, sunny position. Prefers 200 to 300 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed. Slow growth rate.

**VALUES & USES:**

Ornamental graceful plant suited for park and garden plantings.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sheepbush,  
Dogwood, Willow



**HABIT:**

Shapely spreading small tree or shrub to 10 m high, rounded, dense canopy of low-hanging branches, narrow glossy dark-green leaves. White, strong-smelling flowers, Jun-Nov. Drought resistant and hardy.

**HABITAT & SITE PREFERENCE:**

Mixed woodland communities on various soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect easily when mature, abundant seeds. Can be gathered from the ground. Propagate from fresh seed or cuttings (slow to root). Fracture hard seed coat before sowing to remove inhibitors. Regenerates from seed, but few seedlings establish. Propagates from cuttings

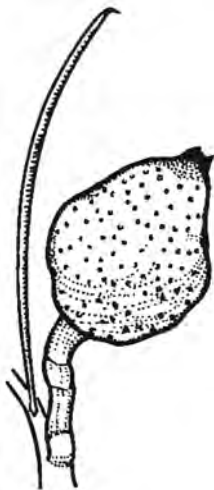
**VALUES & USES:**

Excellent low-level windbreak cover due to low branching. Excellent habitat, flowers provide nectar and pollen for insects. Timber light-coloured, hard, fragrant, but prone to splitting. Excellent ornamental for larger spaces, responds well to pruning. Useful emergency fodder in drought (palatability varies).

# *Hakea tephrosperma* - Hooked Needlewood

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Striped Hakea,  
Needlewood



**HABIT:**

Small tree or shrub, 3-12 m high, often with drooping branches. Sparse crown of cylindrical leaves (2-9 cm long). Cream, spider-like flowers in spring.

**HABITAT & SITE PREFERENCE:**

Usually on coarse-textured soils, as individual trees or dense thickets. Very hardy, tolerates moderate frost. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect easily in winter-spring when seeds are available, retained on plants. Propagate easily from fresh seed, germinates in 3-6 weeks. Direct sow into pots or field. Regenerates mainly from root suckers, especially when protected from grazing.

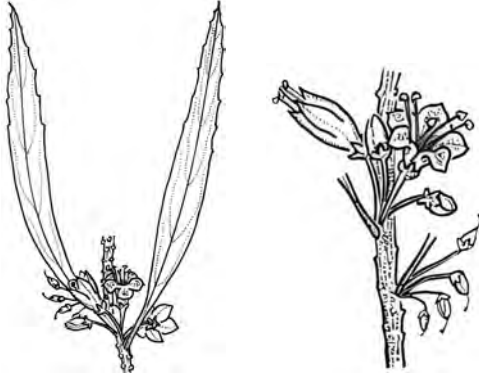
**VALUES & USES:**

Provides excellent cover for small native birds. Flowers are a food source for honeyeaters. Timber used for small ornaments due to attractive pattern. Nectar can be sucked from flowers or used for sweet drinks. Attractive woody fruit and flowers when mass-planted, hardy in cultivation.



**REGIONAL SUBSPECIES:** *M. p. subsp. perbellum*, *M. p. subsp. platycarpum*

**OTHER NAMES:** Sandalwood, False Sandalwood, Bastard Sandalwood, Dogwood, Sugar Tree



## HABIT:

Tree to 10 m high with sticky young growth. Leaves green, linear-lanceolate to 6 cm long. Bell-shaped, white flowers in groups of 4-8 in leaf axils. Fruit a dry drupe. Flowers from August to December.

## HABITAT & SITE PREFERENCE:

Woodland areas with red or red-brown earth and solonized brown soil. Abundant in mallee and Belah-Rosewood communities. Prefers well-drained soils and lots of sun. Prefers 300 to 450 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

Collect seeds from Feb-Mar. Propagate from seed or from cuttings of firm young growth. Cuttings may be slow to produce roots. Hardy to most frost. Withstands extended dry periods.

## VALUES & USES:

Foliage readily eaten by stock. Manna exuded by the tree tastes sugary and was eaten by First Nations People. Resin was used by First Nations People to cement stone heads to implements.

# Pittosporum angustifolium - Butterbush

**REGIONAL SUBSPECIES:** N/A

**OTHER NAMES:** Weeping Pittosporum, Berrigan, Western Pittosporum, Locketbush, Native Willow, Poison-berry Tree



## HABIT:

Shrub or small tree; generally 4-5 m high, but can grow to 10 m. Virtually hairless, drooping branches, and whitish or mottled trunk. Narrow leaves (4-12 cm long), characteristic orange fruit. Yellow to cream, fragrant flowers, winter-spring. Slow-growing but long-lived.

## HABITAT & SITE PREFERENCE:

Woodland, mallee, and sandy soils in arid zones. Tolerates drought and frost, prefers full sun. Dislikes waterlogging. Prefers 300 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect early Dec-late May. Propagate from fresh seed ( $\pm 50$  viable/gram) or cuttings. Wash seeds with detergent and rub with sand to remove inhibitor before sowing. Germinates in 2-3 months. Regenerates readily by suckering.

## VALUES & USES:

Useful low-level windbreak cover, stabilises banks. Provides habitat, sticky seeds eaten by birds. Timber close-grained, hard, used for small articles like tool handles. First Nations used gum, seed flour, and infusions for various medicinal purposes. Decorative ornamental for parks and gardens, graceful weeping habit and orange fruit. Fair emergency fodder in drought.



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# PLANT DESCRIPTIONS

## SMALL TREES & SHRUBS

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Riverina



# SMALL TREES & SHRUBS 2 - 8m



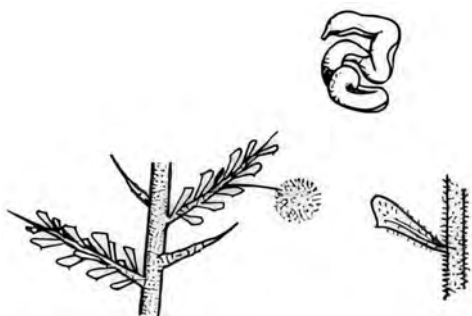
COMMON NAME	BOTANICAL NAME	PAGE
Austral Indigo	<i>Indigofera australis</i>	302
Australian Boxthorn	<i>Lycium australe</i>	302
Bent-leaf Wattle	<i>Acacia flexifolia</i>	281
Box-leaf Wattle	<i>Acacia buxifolia</i>	279
Broombush	<i>Melaleuca uncinata</i>	304
Budda	<i>Eremophila mitchellii</i>	295
Cactus Pea	<i>Bossiaea walkeri</i>	289
Comb Spider-flower	<i>Grevillea huegelii</i>	301
Cough Bush	<i>Cassinia laevis</i>	290
Deane's Wattle	<i>Acacia deanei</i>	280
Dolly Bush	<i>Cassinia sifton</i>	291
Dwarf Cherry	<i>Exocarpos strictus</i>	299
Ellangowan Poison-bush	<i>Eremophila deserti</i>	294
Emubush	<i>Eremophila longifolia</i>	295
Fern-leaf Hop-bush	<i>Dodonaea boroniifolia</i>	292
Gold Dust Wattle	<i>Acacia acinacea</i>	277
Golden Wattle	<i>Acacia pycnantha</i>	286
Green Mallee	<i>Eucalyptus viridis</i>	298
Grey Mallee	<i>Eucalyptus morrisii</i>	297
Grey Wattle	<i>Acacia brachybotrya</i>	278
Hakea Wattle	<i>Acacia hakeoides</i>	282
Harrow Wattle	<i>Acacia acanthoclada</i>	277
Hill Tea-tree	<i>Gaudium divaricatum</i>	299
Hop Goodenia	<i>Goodenia ovata</i>	300
Kangaroo Thorn	<i>Acacia paradoxa</i>	285
Leafless Cherry	<i>Exocarpos aphyllus</i>	298
Lerp Mallee	<i>Eucalyptus costata</i>	296
Lignum	<i>Duma florulenta</i>	294
Lobed-leaf Hop-bush	<i>Dodonaea lobulata</i>	293

# SMALL TREES & SHRUBS 2 - 8m

COMMON NAME	BOTANICAL NAME	PAGE
Mallee Wattle	<i>Acacia montana</i>	284
Manna Wattle	<i>Acacia microcarpa</i>	284
Miljee	<i>Acacia oswaldii</i>	285
Moonah	<i>Melaleuca lanceolata</i>	303
Mulga	<i>Acacia aneura</i>	278
Myall	<i>Acacia melvillei</i>	283
Native Blackthorn	<i>Bursaria spinosa</i>	289
Needle Wattle	<i>Acacia rigens</i>	286
Needlewood	<i>Hakea leucoptera</i>	301
Old Man Saltbush	<i>Atriplex nummularia</i>	288
Pink Honey-myrtle	<i>Melaleuca diosmatifolia</i>	303
Prickly Bottlebrush	<i>Callistemon brachyandrus</i>	290
Prickly Wattle	<i>Acacia victoriae</i>	287
Punty Bush	<i>Senna artemisioides</i>	305
Quandong	<i>Santalum acuminatum</i>	305
Rock Correa	<i>Correa glabra</i>	291
Rusty Spider-flower	<i>Grevillea floribunda</i>	300
Sandhill Bitter-pea	<i>Daviesia arenaria</i>	292
Sandhill Wattle	<i>Acacia ligulata</i>	282
Slender-leaf Mallee	<i>Eucalyptus leptophylla</i>	297
Spine Bush	<i>Acacia colletioides</i>	280
Sticky Hop-bush	<i>Dodonaea viscosa</i>	293
Streaked Wattle	<i>Acacia lineata</i>	283
Wallowa	<i>Acacia calamifolia</i>	279
Warrior Bush	<i>Apophyllum anomalum</i>	288
Western Boobialla	<i>Myoporum montanum</i>	304
Western Golden Wattle	<i>Acacia decora</i>	281
Western Rosewood	<i>Alectryon oleifolius</i>	287
Yorrell	<i>Eucalyptus gracilis</i>	296

**REGIONAL SUBSPECIES:** *A. a.*  
subsp. *acanthoclada*

**OTHER NAMES:** n/a



## HABIT:

Erect to spreading shrub, 1.3-1.5 m high. Smooth grey bark, spiny and hairy branches. Golden yellow flowers (Jul-Jan).

## HABITAT & SITE PREFERENCE:

Mallee communities in sandy, well-drained soil. Tolerates dry conditions and frost. Prefers 300 - 450 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect seed in summer. Propagate from scarified or heat-treated seed, or cuttings.

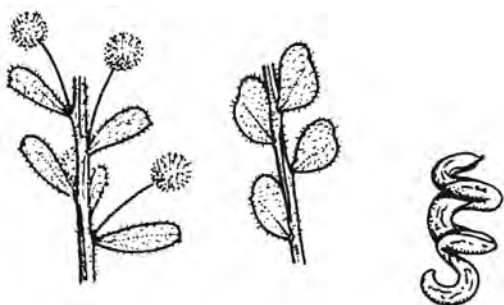
## VALUES & USES:

Low windbreak. Nitrogen-fixing legume, improves soil fertility. Potential ornamental use in gardens as a screen plant due to spiny habit.

# Acacia acinacea - Gold Dust Wattle

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** Round-leaved Wattle



## HABIT:

Small spreading shrub, 30 cm to 2 m high, arching branches, angled/flattened branchlets, hairy 'leaves.' Golden-yellow flowers, Aug-Oct, profuse. Fast-growing, lifespan may be several decades.

## HABITAT & SITE PREFERENCE:

Woodland, various soils, mainly sand. Prefers well-drained soil in full or partial sun. Tolerates frost and drought, dislikes poor drainage. Prefers 350 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

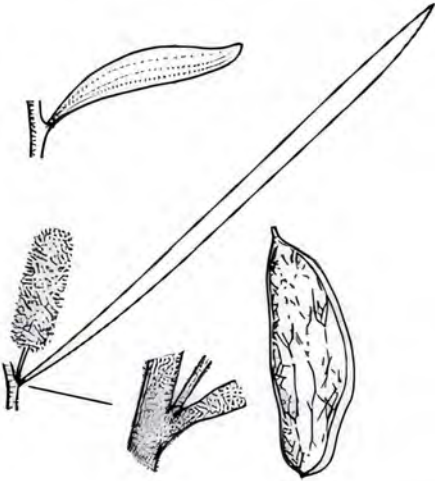
Collect early Dec-mid Feb, seeds released quickly after maturity. Often low seed production. Propagate from scarified seed ( $\pm 113$  viable/gram), soak in boiling water before sowing. Also propagates from cuttings. Regenerates from seed and suckers after fire. Does not establish easily from direct seeding.

## VALUES & USES:

Low-level windbreak cover. Improves soil fertility (legume). Good habitat, flowers provide nectar and pollen for insects, seeds eaten by birds and ants. Attractive for hedges, screens, rock gardens, under trees, and tubs. Self-seeds in gardens.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Mulga Wattle, Mulga Acacia



**HABIT:**

Ascending, layered shrub to small tree to 8 m high. Leaves are minutely hairy and greyish-blue. Flowers are bright yellow spikes to 20 mm long. Flowering depends on rain.

**HABITAT & SITE PREFERENCE:**

Slopes and ranges with stony, well-drained, medium to light soils in full sun. Tolerates frost and lime. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

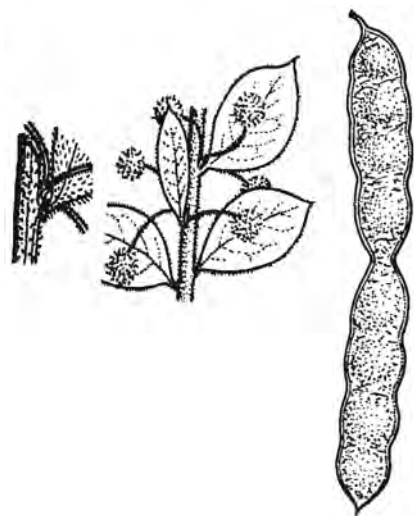
Collect seed from Sep-Jan. Propagate from scarified or heat-treated seed. Fast growth rate.

**VALUES & USES:**

Provides light shade and protection from erosion. Nitrogen-fixing legume, improves soil fertility. Wood used for weapons and tools by First Nations People, and seeds and gum were used as food sources. Attractive and suitable for gardens. A very important forage plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Grey Mulga



**HABIT:**

Erect or spreading grey to grey-green shrub, 1-4 m high, downy branches. Golden-yellow flowers, Jul-Sept, abundant. Moderate growth rate.

**HABITAT & SITE PREFERENCE:**

Mainly in mallee on red earths. Prefers relatively well-drained soil. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mid-Nov to late Jan, seeds released quickly after maturity. Propagate from scarified seed. Regenerates from seed or stem after fire.

**VALUES & USES:**

Low-level cover in windbreaks. Useful for stabilising sandy soils near watercourses, improves soil fertility (legume). Provides dense understory for bird cover, seeds eaten by birds. Decorative ornamental for gardens.

**REGIONAL SUBSPECIES:** *A. b. subsp. buxifolia*, *A. b. subsp. pubiflora*

**OTHER NAMES:** Hill Wattle



**HABIT:**

Erect or spreading shrub, 1-3 m high, thick blue-grey foliage. Golden-yellow flowers, Jul-Nov. Moderate growth rate, variable habit.

**HABITAT & SITE PREFERENCE:**

Ridges and mallee, often on rocky outcrops and foot slopes. Prefers well-drained soil, tolerates frost and dryness. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

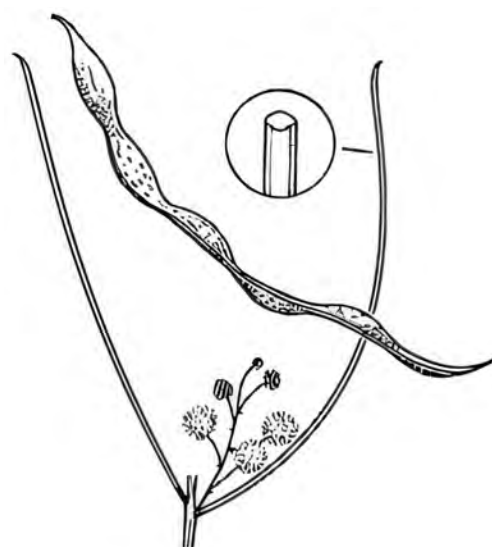
Collect early Dec-mid Jan, seeds released quickly after maturity. Propagate from scarified seed ( $\pm 58$  viable/gram), soak in boiling water before sowing. Also from cuttings. Regenerates from seed, particularly after fire.

**VALUES & USES:**

Excellent low-level cover in windbreaks. Controls erosion due to soil-binding fibrous roots, improves soil fertility (legume). Good habitat, flowers provide food for insects, attracting insect-eating birds. Seeds eaten by parrots and pigeons. Attractive ornamental due to foliage and flowers.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Reed-leaf Wattle, Willow, Broom Wattle, Wallowa Wattle, Sandhill Wattle



**HABIT:**

Upright to spreading shrub, 2-4 m high with many slender branches. Has profuse golden flowers, flowering from August to October. Fast growth rate.

**HABITAT & SITE PREFERENCE:**

Foot-slopes and ridges. Prefers gravelly red earth, tolerates frost, drought and lime. Withstands short periods of waterlogging. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

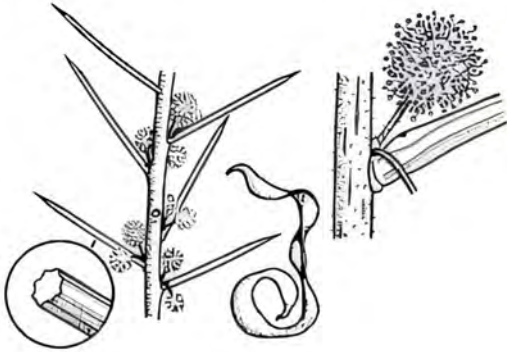
Collect mid Nov-mid Feb. Mature seed released immediately or within 12 days of maturity. Propagate from scarified seed, soak in boiling water before sowing. Also, from cuttings. Regenerates by stem coppicing and from seed, particularly after fire.

**VALUES & USES:**

Useful low-level cover in windbreaks. Improves soil fertility (legume). Bark used for tanning. The seeds are a part of the basic diet of Mallee Fowl. Food plant for caterpillars of native butterflies and moths, which also attract insect eating birds. Cultivated widely as ornamental. An adaptable, hardy shrub.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Wait-a-while, Pin Bush



**HABIT:**

Erect to spreading, often dome-shaped shrub, 1-4 m high. Tangled and prickly branches. Pods twisted or coiled. Golden-yellow flowers (Jul-Oct).

**HABITAT & SITE PREFERENCE:**

Belah-Rosewood and Mallee woodland in sandy calcareous red earth. Very well-drained, light to medium soils. Partial or full sun, low rainfall areas. Drought, frost, and lime tolerant. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

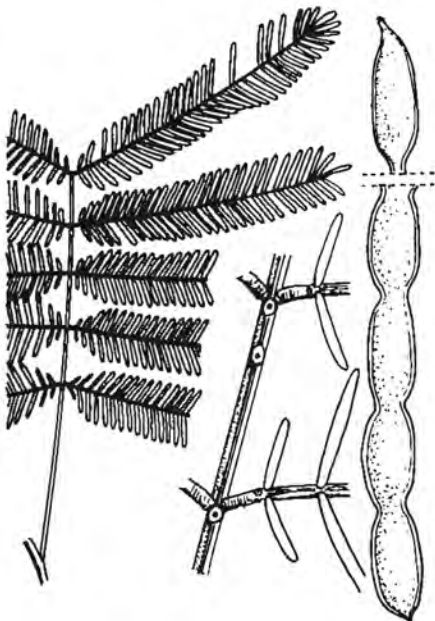
Collect seed Nov-Dec. Propagate from scarified or heat-treated seed or cuttings.

**VALUES & USES:**

Nitrogen-fixing legume, improves soil fertility. Ornamental species. Bark used for tanning leather.

**REGIONAL SUBSPECIES:** *A. d.* subsp. *deanei* (Deane's Wattle), *A. d.* subsp. *paucijuga* (Green Wattle)

**OTHER NAMES:** *n/a*



**HABIT:**

Erect shrub or small tree, 2-7 m high, smooth grey-brown bark, green or green-yellow feathery foliage. Often forms thickets. Golden-yellow or whitish flowers, year-round. Very hardy.

**HABITAT & SITE PREFERENCE:**

Various sclerophyll communities on a range of soils. Tolerates frost. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed pods when ripe. Propagate from scarified seed. Regenerates easily from seed, especially in disturbed sites. Establishes well when direct seeded.

**VALUES & USES:**

Excellent low-level cover in windbreaks. Valuable for erosion control due to fibrous roots, improves soil fertility (legume). Excellent habitat. Attractive ornamental for hedges, screening, and low-maintenance areas. Hardy and adaptable.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Showy Wattle, Graceful Wattle, Western Silver Wattle, Golden Wattle



**HABIT:**

Erect or spreading shrub, usually 1-4 m high, with grey-blue foliage. Bright golden-yellow flowers, Apr-Oct. Adaptable.

**HABITAT & SITE PREFERENCE:**

On rocky hillsides and ridges. Prefers well-drained light to heavy soils in full sun. Tolerates frost and drought. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-mid Jan, seeds released quickly after maturity. Propagate from scarified seed or cuttings. Regenerates from seed, especially after fire.

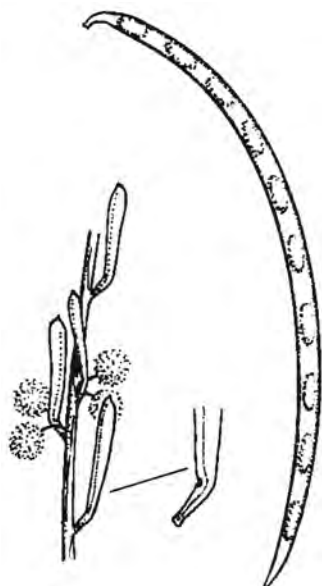
**VALUES & USES:**

Excellent low-level cover in windbreaks. Useful for recharge plantings and improves soil fertility (legume). Good habitat and pollen source for insects and birds. Valuable understory in woodlots. Decorative ornamental due to flowers and foliage, adaptable in cultivation.

# Acacia flexifolia - Bent-leaf Wattle

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Small Winter Wattle



**HABIT:**

Spreading bushy shrub, 30 cm to 1.5 m high, angled or flattened resinous branchlets, grey-green 'leaves.' Golden-yellow, perfumed flowers, Jun-Sept. Adaptable.

**HABITAT & SITE PREFERENCE:**

Chiefly woodland, dry sclerophyll forest, and mallee in inland districts. Prefers well-drained light to heavy soils, partial to full sun. Tolerates frost and extended dry periods. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

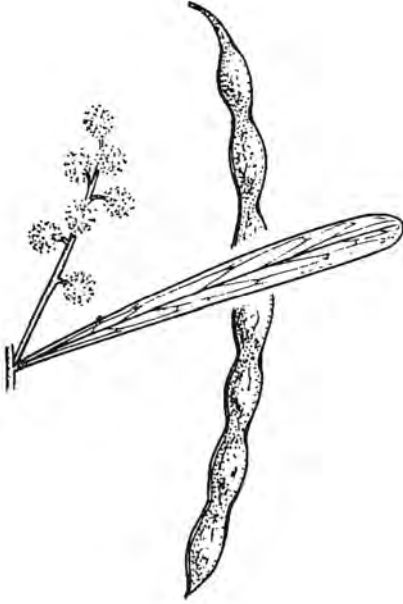
Collect Nov-Dec. Propagate from scarified seed or cuttings.

**VALUES & USES:**

Useful low-level cover in windbreaks. Improves soil fertility (legume). Good habitat. Attractive ornamental or informal hedge, flowers mostly during winter. Responds well to light pruning.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Western Black Wattle, Hakea-leaved Wattle



**HABIT:**

Erect or spreading hairless shrub, 1-6 m high. Smooth or finely fissured grey-brown bark, angled or flattened branchlets. Golden-yellow flowers, Jul-Nov. Moderate growth rate, lifespan up to several decades.

**HABITAT & SITE PREFERENCE:**

Woodland and mallee on sand. Prefers medium to well-drained light to heavy soils, partial or full sun. Tolerates frost and extended dry periods. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

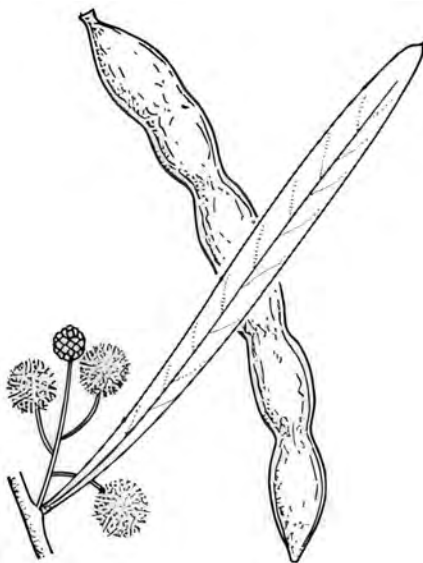
Collect early Dec-late Jan. Propagate from scarified seed ( $\pm 12$  viable/gram) or cuttings. Regenerates frequently, forming dense thickets. Establishes readily when direct seeded.

**VALUES & USES:**

Excellent low-level cover in windbreaks. Controls soil erosion due to fibrous roots, improves soil fertility (legume). Good habitat, flowers provide food for insects and birds. Good fuelwood. Excellent ornamental due to quick growth, flowers, and dark foliage.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Dune Wattle, Small Cooba, Umbrella Bush, Marpoo, Dune Wattle, Little Cooba, Small Cooba



**HABIT:**

Dome-shaped bushy shrub with spreading branches, 1-4 m high. Orange-yellow flowers (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Open Mulga and Bluebush communities on sandhills and lake lunettes. Full sun, frost hardy, and drought tolerant. Prefers 200 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Jan. Propagate from scarified or heat-treated seed. Fast growing.

**VALUES & USES:**

Shelterbelts, soil erosion control. Nitrogen-fixing legume, improves soil fertility. Provides resting sites for kangaroos. Gum eaten, seeds ground and cooked by First Nations People.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect or spreading shrub, 60 cm to 2 m high. Smooth grey bark, resinous hairy branchlets, erect deep-green sticky 'leaves.' Golden-yellow flowers, Aug-Oct.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest, woodland, and mallee on sandy or gravelly soil. Prefers well-drained soil in partial or full sun. Tolerates drought and frost. Prefers 250 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

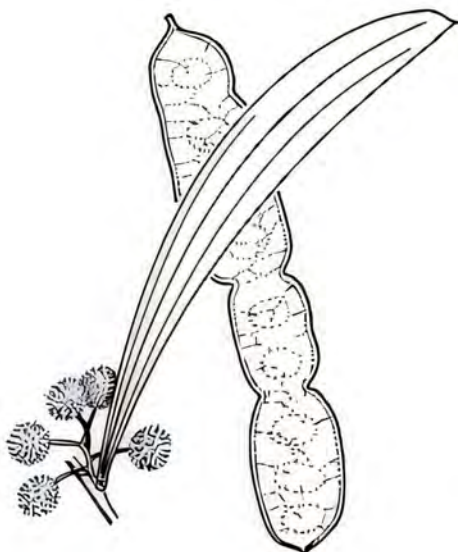
Collect Nov-Dec. Propagate from scarified seed or cuttings.

**VALUES & USES:**

Excellent low-level cover in windbreaks, bushy to the ground. Improves soil fertility (legume). Good habitat. Attractive ornamental, particularly in flower.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yarran



**HABIT:**

Erect to spreading tree, 5-10 m high, bushy to ground level. Orange-yellow flowers (Aug-Oct).

**HABITAT & SITE PREFERENCE:**

Shrubland to woodland on red-brown clay to sandy loam soils. Prefers 300-400 mm rainfall

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Dec. Propagate from scarified or heat-treated seed. Regenerates from suckers.

**VALUES & USES:**

Erosion control due to branches reaching ground level. Nitrogen-fixing legume, improves soil fertility. Ornamental species with showy flowers.

## *Acacia microcarpa* - Manna Wattle

FABACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect to spreading shrub, 1-3 m high. Dark brown, twisted or curved pods. Golden-yellow flowers (Aug-Sep).

**HABITAT & SITE PREFERENCE:**

Sandy soil in mallee communities. Well-drained, light to heavy soil. Partial or full sun. Frost and drought tolerant. Prefers 250 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

**VALUES & USES:**

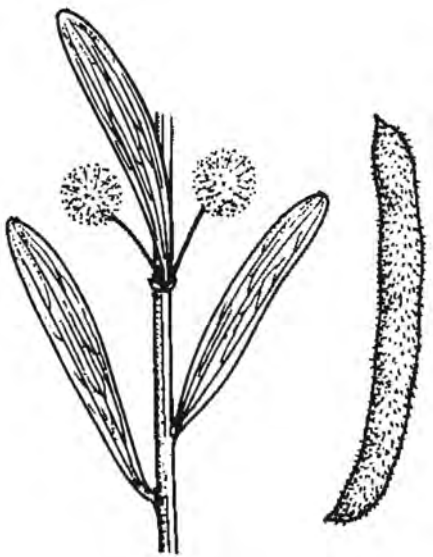
Low windbreaks, erosion control. Potential as understorey plant in gardens.

## *Acacia montana* - Mallee Wattle

FABACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect or spreading shrub, 1-3.5 m high, fissured grey bark, angled or flattened branchlets, straight sticky 'leaves.' Golden-yellow flowers, Aug-Nov, abundant. Fast-growing.

**HABITAT & SITE PREFERENCE:**

Mallee, sandy red earths, stony ridges, and heavy clay soils. Prefers well-drained light to heavy soil in partial or full sun. Tolerates frost. Prefers 350 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

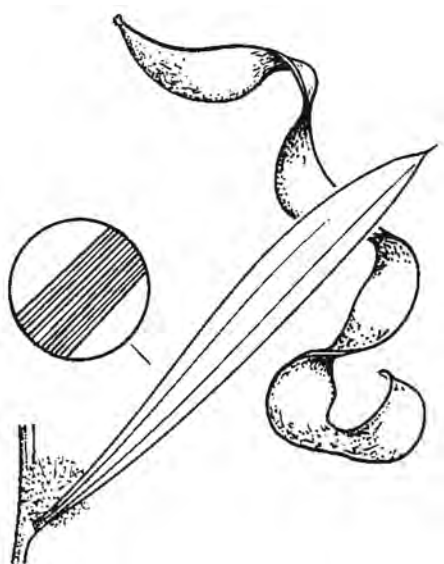
Collect mid Nov-mid Dec. Propagate from scarified seed or cuttings. Regenerates from seed and coppice after fire.

**VALUES & USES:**

Excellent low-level cover in windbreaks. Improves soil fertility (legume). Good habitat. Useful ornamental for hot dry areas, road batters, and low-maintenance sites.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Umbrella Wattle, Midget Tree, Ram's Horn Tree, Nelia, Karagata



**HABIT:**

Densely branched erect or spreading shrub or small tree, 2-6 m high. Finely fissured dark grey bark, angled or flattened branchlets. Sharp-tipped 'leaves,' large woody twisted pods. Golden-yellow or pale-yellow flowers, Oct-Dec. Moderate growth rate, long-lived.

**HABITAT & SITE PREFERENCE:**

Widespread in various habitats, including open eucalypt forest or among other acacias. Prefers heavy to moderately-drained soil, partial or full sun. Tolerates drought and frost. Prefers 200 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect Dec-late Feb, seeds released quickly after maturity. Abundant seeder every few years. Propagate from scarified seed ( $\pm 6$  viable/gram). Regenerates from seed dispersed by birds around vegetated areas.

**VALUES & USES:**

Low-level cover in windbreaks. Improves soil fertility (legume). Dense foliage provides cover for birds. Very good fuelwood. Timber heavy, close-grained, durable, suitable for cabinet work. First Nations used wood for weapons, seeds for food. Ornamental value. Subsistence fodder, pods eaten by sheep.

# Acacia paradoxa - Kangaroo Thorn

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Hedge Wattle, Prickly Acacia, Prickly Moses, Acacia Hedge



**HABIT:**

Erect or spreading shrub, 2.5-4 m high. Dark green foliage, fine thorns, finely fissured brownish-grey bark. Golden-yellow flowers, July-Nov. Fast-growing, lifespan up to several decades.

**HABITAT & SITE PREFERENCE:**

Various communities and soils. Prefers dry shallow soils in higher rainfall areas or heavier soils in lower rainfall areas. Tolerates limited inundation, extended dry periods, alkaline and acidic soil. Frost tender when young. Prefers 300 - 550 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-mid Jan, seeds released quickly. Propagate from scarified seed ( $\pm 75$  viable/gram), soak in boiling water before sowing. Regenerates from seed after disturbance, readily established when direct seeded.

**VALUES & USES:**

Useful low-level windbreak cover where it doesn't spread. Controls soil erosion due to fibrous roots, improves soil fertility (legume). Excellent habitat and refuge for small birds due to prickliness. Flowers provide food for insects, attracting insect-eating birds. Seeds eaten by birds. Attractive ornamental for hedges, barriers, screening, and as cut flower.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Australian Golden Wattle, Green wattle, Broad-leaved Wattle, Witch, Black Wattle



**HABIT:**

Erect or spreading tree or shrub, 3-8 m high, dark brown to greyish smooth or finely fissured bark. 'Leaves' 6-20 cm long. May form thickets. Golden-yellow, strongly scented flowers, Jul-Nov. Short-lived, fast-growing.

**HABITAT & SITE PREFERENCE:**

Usually dry sclerophyll forest, Box woodland, and heath on sandy and stony soils. Young plants frost-tender, mature plants reasonably frost tolerant. Tolerates drought, various soils, brief waterlogging, and shade. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

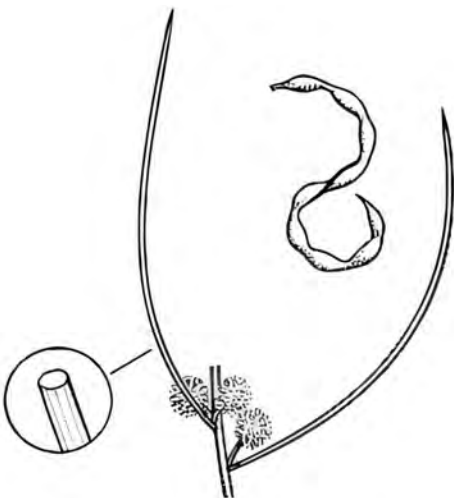
Collect early Nov-mid Jan, frequent large crops. Propagate from scarified seed (20-64 viable/gram), soak in boiling water before sowing. Regenerates from seed after fire, or without fire in non-compacted soil. Establishes very well when direct seeded.

**VALUES & USES:**

Low-level cover in windbreaks. Stabilises soil due to fibrous roots, improves fertility (legume). Valuable habitat, flowers provide nectar for birds and insects, larvae and grubs provide food for birds, gum eaten by possums. Burns well, but not significant fuel source. Timber not durable. Bark rich in tannin. Ornamental, attractive foliage and flowers. Leaves produce gold dye. Gum used historically to treat diarrhoea.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Needlebush Acacia, Nelie, Nilyah, Nealia



**HABIT:**

Moderately dense, erect shrub to 3 m high. Bark often shedding, pods curved or twisted. Golden-yellow flowers (Jul-Oct).

**HABITAT & SITE PREFERENCE:**

Mallee and woodland communities on sandy red earth and red earth. Well-drained to heavy soil, full or partial sun. Recommended for hot, dry areas. Drought and frost tolerant. Prefers 250 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

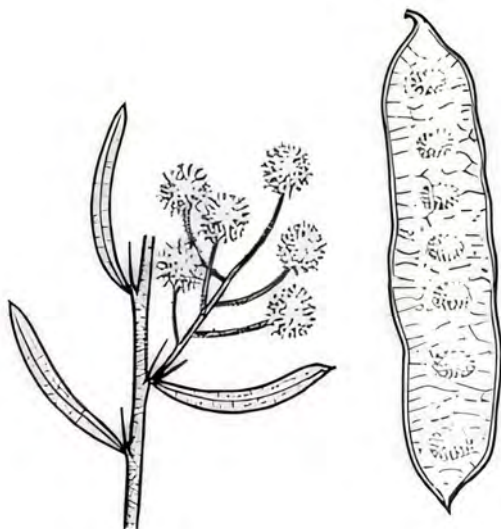
Collect seed Dec-Jan. Propagate from scarified or heat-treated seed or cuttings.

**VALUES & USES:**

Windbreak. Nitrogen-fixing legume, improves soil fertility. Wood used for weapons by First Nations People. Attractive garden plant.

**REGIONAL SUBSPECIES:** *A. v.* subsp. *arida*, *A. v.* subsp. *victoriae*

**OTHER NAMES:** Elegant Wattle, Prickly Wattle, Bramble Wattle, Pin Bush, Gundabluie, Narran



## HABIT:

Erect to spreading shrub to 4 m high. Branches hairy or hairless, broad linear, grey-green leaves. Cream to pale yellow flowers (Sep-Dec).

## HABITAT & SITE PREFERENCE:

Variable, including Black Box, Belah-Rosewood, mallee, and Callitris mixed woodland. Well-drained light to heavy soil, filtered light, partial or full sun. Prefers 300 - 400 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Propagate from scarified or heat-treated seed. Can rapidly increase in numbers around watercourses in wet years.

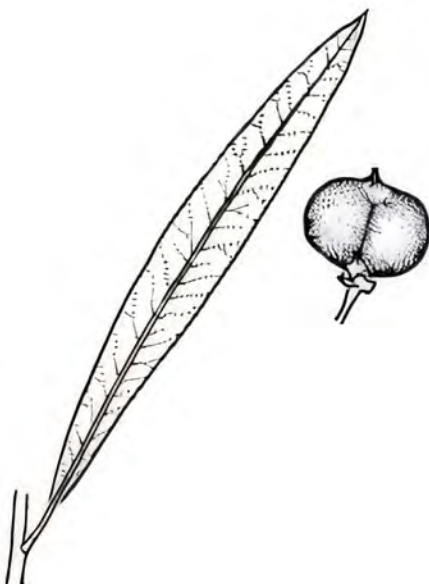
## VALUES & USES:

Nitrogen-fixing legume, improves soil fertility. Attractive garden plant and low hedge. Provides supplemental stock fodder during drought. Seeds used in bush food industry when grown commercially.

# Alectryon oleifolius - Western Rosewood

**REGIONAL SUBSPECIES:** *A. o.* subsp. *canescens* (Rosewood), *A. o.* subsp. *elongatus* (Western Rosewood)

**OTHER NAMES:** Rosewood, Boonaree, Bulloak Bush, Bullocky Bush, Minga, Cattle Bush, Jiggo



## HABIT:

Small tree, 4-8 m high, often with broad greyish crown. Linear-lanceolate, greyish-green leaves. Inconspicuous cream to whitish-green flowers (Dec-Mar). Black seed with red appendage.

## HABITAT & SITE PREFERENCE:

Various vegetation communities with sandy, limestone-containing soil, often associated with Belah. Very well-drained soil, hot sunny aspect. Prefers 300 - 450 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

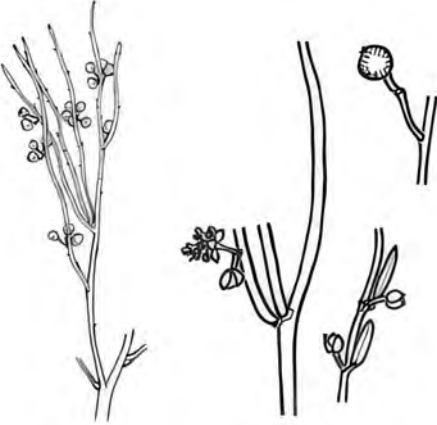
Collect seed Feb-Apr. Sow fresh seed, germination improved by dark storage and inoculation with soil from parent plants. Propagate from seed and cuttings. Tolerates frost, readily regenerates from suckers if roots are disturbed.

## VALUES & USES:

Soil erosion control in semi-arid areas, hedge in low rainfall areas. Palatable to stock, valuable drought fodder.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Broombush, Mustard Bush, Currant Bush



**HABIT:**

Small tree to 4 m tall, with one to many trunks. Branches cylindrical, pendulous, and almost leafless. Creamy, fragrant flowers (Oct-Dec). Fruit a black berry when ripe.

**HABITAT & SITE PREFERENCE:**

Variable on sands to clay. Often in open woodland on duplex soils and red earth. Prefers areas with good drainage and full sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

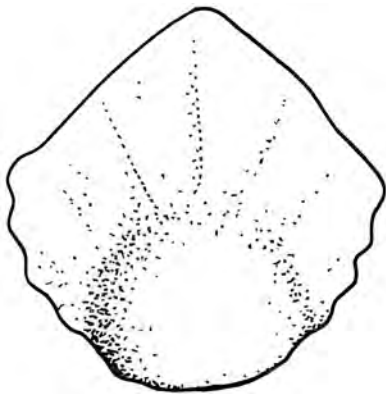
Propagate from seed and probably from cuttings. Fast growth rate.

**VALUES & USES:**

The young growth and berries are eaten by stock. It is also a host plant for the Caper White Butterfly. Responds well to lopping.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Giant saltbush, Cabbage Saltbush



**HABIT:**

Dense, large, grey-scaly shrub with whitish, brittle branches. Up to 3 m high and occasionally 4-5 m across. Yellow-brown flowers present most of the year.

**HABITAT & SITE PREFERENCE:**

Grows on all soils, especially clay soils in flat or low-lying situations. Prefers full sun. Tolerates frost, salt, severe drought, and long periods of shallow flooding. Grows on alkaline soils. Prefers 200-500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds Jan-Apr. Propagate from seed or cuttings. Soak fruits in water for an hour to remove salt before sowing, or remove seeds from fruits and sow directly. Sow 2-3 seeds per pot. Expect germination in 2-4 weeks. Seed may remain viable for several years. Fast growth rate.

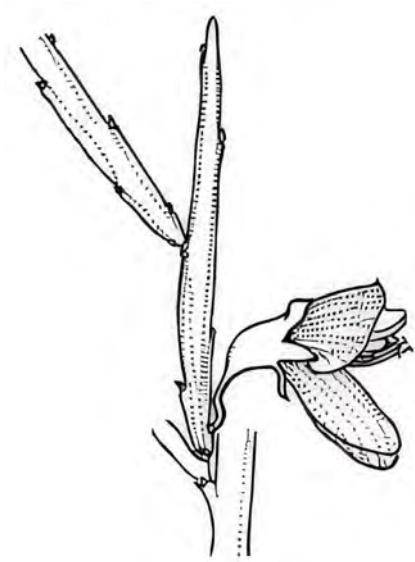
**VALUES & USES:**

Recovers well after grazing. Garden plant and useful for informal hedges. Roadside planting as foliage is readily visible at night. Fire-retardant species. Excellent fodder plant.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Walker's Stick Bush, Sward Bush, Mallee Rose, Cactus Bossiaea, Walkeri



**HABIT:**

Leafless, hairless, tangled, greyish shrub to 2 m high. Flattened branches. Pea-shaped, bright crimson flowers (Sep-Dec, Mar-May).

**HABITAT & SITE PREFERENCE:**

ainly on calcareous red earth in mallee communities. Well-drained soils with partial sun. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings. Soak seed in hot water before sowing. Frost and drought tolerant.

**VALUES & USES:**

It's unusual habit and bright crimson tear-drop flowers make it an interesting species for inclusion in native gardens. Attracts birds and pollinating insects including bees. The honey from Bossiaea walkeri has a very distinctive and pleasant flavour.

# Bursaria spinosa - Native Blackthorn

**REGIONAL SUBSPECIES:** *B. s.* subsp. *lasiophylla* (Hairy Bursaria), *B. s.* subsp. *spinosa* (Sweet Bursaria)

**OTHER NAMES:** Blackthorn, Castanet Bush, Prickly Box, Native Olive, Native Boxthorn, Australian Boxthorn, Tupy



**HABIT:**

Shrub to 2.5 m high, clustered green leaves, hairy underside. White to cream flowers, mainly summer. Long-lived, may be slow-growing.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest or woodland on granite or metamorphic substrates. Prefers well-drained soil, tolerates frost and wind. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

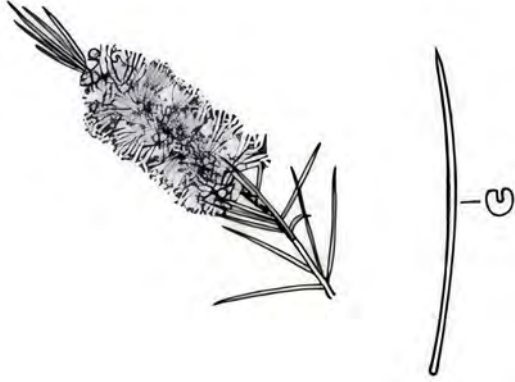
Collect late Jan-early May when ripe fruit rattles. Timing varies by location. Propagate from seed ( $\pm 190$  viable/gram) or cuttings. Stratify seeds in moist sand for 6 weeks, sow Jun-Jul. Germination may take months, seedlings prone to damping-off. Regenerates from wind-dispersed seed over winter.

**VALUES & USES:**

Excellent low-level windbreak cover. Controls gully erosion with fibrous roots. Useful habitat, hosts insects that control pests on eucalypts. Nectar source for beneficial wasps. Fragrant flowers attract butterflies, moths, and insects. Prickly plants provide refuge for small birds. Timber pale, tough, easily worked. Ornamental for hedges and cut flowers due to summer flowering and bronze winter capsules. Leaves contain aesculin, used historically for sunburn protection.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Mallee Bottlebrush, Prickly Mallee Bottlebrush, Mallee Bottlebrush, Prickly Mallee Bottlebrush



**HABIT:**

Small, spreading, prickly shrub, 2-3 m high. Narrow, linear leaves with glands on underside and sharp tip. Red flowers with yellow stamens (Dec-Apr).

**HABITAT & SITE PREFERENCE:**

Variety of situations, often areas with extra water and along sandy creek beds. Prefers most soils in full sun. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed anytime from older wood. Propagate from seed or cuttings.

**VALUES & USES:**

Provides refuge for birds. Ornamental value with attractive flowers. Relatively drought and frost tolerant.

# Cassinia laevis - Cough Bush

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Wild Rosemary, Curry Bush, Wild Curry, Rosemary Bush, Dead Finish



**HABIT:**

Much-branched aromatic shrub to 3 m high, white woolly stems, linear leaves 1-5 cm long and  $\pm 1$  mm wide. Creamy-white flowers in terminal clusters, spring-autumn.

**HABITAT & SITE PREFERENCE:**

Various communities on ridges and stony soils, also in mallee on red sands. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect Jan-Apr, shake mature heads into paper bag. Propagate from seed, surface sow in late winter-early spring and cover lightly.

**VALUES & USES:**

Good habitat, seeds eaten by ants and other insects. Timber dark with attractive pattern.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sifton Bush, Dogwood, Common Cassinia, Mountain Itch



**HABIT:**

Small open aromatic shrub to 2 m high, small narrow leaves, white woolly long slender branches. Shiny pale-brown flowerheads, spring-autumn. Fast-growing.

**HABITAT & SITE PREFERENCE:**

White Cypress Pine and Grey Box Communities on loamy soils, and Black Box communities. Prefers well-drained soil in open, semi-shaded positions. Tolerates moist soil, full sun, and drought. Dislikes poor drainage. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Feb-late Jun, seeds released 3-14 days after maturity. Propagate from seed, surface sow and cover lightly. Direct sow into pots due to small seedling size. Germinates readily year-round, grows rapidly.

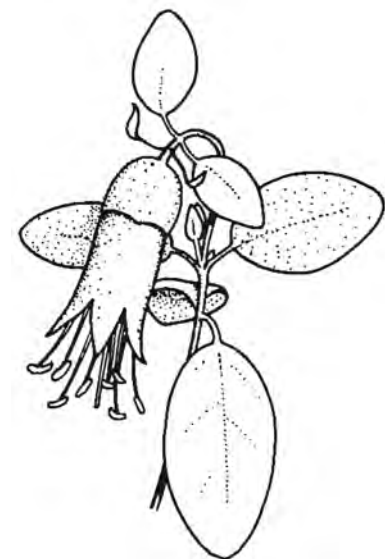
**VALUES & USES:**

Readily colonises disturbed and bare soils, useful for reclamation. Attractive, graceful ornamental, easily grown. Foliage suitable for cut flower arrangements.

# Correa glabra - Rock Correa

**REGIONAL SUBSPECIES:** *C. g. var. glabra, C. g. var. leucoclada*

**OTHER NAMES:** Smooth Correa



**HABIT:**

Erect shrub to 2.7 m high, woody stems at base. Dense aromatic oval leaves, bell-shaped tubular pale green flowers, May-Aug, sporadic. Fast-growing.

**HABITAT & SITE PREFERENCE:**

Rocky habitats, mostly open woodland. Prefers well-drained soil in semi-shade, tolerates drought and frost. Dislikes poor drainage. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Seed collection difficult. Propagate from cuttings (strikes readily) or seed. Leaching seeds for weeks may enhance germination, but not always necessary.

**VALUES & USES:**

Good habitat, nectar source for native birds. Attractive for hedges, screening, and tubs, easily cultivated. Used for cut flowers.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Rounded small shrub to 1.5 m high and 3 m diameter. The branches are hairy, ridged, and ending in a spine. Pea-like red or purple and yellow flowers (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

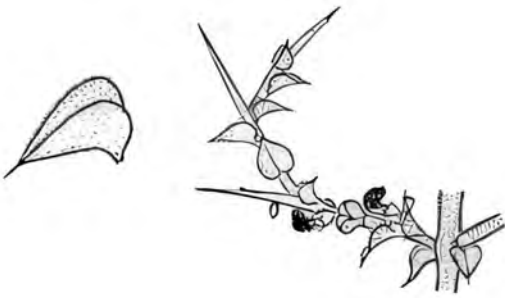
Sand ridges in mallee communities with sandy soil. Very well-drained, light to medium soil, in a warm to hot position. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and cuttings. Soak seed in hot water (just off boiling) for a few hours.

**VALUES & USES:**

Habitat for small native birds. Will grow in denuded sandy soil and can be used as a coloniser. Frost and drought tolerant.



# *Dodonaea boroniifolia* - Fern-leaf Hop-bush

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Small Hopbush,  
Hairy Hopbush

**HABIT:**

Spreading shrub, usually 2 m high, sometimes 4m. Dark green, pinnate leaves with 3-8 leaflet pairs. Inconspicuous flowers in groups of 2-3 in leaf axils. Seeds with 4 papery wings (10-20 mm long), maturing pink or purplish-red.

**HABITAT & SITE PREFERENCE:**

Hilly areas on shallow sandy soils. Well-drained soils. Prefers dappled shade to full sun. Prefers 300-450 mm rainfall in the Riverina region. Frost hardy and tolerates extended dry periods.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Apr. Propagate from seed or cuttings. Fast growth rate. Available from specialist nurseries.

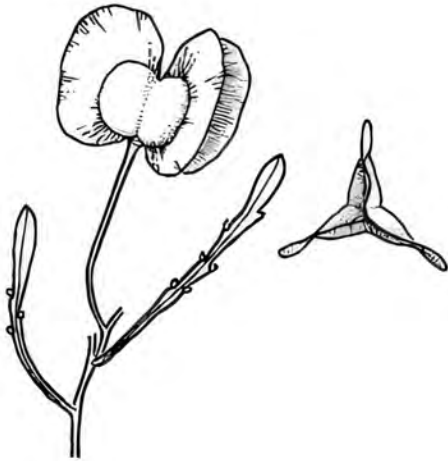
**VALUES & USES:**

Very decorative and well-known in cultivation. Useful low-level cover in windbreaks due to multi-stemmed growth. Four-angled fruits are colourful and attractive. Prune lightly to promote bushiness.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Lobe-leaf Hopbush, Bead Hopbush, Wild Hopbush



**HABIT:**

Sticky shrub to 3 m high. Narrow leaves with small lobes along the margins. Reddish, drooping capsule fruit with three vertical wings.

**HABITAT & SITE PREFERENCE:**

Often in rocky outcrop woodlands with shallow red earths and skeletal soil. Prefers well-drained soil in a warm to hot climate. Tolerates slightly alkaline soils. Prefers 300 to 450 mm rainfall in the Riverina region. Withstands frost and drought.

**SEED COLLECTION & PROPAGATION:**

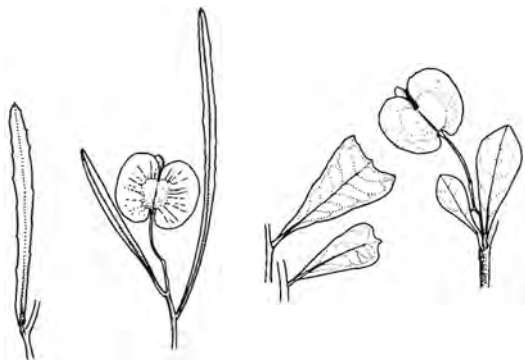
Collect seeds Aug-Nov. Collect capsules that contain hard black seeds, usually when capsule is turning red or brown. Place capsules in a tray and leave to dry for 1 to 2 weeks. Rub capsules by hand to dislodge the seeds. Use a sieve to separate the unwanted material. Store seeds with a desiccant, such as dried silica beads or dry rice, in an airtight container in a cool, dry place. From one collection, the seed viability was high, at 80%. This species has physiological dormancy that needs to be overcome for the seed to germinate (e.g. nicking the seed coat). Can also propagate from cuttings.

**VALUES & USES:**

It emits a characteristic aroma, particularly after rain. Is used as an ornamental windbreak or screen in rocky locations, parks and reserves. Decorative red and green coloured fruit.

**REGIONAL SUBSPECIES:** *D. v.* subsp. *angustifolia* (*Broad-leaf Hop-bush*), *D. v.* subsp. *angustissima* (*Narrow-leaf Hop-bush*), *D. v.* subsp. *cuneata* (*Wedge-leaf Hop-bush*), *D. v.* subsp. *mucronata*, *D. v.* subsp. *spatulata*

**OTHER NAMES:** Hop-bush, Narrow-leaf Hopbush, Wedge-leaf Hopbush



**HABIT:**

Erect or spreading shrubs up to 4 m high, with narrow or wedge-shaped green leaves and inconspicuous flowers (mainly spring). Fast-growing with a lifespan of several decades.

**HABITAT & SITE PREFERENCE:**

Found in various habitats including open forests, woodlands, scrubs, rocky outcrops, drier slopes, and sandy sites. Prefer well-drained soils in partial or full sun. Tolerate frost and drought. Prefers 250 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

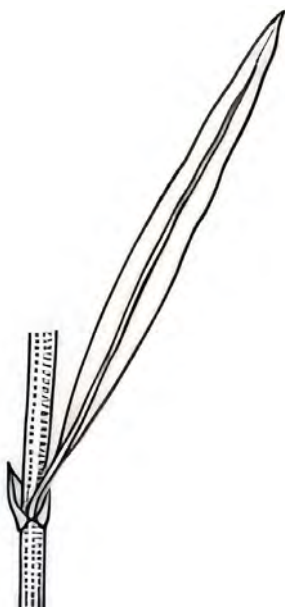
Collect seeds from mid Oct-early Feb. Monitor closely as they are released quickly. The papery capsules turn tan-brown when ripe, and the seeds are black and firm. Easily collected in large quantities and retain viability for several years. Propagate from seed (approximately 212 viable seeds per gram) or cuttings. Hot water treatment can hasten germination, which takes 2-4 weeks. Regenerates readily from seed, stem, and coppice, particularly after fire. Establishes well when direct seeded.

**VALUES & USES:**

Valuable low-level windbreak cover and for understory plantings, stabilising sand with shallow roots. Provides habitat and pollen for insects; birds eat foliage and seeds. Leaves traditionally used by First Nations People for pain relief. Ornamental, as hedges, screens, rock gardens, and understory, with colourful fruits. Drought fodder in areas.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Greyish shrub to about 2 m high and wide with medium growth rate. Intricately branched and often apparently leafless. Small whitish-yellow flowers from October to March

**HABITAT & SITE PREFERENCE:**

In areas intermittently inundated, often in Black Box and River Red Gum communities. Tolerates dry periods, seasonal inundation and most frost. Regenerates relatively quickly following flooding or wet years. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

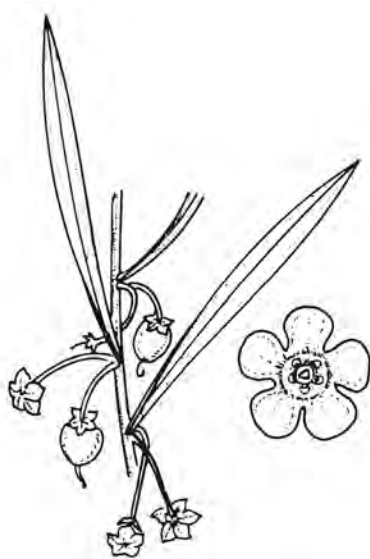
Collect seeds early Jan-late Apr. Propagate from seed, or cuttings of firm young growth.

**VALUES & USES:**

Provides stock shelter where it occurs naturally. Useful for erosion control in waterlogged and saline sites. Highly valuable habitat. Favoured breeding ground for wildfowl. Rich in pollen and nectar. Often in dense stands that restrict access. Stock do not readily graze Lignum except when other feed is scarce. Can be controlled in cultivation by burning or other means, but usually regenerates quickly. Useful for honey production.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Turkeybush, Dogwood, Poison Bush, Pencil-bush, Carrot-bush



**HABIT:**

Erect, much-branched hairless shrub, 1-4 m high, warty branchlets. White, bell-shaped flowers, late winter-early summer (Aug-Dec).

**HABITAT & SITE PREFERENCE:**

Variety of communities on calcareous red earths to stony skeletal soils on hillsides and riversides. Prefers 250 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

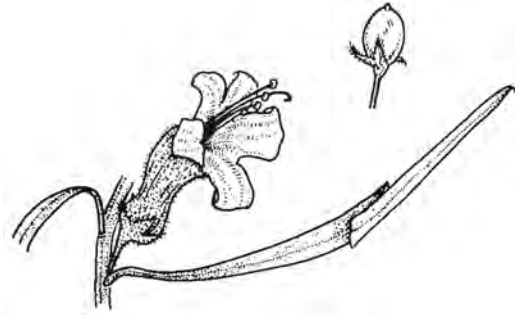
Collect when fruits are yellow. Propagate from cuttings or fresh seed sown late summer-autumn. Remove fruit flesh, soak seeds overnight in warm water, sow 2-3 mm deep, cover with gravel.

**VALUES & USES:**

Stabilises soil on riverbanks. Good habitat, fruits eaten by various birds (including emus, honeyeaters, silvereyes and Australian Bustard). Attractive ornamental for windbreaks, parks, screens, or hedges. Prune lightly to promote bushiness. Reportedly poisonous to stock.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Berrigan, Berrigan Emubush, Long-leaved Eremophila, Native Plum tree



**HABIT:**

Shrub to small tree, up to 8 m high. Narrow drooping leaves 3-20 cm long, drooping branches. Mature bark dark-grey, rough, divided into squarish segments. Pinkish to reddish-brown flowers with white spots, most of year.

**HABITAT & SITE PREFERENCE:**

Various communities, mainly plains, sandy or loam soils in Grey Box, White Cypress Pine, Boree, and Mallee communities. Prefers well-drained soil in full sun. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Jan-late Mar, seeds released in 3-14 days. Fruits collected from beneath plants. Difficult to germinate, propagate from seed or cuttings (slow to root). Disturbing roots promotes suckering, transplant suckers for best establishment. Regenerates prolifically from seed and root suckers, recovers well from fire.

**VALUES & USES:**

Excellent low-level windbreak cover. Controls soil erosion with fibrous roots. Excellent habitat, fruit eaten by emus, nectar and pollen attract birds and bees. Best Eremophila fodder species, constantly trimmed by livestock. Ornamental for low garden shelter. Leaves used for tanning by First Nations People.

# *Eremophila mitchellii* - Budda

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sandalwood, False Sandalwood, Native Sandalwood, Sandalbox, Rosewood



**HABIT:**

Shrub to 3 m high or tree to 9 m high. Bark rough and dark brown with oblong pattern segments. Flowers white to pale-cream, mainly spring with a second flowering in autumn (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Bimble Box, Callitris mixed, and rocky outcrop woodlands. Range of soils, with full sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and stem cuttings. Most Eremophila species are very difficult to germinate from seed. Hard woody fruits prevent germination and contain chemical inhibitors. Stem cuttings can be very slow to root. Promote suckering by disturbing roots of established plants. Transplant resulting root suckers. Regenerates from suckers if roots are damaged.

**VALUES & USES:**

The tree form is attractive and has ornamental value. It recovers well after fire, ringbarking or cutting. The foliage contains essential oils & the scented wood is traditionally burned for its pleasant aroma.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yellow Mallee, Ridge-fruited Mallee, Mallee Box, Angular Yellow Mallee.

**HABIT:**

Mallee to 4 m high. Smooth bark throughout. Has smooth shiny leaves. Flowers are cream (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

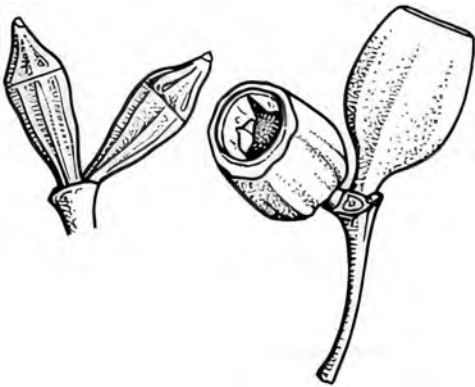
Only in deep sandy red soil. Arid to semi-arid areas. Prefers from 250 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds between January and December. Seeds generally ripe 2 years after flowering. From seed which readily germinates. Drought tolerant and hardy to most frost.

**VALUES & USES:**

Can be used as a windbreak. Useful for erosion stabilisation. Has very showy flowers. Highly valued for honey production.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** White Mallee, Snap and Rattle, Mallee Gum, Red Mallee, Kong Mallee, Morrel

**HABIT:**

Usually a mallee to 7 m high. Bark dark and persistent at base, leaves pendulous and shiny. Flowers whitish (Mar-Aug).

**HABITAT & SITE PREFERENCE:**

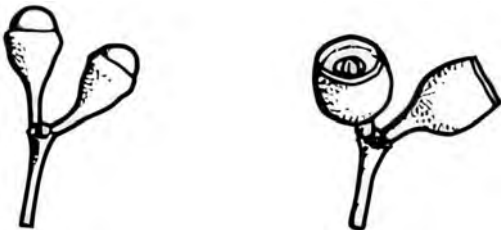
Mainly found in mallee, semi-arid and temperate zones in well-drained loamy soils. Also grows well in alkaline soils. Prefers 250 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds between January and December. Propagate from seed, which readily germinates. Frost and drought tolerant.

**VALUES & USES:**

Useful for windbreaks and soil erosion control. Excellent in the production of honey.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** York Gum, Narrow-leaved Red Mallee, Silver-leaf Mallee, Hooked Mallee, Black Mallee



**HABIT:**

Spreading multi-stemmed mallee to 6 m high, sometimes with a rough stocking at the base. Narrow glossy leaves and lots of colourful buds. Flowers are cream and mostly Mar-Oct, but sometimes sporadic.

**HABITAT & SITE PREFERENCE:**

Mainly in mallee communities. Fairly deep soils in arid to semi-arid areas. Prefers from 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

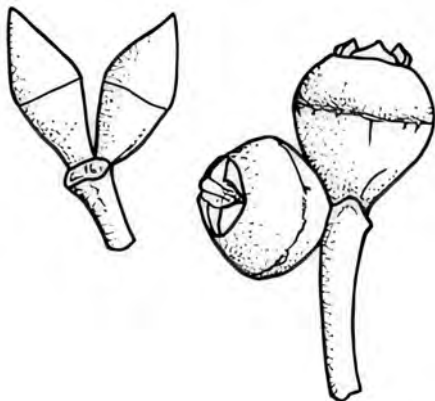
Collect seeds between January and December. Propagate from seed which readily germinates. Frost and drought tolerant.

**VALUES & USES:**

Recommended as a windbreak. Useful for soil erosion control. Attractive plant recommended for gardens and roadsides. Excellent for honey production.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Small tree or mallee, 2-6 m high. Bark sometimes persistent on older trees and curly-flaky on younger trees. Leaves dull and pale green. Flowers white (Nov-Dec).

**HABITAT & SITE PREFERENCE:**

Rocky outcrops with shallow soils and in mallee communities. Prefers well-drained stony soil. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

**VALUES & USES:**

Potential as a drier inland garden plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Green Mallee Box

**HABIT:**

Mallee 2-8 m high with rough bark on lower stems, smooth and ribbony above. Compact crown of narrow, shiny, green leaves. Profuse, white flowers (Dec-May).

**HABITAT & SITE PREFERENCE:**

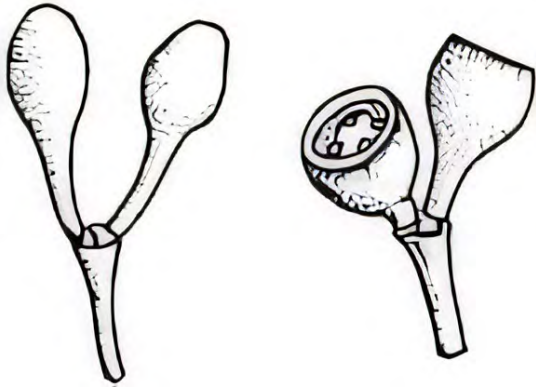
Wide range of soils, often on poorer, shallow soils on fairly flat country. Often found in mallee communities. Prefers 300 to 450 mm rainfall in the Riverina region. Tolerates moderate frost. Responds well to coppicing.

**SEED COLLECTION & PROPAGATION:**

Seed is retained. Propagate from seed. Medium growth rate. Very hardy once established. Regenerates from coppicing after fire, and from seed. Available from specialist nurseries.

**VALUES & USES:**

Excellent low cover in windbreaks. Useful for protection against wind erosion. Hard, mustard-coloured timber. Roots are an excellent fuel source. Leaves are harvested commercially for oil, which contains 80% cineol. Major honey producer in NSW. Flowers are a food source for nectar-feeding birds and insects. Old trees form hollows. Very attractive small tree for parks and gardens.



# *Exocarpos aphyllus* - Leafless Cherry

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Leafless Ballart, Stiff Cherry, Jointed Cherry, Currant Bush

**HABIT:**

Upright, spreading, much-branched shrub to small tree, up to 4 m high. Mostly yellowish-green with branches that appear leafless. Flowers from June to December.

**HABITAT & SITE PREFERENCE:**

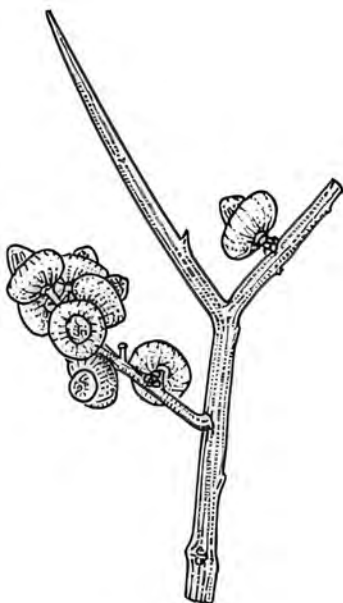
Mainly on sandy soil in various woodland communities. Also on well-drained clays. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Difficult to grow from seed and is usually grown from cuttings. Suckers vigorously from damaged roots (most plants in the Santalaceae family are root parasites). Most plants in the Santalaceae family are root parasites.

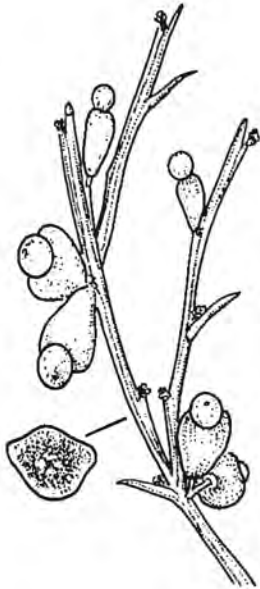
**VALUES & USES:**

First Nations People ate the fleshy fruit. Useful in honey production, but produces a low yield.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Pale-fruit Ballart



**HABIT:**

Erect shrub to 3.5 m high, light green, bronzy, blue-green, or greyish foliage. Often forms dense thickets. Mainly flowers in early summer, but can occur year-round.

**HABITAT & SITE PREFERENCE:**

Various habitats including high banks of rivers and streams, on well-drained clay soils in River Red Gum communities. Prefers well-drained sandy or clay loam soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-late Apr, seeds shed in 3-14 days. Propagation difficult, see Native Cherry (*E. cupressiformis*) [p. 271] for details.

**VALUES & USES:**

Useful for controlling soil erosion. Provides habitat. Attractive ornamental.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Inland Tea-tree



**HABIT:**

Small to medium shrub, 1- 4 m high, typically with many slender stems. Leaves elliptic to obovate. Flowers profuse and white, blooming from August to October.

**HABITAT & SITE PREFERENCE:**

Box-Callitris and rocky outcrop woodlands. Prefers freely drained soil. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Can be collected all year as seed is usually persistent. Propagate from seed or cuttings. Hardy to most frost and tolerates high temperatures.

**VALUES & USES:**

Provides good screening and low windbreaks.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect or prostrate sticky shrub to 2 m high, 'varnished' bright green leaves. Bright yellow flowers, mainly Oct-Mar, year-round. Hardy, fast-growing.

**HABITAT & SITE PREFERENCE:**

Forest and woodland, sometimes exposed rocky areas. Prefers protected positions, moist soil in semi-shade. Tolerates drought, moderate frost, dry soil, poor drainage, waterlogging, and full sun to full shade. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-late Jan, seeds shed quickly. Propagate from cuttings (root readily) or fresh seed (difficult). Regenerates easily by suckering, colonises after fire and clearing.

**VALUES & USES:**

Low-level windbreak cover. Tough, adaptable coloniser for various sites. Good habitat, shelter, and food source for small birds and animals. Useful for bog gardens, rockeries, under trees. Cut flowering branches last well. Leaves used for tea with potential anti-diabetic properties.



# Grevillea floribunda - Rusty Spider-flower

**REGIONAL SUBSPECIES:** *G. f.*  
*subsp. floribunda*

**OTHER NAMES:** Seven Dwarfs'  
Grevillea

**HABIT:**

Erect or spreading shrub, 40 cm to 1.8 m high, velvety branches. Rusty and greenish flowers, year-round, mainly spring. Hardy, highly variable characteristics.

**HABITAT & SITE PREFERENCE:**

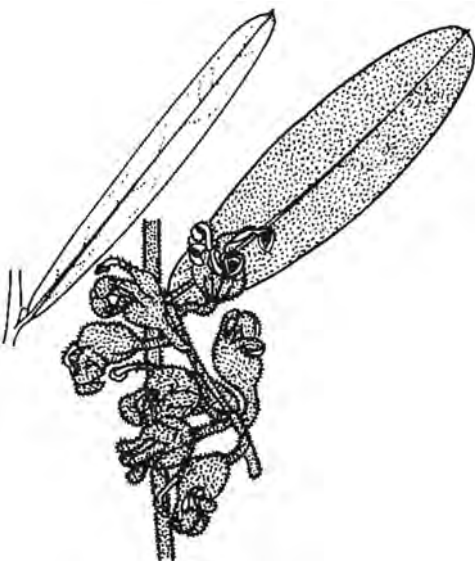
Dry sclerophyll forest or woodland on sandy soil, often in rocky situations. Prefers well-drained soil in full sun or partial shade. Tolerates extended dry periods and moderate frost. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Monitor seed pods, as seeds shed soon after maturity. Propagate from seed or cuttings (strike readily), germination may be difficult.

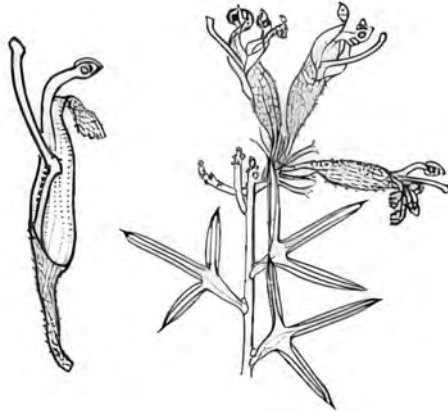
**VALUES & USES:**

Useful low-level windbreak cover. Excellent for attracting nectar-feeding birds. Decorative ornamental for gardens and tubs due to densely rusty-hairy flower-heads. Readily cultivated.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect to prostrate shrub to 2m high. Leaves lobed and bluish-green to green. Crimson flowers (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Found growing in mallee and Belah communities. Prefers well-drained soils and a hot, sunny position. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings. Cuttings need to be firm and young and may take some time to form roots.

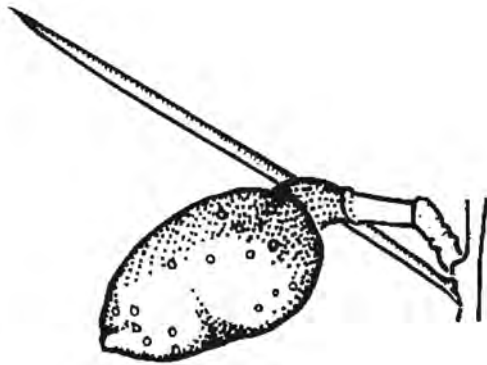
**VALUES & USES:**

Flowers utilised by nectar-eating birds and foliage offers shelter. Can be used as informal hedges. Tolerates moderate frost and grows in slightly alkaline soils.

# Hakea leucoptera - Needlewood

**REGIONAL SUBSPECIES:** *H. l. subsp. leucoptera, H. l. subsp. sericipes*

**OTHER NAMES:** Needle Bush, Silver Needlewood, Needle Hakea, Silver Needlewood



**HABIT:**

Bushy shrub to 2 m or small tree to 5 m, open-branched crown, straight rigid branches. Rigid cylindrical leaves 2-9 cm long. Creamy white flowers, late spring-summer. Long-lived.

**HABITAT & SITE PREFERENCE:**

Coarse-textured soils, as individual trees or dense thickets. Tolerates heavy soil and partial shade, hardy and moderately frost tolerant. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

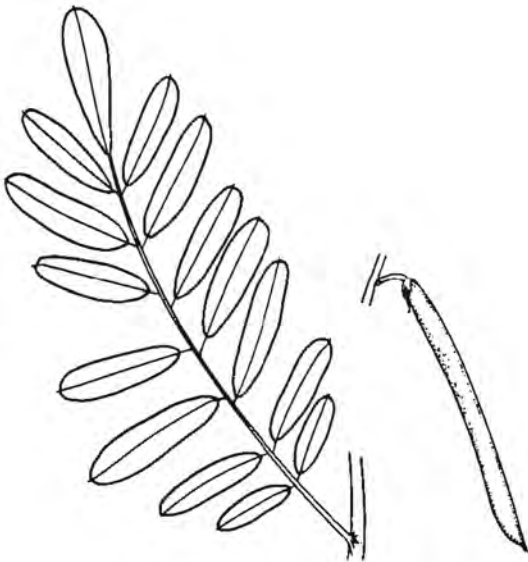
Collect throughout the year, seeds retained. Propagate from fresh seed ( $\pm 300$  viable/gram), germinates in 3-6 weeks. Suitable for direct seeding into pots or field. Regenerates from root suckers.

**VALUES & USES:**

Good habitat, nectar source for birds and insects, foliage provides nesting sites for small birds. Fuelwood easily split. Timber used for small turnery and smoking pipes. Roots used as water source by First Nations People. Ornamental, decorative woody fruit. Light producer of fair quality honey.

**REGIONAL SUBSPECIES:** *I. a.*  
subsp. *australis*

**OTHER NAMES:** Austral Indigo,  
Native Indigo



**HABIT:**

Open, erect, spreading shrub to 2.5 m high, long slender stiff stems. Mauve to purple (sometimes white) pea-like flowers, winter-spring.

**HABITAT & SITE PREFERENCE:**

Woodland and eucalypt forest, commonly in hilly areas. Prefers poor, shallow soil in semi-shade or dappled shade. Tolerates moderate frost and extended wet periods, adapts to well-drained acidic soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

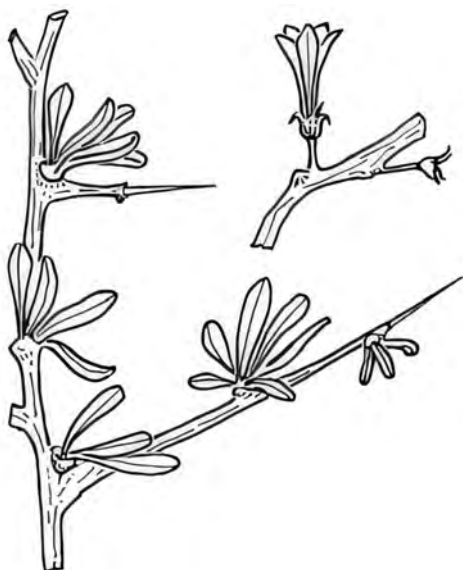
Propagate from scarified seed (soak in boiling water, then dry) or cuttings. Germination takes 3-4 weeks, direct seed into pots (2-3 seeds/pot). Regenerates easily from seed, especially after fire.

**VALUES & USES:**

Low-level windbreak cover. Improves soil fertility (legume). Excellent habitat, flowers provide pollen and nectar for insects, food for butterfly caterpillars. First Nations used roots for fish poison. Attractive ornamental, best planted in groups. Tip prune to promote bushiness. Leaves and stems produce yellow-fawn dye.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Water Bush



**HABIT:**

Small to medium shrub to 1.5 m. Many branched, with shorter side branches sometimes ending in a spine. Funnel-shaped flowers, creamy-white to lilac or sometimes purplish-brown. Fruit a succulent, dull orange-red berry. Flowers from Sep-Feb.

**HABITAT & SITE PREFERENCE:**

Often in slightly saline or low-lying situations and claypans. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect when fruit mature (red or orange); germinates readily. Also grows from cuttings. Hardy to reasonably heavy frost.

**VALUES & USES:**

Habitat for small birds. Berries were eaten by First Nations People and are also eaten by small birds.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Rosy Honey-myrtle

**HABIT:**

Shrub to 3 m high, with lower branches leafless. Dark green, thread-like leaves. Bottle-brush spike with red, purple, or pink flowers (Dec-Jan). Fruit a globular capsule in oblong clusters.

**HABITAT & SITE PREFERENCE:**

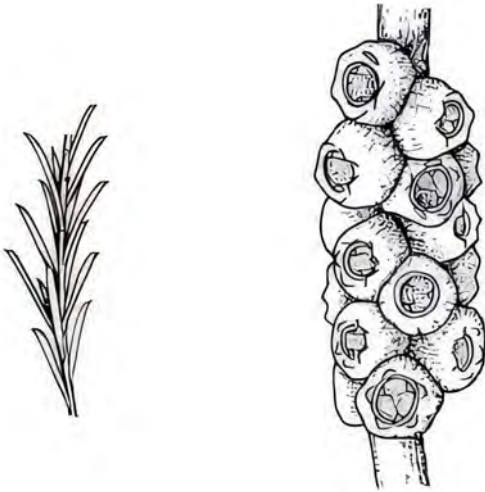
Rocky outcrops. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year round, as seed is usually persistent. Propagate from seed which germinates readily and stores for extended periods.

**VALUES & USES:**

Attractive screening plant. Attracts nectar-feeding birds.



# Melaleuca lanceolata - Moonah

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Black Tea-tree, Dryland Tea-tree, Rottneest Tea-tree, Western Tea-tree.

**HABIT:**

Shrub to small tree, up to 7 m high, with a dull green, domed canopy and finely cracked, rough, grey-brown bark. White-cream flowers (Dec-Feb).

**HABITAT & SITE PREFERENCE:**

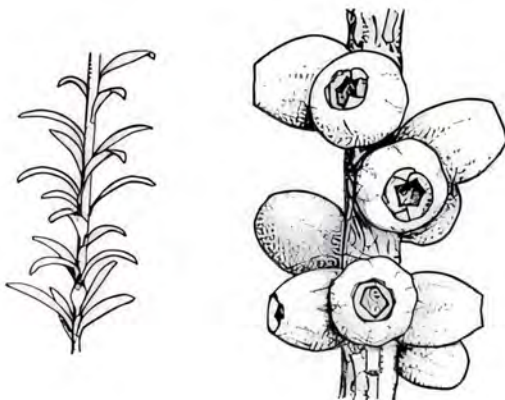
Found in mallee in the south-west and east, and in yellow box communities in the south. Tolerates most soils, including swampy, saline, and calcareous ones. In hotter areas, it prefers dry, rocky sites. Prefers 250 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Pick and dry previous years capsules to release seed, refrigerate 1-2 weeks before sowing. Tolerates moderate to heavy frost and saline conditions. Very hardy. Available from general nurseries.

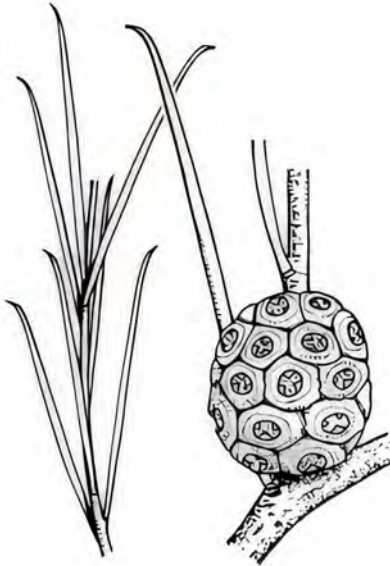
**VALUES & USES:**

Provides excellent low shelter and is good for honey production.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Mallee Broombush, Yangarra, Dyurr, Youngie Bush, Common Tea-tree, Broom Honey-myrtle.



**HABIT:**

Many-stemmed, erect shrub to 3 m high. Dark green leaves. Cream flowers (Jul-Dec).

**HABITAT & SITE PREFERENCE:**

Usually in mallee in deep sandy soils and red earth. Also in Black Box, rocky outcrop, and Callitris mixed woodlands. Prefers well-drained soils in full sun. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Feb-Apr. Propagate from seed (germinates in 14-40 days) or cuttings of firm young growth (cuttings may be slow to form roots). Available from specialist nurseries. Tolerates acidic to alkaline soils. Hardy to fairly heavy frost and extended dry periods.

**VALUES & USES:**

Good for windbreaks and screening purposes.

# Myoporum montanum - Western Boobialla

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Water Bush, Boobialla, Boomeralla, Native Daphne, Native Myrtle



**HABIT:**

Hairless, erect, bushy shrub or small tree up to 8 m high. It features finely fissured bark and narrow leaves about 3-14 cm long. Produces white, purple-spotted flowers, and usually grows as scattered plants or in small, relatively dense colonies. White flowers spotted with purple from August to December.

**HABITAT & SITE PREFERENCE:**

Found in Mallee, Grey Box, Belah-Rosewood, and Black Box communities. Prefers well-drained soil in full sun and a rainfall of 300 to 500 mm in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds early Feb-late Mar, monitoring closely as they shed 3-14 days after maturity. Propagate from cuttings of firm young growth or seed. For seed propagation, remove fruit flesh and soak overnight in warm water before sowing in late summer to early autumn. Cover with 2-3 mm of seed-raising media and 4 mm of fine gravel. Place seed trays in an open shaded position. Tolerates severe drought and exhibits low flammability. Appears to be unpalatable to livestock.

**VALUES & USES:**

Excellent low-level cover in windbreaks. Excellent habitat, flowers provide pollen and nectar, fruits eaten by birds. First Nations used gum as glue and leaves medicinally. Attractive ornamental for windbreaks, parks, screens, or hedges. Prune lightly and regularly to promote bushiness.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sweet Quandong, Desert Quandong, Native Peach, Bidjigal, Gudi Gudi



**HABIT:**

Erect, spindly shrub or small, shapely tree to 6 m high. Spreading to drooping branches, sparse pale to olive-green narrow leaves (3-9cm long), in opposite pairs. Whitish-cream flowers (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Various woodland communities, sandy sites or gravelly ridges. Sandy, well-drained loamy and clayey soils. Tolerates drought, most frosts, and possibly some salinity. Prefers 200 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed early Aug-late Nov (monitor closely as seeds drop quickly). Soak fruits in mild bleach solution before sowing whole or cracked. Germinate in moist vermiculite with fungicide at 16-25°C. Plant seedlings with host plants (e.g., native grasses) after 12 months, or directly over host roots. Parasitic on roots of other plants, especially when young. Regenerates from suckers and seeds. Not suitable for direct seeding.

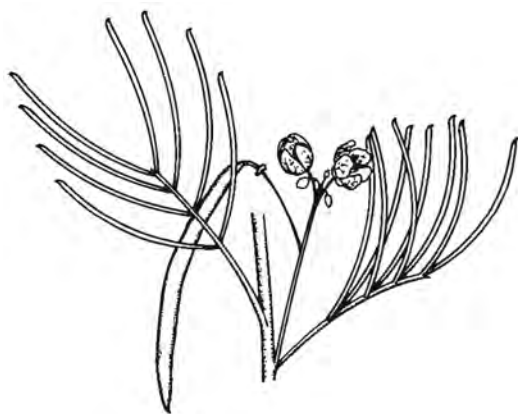
**VALUES & USES:**

Long-lived, medium-level shelter. Hard, close-grained, fragrant heartwood used for cabinet work. Fruit and seeds eaten by First Nations People and wildlife. Fruit used for preserves. Oily seeds used medicinally.

# *Senna artemisioides* - Punty Bush

**REGIONAL SUBSPECIES:** *S. a.* subsp. *artemisioides* (Silver Cassia), *S. a.* subsp. *circinnata*, *S. a.* subsp. *coriacea*, *S. a.* subsp. *filifolia*, *S. a.* subsp. *petiolaris* (Woody Cassia), *S. a.* subsp. *zygophylla*,

**OTHER NAMES:** Cassia, Silver Cassia



**HABIT:**

Small, bushy shrubs, 1-3 m high. Silver-grey leaves. Short-lived. Golden-yellow, sweet-scented flowers (Jun-Nov). Several subspecies, which tend to hybridise.

**HABITAT & SITE PREFERENCE:**

Variable, including mallee, Currawang, Mulga, Belah-Rosewood, Bimble Box, Red Box, and White Cypress Pine communities. Moderately well-drained soil in full sun. Prefers 200 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-mid Mar, seeds shed quickly. Propagate from scarified seed (boil or soak in hot water, then dry) or cuttings. Regenerates readily from seed, establishes well when direct seeded. Tolerates drought and frost (heavy frost may damage tips).

**VALUES & USES:**

Useful low-level cover in windbreaks, important understory component. Improves soil fertility (legume). Excellent habitat. Ornamental for gardens or low hedges due to attractive foliage and abundant flowers.



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**PLANT DESCRIPTIONS**  
SMALL SHRUBS  
& GROWDCOVERS

.....

Riverina



# SMALL SHRUBS



COMMON NAME	BOTANICAL NAME	PAGE
Bitter Saltbush	<i>Atriplex stipitata</i>	312
Black Bluebush	<i>Maireana pyramidata</i>	325
Black Roly-poly	<i>Sclerolaena muricata</i>	335
Bladder Saltbush	<i>Atriplex vesicaria</i>	313
Bluebush	<i>Maireana</i> spp.	326
Bushy Groundsel	<i>Senecio cunninghamii</i>	336
Cannon-ball	<i>Dissocarpus paradoxus</i>	318
Clustered Sea-heath	<i>Frankenia connata</i>	323
Cotton Fireweed	<i>Senecio quadridentatus</i>	337
Cottony Saltbush	<i>Chenopodium curvispicatum</i>	315
Creeping Saltbush	<i>Atriplex semibaccata</i>	312
Desert Broombush	<i>Templetonia egena</i>	338
Desert Goosefoot	<i>Chenopodium desertorum</i>	316
Dillon Bush	<i>Nitraria billardierei</i>	327
Eastern Flat-top Saltbush	<i>Atriplex lindleyi</i>	311
Felted Wallaby-bush	<i>Beyeria lechenaultii</i>	314
Galvanised Burr	<i>Sclerolaena birchii</i>	332
Goathead Burr	<i>Sclerolaena bicornis</i>	331
Gooma Bush	<i>Bertya cunninghamii</i>	314
Green Fuchsia-bush	<i>Eremophila serrulata</i>	321
Grey Copperburr	<i>Sclerolaena diacantha</i>	333
Grey Guinea-flower	<i>Hibbertia obtusifolia</i>	324
Grey Parrot-pea	<i>Dillwynia cinerascens</i>	317
Hard-leaved Wattle	<i>Acacia sclerophylla</i>	309
Lagoon Saltbush	<i>Atriplex suberecta</i>	313
Limestone Copperburr	<i>Sclerolaena obliquicuspis</i>	335
Mallee Bush-pea	<i>Eutaxia microphylla</i>	322

# SMALL SHRUBS

COMMON NAME	BOTANICAL NAME	PAGE
Mealy Saltbush	<i>Atriplex pseudocampanulata</i>	311
Mueller Daisy-bush	<i>Olearia muelleri</i>	328
Native Cranberry	<i>Astroloma humifusum</i>	309
Native Liquorice	<i>Glycyrrhiza acanthocarpa</i>	323
Nitre Goosefoot	<i>Chenopodium nitrariaceum</i>	316
Nodding Blue-lily	<i>Stypandra glauca</i>	337
Pale Poverty-bush	<i>Sclerolaena divaricata</i>	333
Peach Heath	<i>Lissanthe strigosa</i>	324
Pearl Bluebush	<i>Maireana sedifolia</i>	325
Ruby Saltbush	<i>Enchylaena tomentosa</i>	319
Saloop	<i>Einadia hastata</i>	319
Short-winged Copperburr	<i>Sclerolaena brachyptera</i>	332
Showy Daisy-bush	<i>Olearia pimeleoides</i>	329
Showy Parrot-pea	<i>Dillwynia sericea</i>	317
Shrubby Rice-flower	<i>Pimelea microcephala</i>	330
Slender Rice-flower	<i>Pimelea linifolia</i>	329
Slender-fruit Saltbush	<i>Atriplex leptocarpa</i>	310
Small Saltbush	<i>Atriplex eardleyae</i>	310
Soft-horns	<i>Malacocera tricornis</i>	326
Splendid Daisy-bush	<i>Olearia magniflora</i>	328
Spotted Fuchsia	<i>Eremophila maculata</i>	321
Spreading Emubush	<i>Eremophila divaricata</i>	320
Stiff Western Rosemary	<i>Westringia rigida</i>	338
Streaked Poverty-bush	<i>Sclerolaena tricuspis</i>	336
Tangled Poverty-bush	<i>Sclerolaena intricata</i>	334
Tar Bush	<i>Eremophila glabra</i>	320
Tar Vine	<i>Boerhavia dominii</i>	315
Thorny Saltbush	<i>Rhagodia spinescens</i>	331
Turpentine	<i>Eremophila sturtii</i>	322
Twiggy Bush-pea	<i>Pultenaea largiflorens</i>	330
Twin-horned Copperburr	<i>Dissocarpus biflorus</i>	318
Urn Heath	<i>Melichrus urceolatus</i>	327
Woolly Copperburr	<i>Sclerolaena lanicuspis</i>	334

**REGIONAL SUBSPECIES:** *A. s. var. sclerophylla*

**OTHER NAMES:** n/a



**HABIT:**

Small dense spreading shrub to 1 m high. Glossy phyllodes, curved and twisted pods. Golden-yellow flowers (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Mainly mallee communities on sandy soil. Adaptable to well-drained, light to heavy soils in dappled shade, partial, or full sun. Tolerates frost, drought, alkaline, and somewhat saline areas. Prefers 250 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

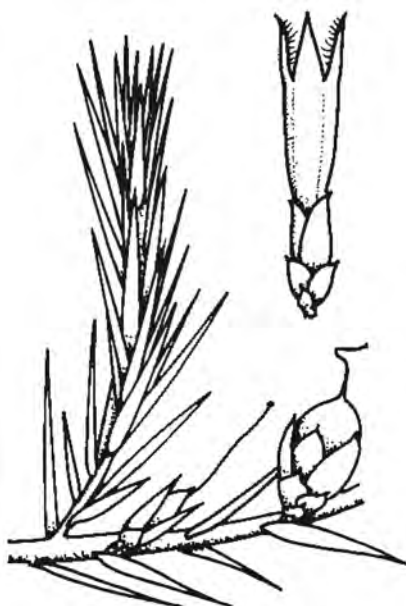
Propagate from seed or cuttings.

**VALUES & USES:**

Roadside plantings, erosion control. Nitrogen-fixing legume, improves soil fertility. Attractive garden plant.

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a



**HABIT:**

Small, mat-forming densely-branched shrub, branches to 50 cm high. Bright to dark red tubular flowers, primarily May-Sep. Blue-green stiff, prickly, narrow leaves.

**HABITAT & SITE PREFERENCE:**

Sandy soils on hillsides. Prefers 300 - 550 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

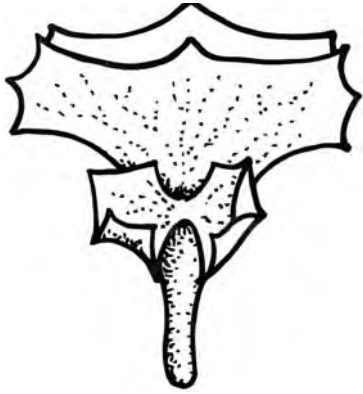
Harvest early Sep-late Mar, seeds shed in 3-14 days. Propagate from very young, firm new growth cuttings (difficult to root) or seed (difficult to germinate).

**VALUES & USES:**

Good habitat, nectar source for native birds. Fruits eaten by First Nations People and used in jams and jellies. Widely cultivated for rockeries, embankments, groundcover, and planting beneath larger shrubs.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Small prostrate to erect perennial sub-shrub. Mealy white, obovate leaves, entire or toothed. Bell-shaped fruits, 4-5 mm wide. Flowers all year round.

**HABITAT & SITE PREFERENCE:**

Variety of vegetation communities and soil types. Fairly well-drained light to heavy soil. Drought and frost tolerant. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

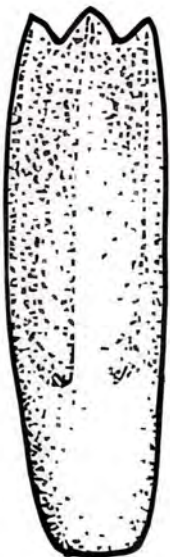
Soak fruits in water to remove salt before sowing or remove seeds and sow directly. Sow 2-3 seeds per pot, expect germination in 2-4 weeks.

**VALUES & USES:**

Readily eaten by stock and considered a useful component of any pasture

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Long-fruited Saltbush, Creeping Saltbush



**HABIT:**

Prostrate, short-lived perennial shrub to 30 cm high, with rigid stems. Flowers all year, mainly spring-summer (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Variety of vegetation communities and soil types. Prefers heavy soils with full sun. Tolerates drought and frost. Prefers 300-500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

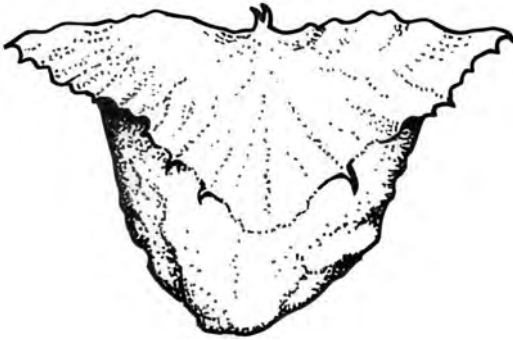
Soak fruits in water to remove salt before sowing, or remove seeds and sow directly. Sow 2-3 seeds per pot, expect germination in 2-4 weeks. Fast growth rate.

**VALUES & USES:**

Erosion control on roadsides and embankments, useful ground cover for gardens. Not highly palatable, but grazed during dry times.

**REGIONAL SUBSPECIES:** *A. l.* subsp. *conduplicata*, *A. l.* subsp. *inflata*, *A. l.* subsp. *lindleyi*

**OTHER NAMES:** Baldoo



**HABIT:**

Erect annual to 35cm tall. Spreading branches and a mealy grey appearance. Flowers all year, but mainly spring-summer (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Variable, common in low-lying areas. Prefers 300 to 450 mm rainfall in the Riverina region. Full sun.

**SEED COLLECTION & PROPAGATION:**

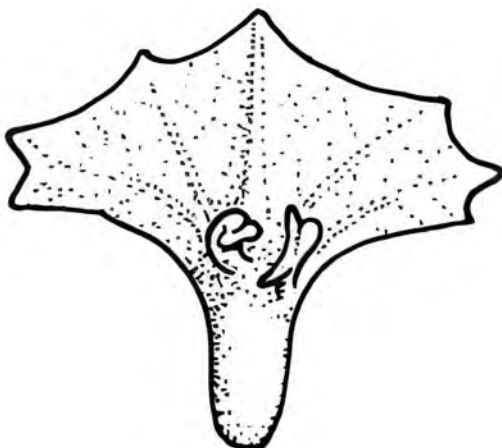
Soak fruits in water to remove salt before sowing, or remove seeds and sow directly. Sow 2-3 seeds per pot. Expect germination in 2-4 weeks. Fast growth rate.

**VALUES & USES:**

Prolific coloniser of scalds and helps stabilise eroded soils.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Small, mealy shrub, 20-30 cm tall. Branches ascending to erect with soft, irregularly toothed leaves. Flowers from Sep-Feb.

**HABITAT & SITE PREFERENCE:**

Variable soil and vegetation types. Often found on roadsides and disturbed areas. Prefers 300-450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

From seed or cuttings. Soak fruits in water for an hour to remove salt before sowing fruits, or remove seeds from fruits and sow directly. Sow 2-3 seeds per pot. Expect germination in 2-4 weeks.

**VALUES & USES:**

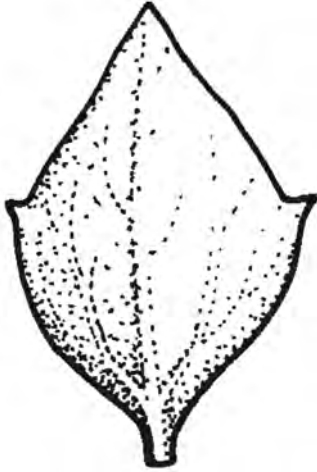
Establishes well on eroded sites.

## *Atriplex semibaccata* - Creeping Saltbush

CHENOPODIACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Berry Saltbush, Diamond Saltbush, Australian Saltbush



**HABIT:**

Prostrate, perennial, small shrub or groundcover with conspicuous red fruits. Forms dense mats.

**HABITAT & SITE PREFERENCE:**

Widespread in drier areas, extremely hardy. Tolerates drought and salt. Prefers 200 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Jan-mid Feb, seeds shed in 3-14 days. Gather from beneath plants or use vacuum cleaner. Propagate from seed or cuttings.

**VALUES & USES:**

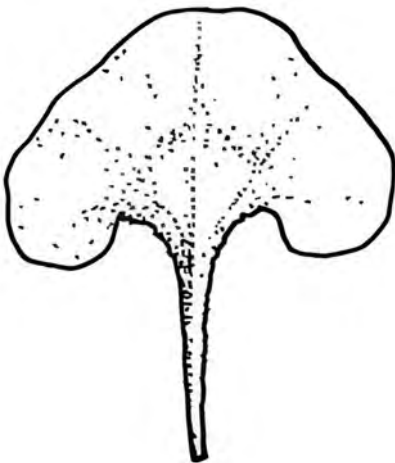
Useful for colonising bare areas, scalds, eroding, and saline sites. Useful firebreak. Good habitat, berries eaten by small birds and ants. Useful groundcover for gardens, cascading over rocks or walls, slopes, embankments, or road median strips. Forage for dry areas, readily grazed saltbush.

## *Atriplex stipitata* - Bitter Saltbush

CHENOPODIACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Mallee Saltbush, Kidney Saltbush



**HABIT:**

Perennial shrub with erect slender branches to 1 m high. Flowers Sep-May.

**HABITAT & SITE PREFERENCE:**

Various vegetation communities, often on coarse-textured soil in Belah-Rosewood, Bimble Box, and mallee communities. Prefers full sun.

**SEED COLLECTION & PROPAGATION:**

Soak fruits to remove salt before sowing or remove seeds and sow directly. Sow 2-3 seeds per pot, expect germination in 2-4 weeks.

**VALUES & USES:**

Used for soil erosion control and as forage when other options are limited. Tolerates frost and saline conditions.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sprawling saltbush

**HABIT:**

Erect or spreading annual shrub. Leaves rounded at the apex. Fruiting bodies with broad triangular lobe at apex, in numerous clusters (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

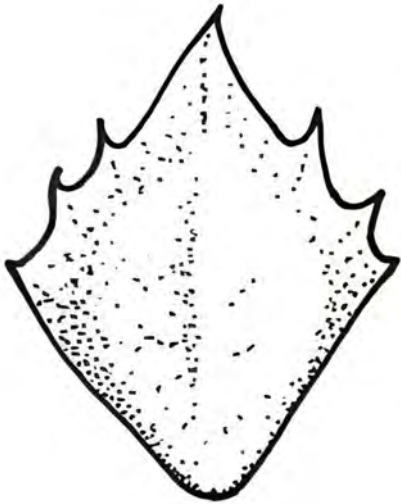
Disturbed sites in most soil types, including saline soils.

**SEED COLLECTION & PROPAGATION:**

Soak fruits to remove salt before sowing or remove seeds and sow directly. Sow 2-3 seeds per pot, expect germination in 2-4 weeks.

**VALUES & USES:**

Acceptable to stock. Grows in summer.



**REGIONAL SUBSPECIES:** *A. v.* subsp. *macrocystidea*, *A. v.* subsp. *minor*, *A. v.* subsp. *sphaerocarpa*, *A. v.* subsp. *vesicaria*.

**OTHER NAMES:** Perennial Saltbush

**HABIT:**

Erect or decumbent perennial shrub to 70 cm high and wide. Brittle woody stems, grey-green leaves. Pale brown flower heads (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

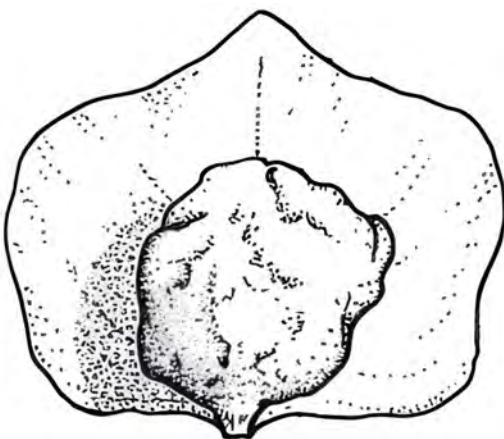
Alluvial plains, rocky hills, ridges, foot-slopes, gibber plains, and sandplains. Heavy alluvial soils in full to partial sun. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Soak fruits to remove salt before sowing or remove seeds and sow directly. Sow 2-3 seeds per pot, expect germination in 2-4 weeks. Regenerates from seed during wet periods.

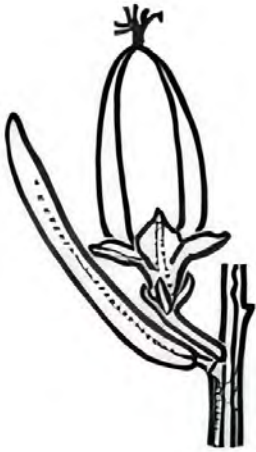
**VALUES & USES:**

Drought and frost resistant. Good fodder plant in times of drought. Attractive foliage.



**REGIONAL SUBSPECIES:** *B. c.*  
subsp. *cunninghamii*

**OTHER NAMES:** Sticky bertya,  
Wallaby-bush



**HABIT:**

Dense shrub, 1.5-2 m high and 2 m diameter. Sticky, usually hairless branches. Flowers most of the year.

**HABITAT & SITE PREFERENCE:**

Mainly on red sandy earth in mallee communities or *Callitris* mixed woodland. Well-drained soils in partial to full sun. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from cuttings of firm young growth. Frost tolerant.

**VALUES & USES:**

Not known to be grazed.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Pale Turpentine  
Bush



**HABIT:**

Small sticky shrub to 1.5 m high. Leaves green and glossy above, white-woolly below (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Mainly in mallee communities with calcareous red earth. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

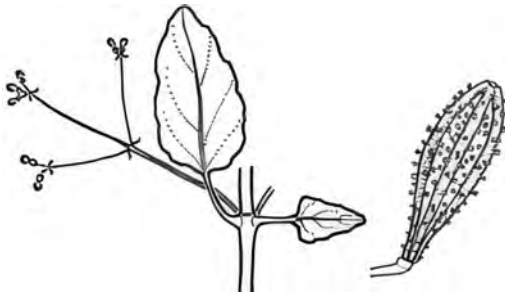
Collect seed Jan-Feb. Propagate from seed or cuttings. Treat for weevils before sowing. Frost tolerant.

**VALUES & USES:**

Not known to be grazed.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Hogweed, Giotcho, Common Spiderling, Tah Vine



**HABIT:**

Usually hairless, prostrate, herbaceous perennial. Slender prostrate or climbing stems. Dark green, ovate leaves. Dull pink flowers (Dec-May).

**HABITAT & SITE PREFERENCE:**

Variety of soil and vegetation types. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

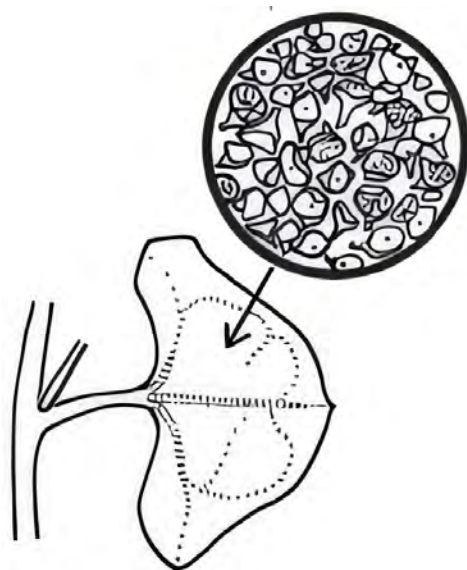
Propagate from seed or cuttings (strikes readily).

**VALUES & USES:**

Drought resistant. Palatable to stock. Tap roots baked for food by First Nations People. Can become weedy in rich garden soil with frequent watering.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Weak spreading shrub to 1 m high. Mealy white in appearance. Flowers mealy and fruit a bright red berry. Flowering December to February.

**HABITAT & SITE PREFERENCE:**

Mallee and Belah communities with calcareous soils. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

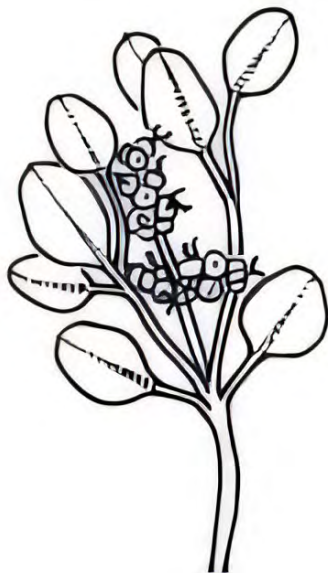
Propagate from seed or cuttings.

**VALUES & USES:**

Not readily grazed by stock.

**REGIONAL SUBSPECIES:** *C. d. subsp. anidiophyllum*, *C. d. subsp. desertorum*, *C. d. subsp. microphyllum*, *C. d. subsp. rectum*, *C. d. subsp. virosum*

**OTHER NAMES:** Frosted Goosefoot



### HABIT:

Densely mealy, perennial sub-shrub to about 30 cm high. *C. desertorum* subsp. *desertorum* - hairs on perianth glisten; *C. desertorum* subsp. *microphylla* - hairs on perianth dull; *C. desertorum* subsp. *virosum* - plant usually foetid.

### HABITAT & SITE PREFERENCE:

Solonized brown soils and sandplains in Leopardwood and mallee communities. Prefers heavier soils. Prefers 300 to 450 mm rainfall in the Riverina region.

### SEED COLLECTION & PROPAGATION:

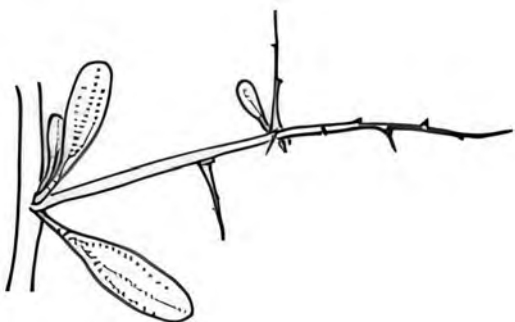
Mainly December to April. From seed which usually germinates in 2-4 weeks. Treat seed by rubbing fruit under running water for a few minutes or soaking for an hour to remove salt which inhibits germination. After treatment, seed is usually sown while still contained in fruits.

### VALUES & USES:

Useful forage plant, moderately acceptable to stock.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Indigo Bush, Nitre Bush, Woody Goosefoot, Branching Goosefoot



### HABIT:

Spiny, greyish shrub to 2.5 m high. Slender branches and thick, green leaves. Flowers most of the year.

### HABITAT & SITE PREFERENCE:

Widespread in various vegetation communities, often on clay and clay-loam soils. Grows in most soils with full sun. Tolerates drought and saline soil, and can withstand extended periods of complete inundation. Prefers 300 to 450 mm rainfall in the Riverina region.

### SEED COLLECTION & PROPAGATION:

Propagate from seeds and cuttings.

### VALUES & USES:

Valued as a fodder plant during drought periods.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Dwarf to small, multi-branched erect shrub, 30 cm to 1.5 m high. Fine slender leaves with bent tips. Showy yellow and orange flowers (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Riverine forest and Grey Box woodland. Protected position in dry, well-drained soil. Full sun. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Oct-late Feb (monitor closely as mature seeds shed quickly). Propagate from scarified seed or cuttings of firm new growth. Strikes readily. Medium growth rate. Tolerates drought, frost, and wet soils over winter (but not permanent poor drainage). Resists Cinnamon fungus. Available from specialist nurseries.

**VALUES & USES:**

Hardy species in cultivation. Low cover in windbreaks. Nitrogen-fixing legume, improves soil fertility. Food for insect-eating birds and butterfly caterpillars. Attractive specimen for beneath established trees and in tubs.

# *Dillwynia sericea* - Showy Parrot-pea

**REGIONAL SUBSPECIES:** *D. s.* subsp. *rudis*, *D. s.* subsp. *sericea*

**OTHER NAMES:** *n/a*



**HABIT:**

Upright shrub, 50 cm to 1 m high, stiff hairy stems, linear leaves. Conspicuous yellow and red flowers, spring to early summer.

**HABITAT & SITE PREFERENCE:**

Stony Ridges in Grey Box, Green Mallee and Mugga Ironbark communities with gravelly soils. Prefers 400 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect late Oct-late Feb, seeds released quickly. Propagate from scarified seed (soak in near-boiling water for 30 seconds, then cold water, then dry before sowing).

**VALUES & USES:**

Improves soil fertility (legume). Important understory component. Excellent for planting under trees, screening, and containers. Prune regularly after flowering.

**REGIONAL SUBSPECIES:** *D. b.* var. *biflorus*

**OTHER NAMES:** Two-point Burr, Twin-flower Saltbush

**HABIT:**

Branched, grey perennial sub-shrub. Fruits woolly. Flowers most of the year (Jan-Dec).

**HABITAT & SITE PREFERENCE:**

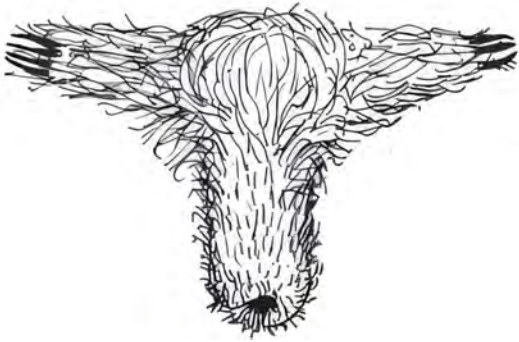
Woodland and shrub communities on variable soil. Prefers dry soils with full sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings.

**VALUES & USES:**

Attractive garden plant with decorative foliage and small spines.



## *Dissocarpus paradoxus* - Cannon-ball

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Curious Saltbush, Hard-head Bassia, Burr Saltbush, Cannonball Burr

**HABIT:**

Short-lived perennial sub-shrub to 50cm tall. Greyish, woolly branches. Flowers most of the year (Jan-Dec).

**HABITAT & SITE PREFERENCE:**

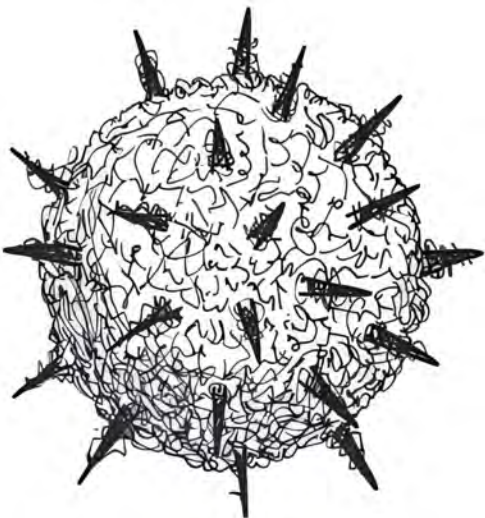
Woodland communities with red earth and solonized soils. Prefers dry soils with full sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings.

**VALUES & USES:**

Used as a forage plant in hard times.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Berry Saltbush

**HABIT:**

Often a neat, rounded, perennial sub-shrub to about 50 cm in diameter. Occasionally straggling, with branches to about 1 m long. Deep green leaves. Fruit a red berry.

**HABITAT & SITE PREFERENCE:**

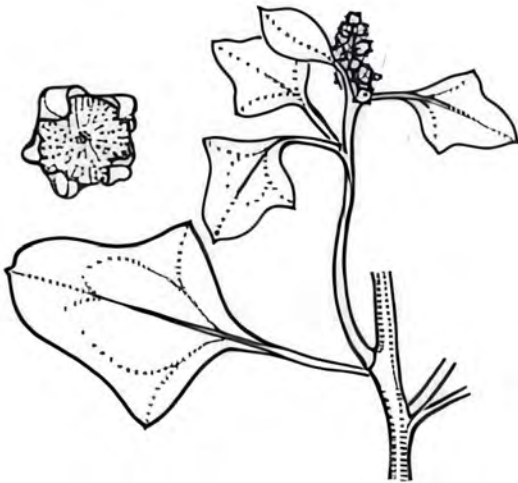
Dryish, usually rocky sites. Tolerates salinity. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds from Dec-Jan. Propagate from seed or cuttings. Should germinate in 2-5 weeks. Seeds have a medium shelf-life. Suitable for direct seeding. The plant has a medium growth rate and is available from specialist nurseries.

**VALUES & USES:**

Useful, relatively palatable forage. Food plant for caterpillars of native butterflies and moths, which in turn attract insect-eating birds. Fruits and foliage are edible. Leaves are tender and tasty if boiled to remove salty flavour.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Barrier Saltbush, Plum Puddings, Berry Cottonbush, Gurgudj

**HABIT:**

Prostrate, spreading, or erect shrub to about 1.5 m high. Shallowly grooved branchlets with green to bluish-green, hairy, succulent leaves.

**HABITAT & SITE PREFERENCE:**

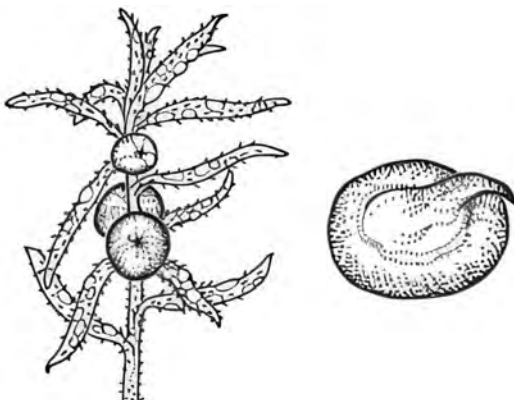
Very widespread in all vegetation communities and soil types. Prefers well-drained soils. Tolerates drought, frost, and some salinity. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds late Oct-late Apr. Monitor closely as mature seeds shed in 3-14 days. Propagate from seed (germinates readily) or from cuttings. Fast growth rate. Available from specialist nurseries.

**VALUES & USES:**

Attractive plant, excellent for containers. Succulent red berries eaten by First Nations People. Berries can be soaked in water to make a drink. Responds well to pruning.



**REGIONAL SUBSPECIES:** *E. d.*  
subsp. *divaricata*

**OTHER NAMES:** Spreading  
Divericata



**HABIT:**

Small, spreading shrub, 1-2 m high, often tangled. Slender branches, sometimes ending in a spine. Blue or lilac flowers (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Mainly heavy clay soils on floodplains, full sun. Tolerates extended dry periods and most frosts. Prefers 300-450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and cuttings. Most *Eremophila* seeds are difficult to germinate due to hard woody fruits and chemical inhibitors. Stem cuttings can be slow to root. Promote suckering by disturbing roots or transplant root suckers.

**VALUES & USES:**

Useful as a low screen plant.

# *Eremophila glabra* - Tar Bush

**REGIONAL SUBSPECIES:** *E.*  
*g.* subsp. *glabra*, *E. g.* subsp.  
*murrayana*

**OTHER NAMES:** Black Fuchsia,  
Fuchsia Bush, Emubush, Dwarf  
Emubush, Poverty Bush, and Native  
Cumquat



**HABIT:**

Variable, from a low, prostrate (densely hairy) shrub to an erect (hairless leaves) shrub, up to 1.5 m high. Sticky to touch. Succulent drupe fruit. Yellow, orange, or reddish flowers (Jan-Dec).

**HABITAT & SITE PREFERENCE:**

Often in mallee, also in Bimble Box, Belah-Rosewood, and Mulga communities. Well-drained soil in full sun. Tolerates light to medium frost and drought. Prefers 300-400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Feb. Propagation is possible from seed or cuttings, but both are challenging. Most *Eremophila* seeds are difficult to germinate due to hard woody fruits and chemical inhibitors. Cuttings readily root, but buds on cuttings may die, leaving them barren. Stem cuttings can also be very slow to root. An alternative method is to promote suckering by disturbing the roots of established plants and then transplanting the resulting root suckers.

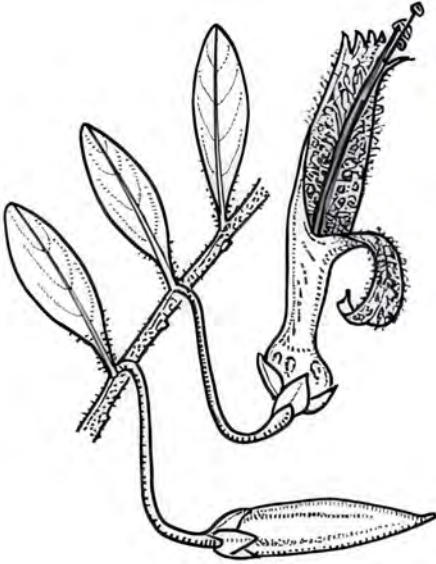
**VALUES & USES:**

Attractive ornamental. Rich in nectar. Bird and insect attracting.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Poison Fuchsia, Spotted Fuchsia-bush, Spotted Emubush



**HABIT:**

Many-branched shrub approx. 1.5 m high. Branches somewhat woolly and ascending. Flowers red, orange, or yellow, with paler interiors spotted with red or brown (Jun-Nov).

**HABITAT & SITE PREFERENCE:**

Heavy clays to clay loams receiving run-off water. Also found in duplex soils on floodplains. Prefers well-drained heavy to sandy soils with plenty of sun. Prefers 300-400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

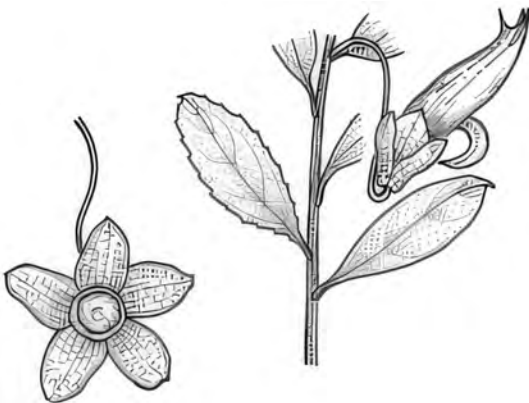
Seed collection Feb-May. Propagate from seeds and cuttings of slightly firm growth. Most *Eremophila* species are difficult to germinate from seed due to hard, woody fruits containing a chemical inhibitor. Stem cuttings can be slow to root. Promote suckering by disturbing roots of established plants and transplanting the resulting root suckers

**VALUES & USES:**

Attractive ornamental. Wildlife attracting.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Small and leggy shrub to 1.5 m high. Leaves ovate to lanceolate, to 20 mm long, and sticky. Flowers green, tubular, hairy, and 20-25 mm long (Jul-Nov). Fruit a globular, hairless drupe. Prefers 300 to 400 mm rainfall in the Riverina region.

**HABITAT & SITE PREFERENCE:**

Found growing in rocky outcrop woodland on upper slopes and crests. Prefers well-drained sites with partial to full sun. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed, but can be difficult and best left for natural regeneration. From cuttings, but can be slow to form roots. Frost hardy.

**VALUES & USES:**

Flowers utilised by honey-eating birds.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Turpentine Bush, Budda Bush, Small Sandalwood, Narrow-leaf Emu-bush, Turpentine Emubush, Scented Sandalwood.



**HABIT:**

Sticky shrub to 4 m high. Dark grey, finely fissured bark, slender branches, and bright green leaves. Lilac or mauve flowers, present all year but mainly in spring (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Wide range of soils, including Bladder Saltbush, Belah-Rosewood, Callitris mixed, and rocky outcrop woodlands. Prefers 300-400 mm rainfall in the Riverina region. Resists frost and tolerates extended dry periods.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and cuttings, both may be difficult. Regenerates from suckers. Slow growth rate.

**VALUES & USES:**

Attractive garden plant but grafted to avoid extensive suckering, First Nations uses include medicinal, use of the wood for weapons and implements, fish poison, insect repellent. Bird and insect attracting.

# *Eutaxia microphylla* - Mallee Bush-pea

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Small-leaved Eutaxia, Eutaxia Bush-pea



**HABIT:**

Variable, low, dense, intricate or erect perennial shrub, 25 cm to 2 m high. Tiny linear grey-green leaves and brown twiggy stems, sometimes spiny-tipped. Profuse yellow and red (sometimes all yellow) flowers (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Drier areas, often in mallee communities on sandy red soil. Prefers an open position in dry, well-drained soil and full sun. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

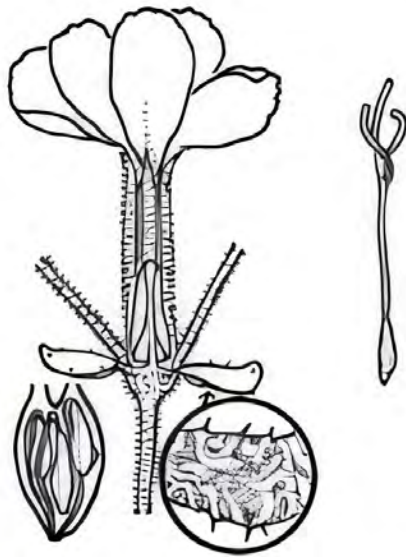
Collect seed late Nov-mid February (monitor closely as mature seeds shed quickly). Propagate from scarified seed (soak in hot water, dry before sowing) or cuttings (strike readily). Germination takes 3-4 weeks. Tolerates wet winter soil, drought, full shade, and most frost. Resents poorly drained soil.

**VALUES & USES:**

Useful for erosion control in small areas due to fibrous roots. Nitrogen-fixing legume, improves soil fertility. Food plant for butterfly and moth caterpillars, attracting insect-eating birds. Excellent for containers, pool edges, groundcover, rockeries, hanging baskets, and under trees. Popular in cultivation. Prune severely to promote bushiness

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Small, hairy perennial shrub to 30 cm high. Linear leaves and pink flowers in loose terminal clusters (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Found in Bladder Saltbush and Mitchell Grass communities. Semi-arid areas with gibber soils and full sun. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and cuttings.

**VALUES & USES:**

Saline tolerant groundcover, attractive flowers.

# Glycyrrhiza acanthocarpa - Native Liquorice

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Southern Liquorice,  
Native Lucerne



**HABIT:**

Small, upright, hairless, and stocky shrub to 1 m high. Leaves glossy bright green, oblong-lanceolate, and aromatic when crushed. Pea-like purple flowers (Sep-Feb). Fruit a rusty-coloured pod covered in hard prickles.

**HABITAT & SITE PREFERENCE:**

Mainly areas subject to occasional inundation on heavy grey and brown clay in River Red Gum, Black Box, and Bimble Box communities. Prefers heavy clays. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

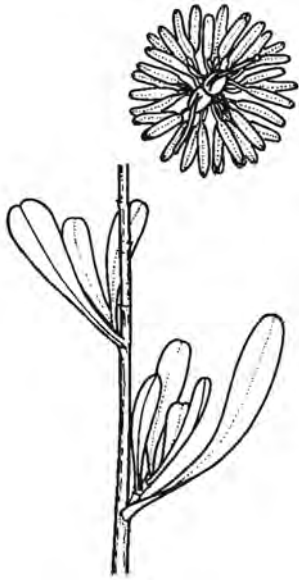
Propagate from seed or cuttings. Seed may require pre-sowing treatment. Hardy to most frost.

**VALUES & USES:**

Utilised by stock, although fruit can attach to sheep wool and reduce its value.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Hoary Guinea-flower



**HABIT:**

Softly hairy, upright or spreading small shrub to 60 cm high. Grey-green leaves. Bright golden-yellow flowers, spring to summer.

**HABITAT & SITE PREFERENCE:**

Sandy and gravelly soils in filtered sun or partial shade in open forest and other habitats. Requires well-drained soil, tolerates moderate frost and dry shady sites once established. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect late Nov-mid Mar, seeds shed quickly. Difficult to collect due to low seed production. Propagate from cuttings of firm young growth (strikes readily) or seed (difficult due to dormancy). Regenerates from suckers and seed.

**VALUES & USES:**

Good habitat, flowers provide food for native insects. Excellent ornamental for containers and rockeries, prune tips regularly for bushiness.

# *Lissanthe strigosa* - Peach Heath

**REGIONAL SUBSPECIES:** *L. s.*  
subsp. *strigosa*, *L. s.* subsp. *subulata*

**OTHER NAMES:** *n/a*

**HABIT:**

Open, rigid heath-like shrub, usually 15-70 cm high, often scrambling. Profuse, honey-scented, white to pink flowers, Aug-Nov.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest, dry scrub, and heath on sandy soil. Prefers well-drained soil in filtered light. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mature fruit. Propagate from cuttings of new season's growth (slow to strike) or seed (difficult).

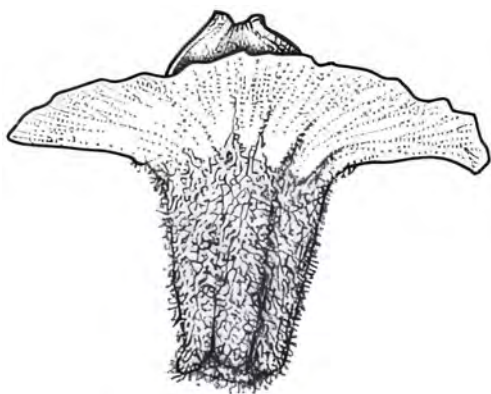
**VALUES & USES:**

Excellent habitat, edible fruit consumed by small native birds. Attractive ornamental, especially when flowering profusely.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Shrubby Bluebush,  
Sago Bush



**HABIT:**

Rounded, blue-grey perennial shrub up to 1.5 m high. Branches are rigid and spiny. Leaves are fleshy, obovoid, and hairy. Fruit is pyramid-shaped, green when fresh and drying to black. Flowers from September to November.

**HABITAT & SITE PREFERENCE:**

Mainly on calcareous sands and loams. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

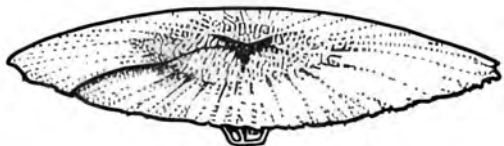
Propagate from seed. Seed only remains viable for a couple of months. Drought resistant. Can become weedy, and its high density can reduce the numbers of other species.

**VALUES & USES:**

Very useful in areas subject to soil erosion. Used for fodder in dry times.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Dense Bluebush,  
Hoary Bluebush, Pearlbush



**HABIT:**

Dense, whitish-blue perennial shrub growing up to 1 m high. Its branches are woolly and woody, and it has stalkless, fleshy, and narrowly obovoid leaves. The fruit tube is hemispherical to top-shaped and turns straw-coloured or pale brown when dry. It flowers from December to February.

**HABITAT & SITE PREFERENCE:**

Found in sandy or loamy textured red-brown soils with limestone present. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed from Dec-Apr. Drought resistant.

**VALUES & USES:**

Under certain conditions, it may be poisonous to stock.

**REGIONAL SPECIES:** *M. brevifolia* (Yanga Bush), *M. decalvans* (Black Cottonbush), *M. enchylaenoides* (Wingless Fissure-weed), *M. microphylla* (Eastern Cottonbush), *M. pentagona* (Slender Fissure-weed), *M. pyramidata* (Black Bluebush)  
[others included in text]

**OTHER NAMES:** refer to above and in text



## HABIT:

Low-growing, hardy perennials, typically less than 1.5 m high. Flowering occurs throughout the year (Jan-Dec).

## HABITAT & SITE PREFERENCE:

Various habitats, including grasslands and woodlands, often on poorer, heavier soils. Prefer 200 to 500 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

Seeds are generally collected in summer. Propagate from seed or cuttings. Seed is usually sown while still within the fruit, often resulting in good germination within 1-2 weeks. Medium growth rate. Seed viability may decline after a year or so. Species recommended: *M. aphylla* (Cottonbush), *M. ciliata* (Hairy Fissure-weed), *M. georgei* (Satiny Bluebush), *M. erioclada* (Rosy Bluebush), *M. lobiflora* (Lobed Bluebush), *M. pentatropis* (Erect Mallee Bluebush), *M. radiata* (Grey Bluebush), *M. sclerolaenoides* (Woolly-fruited Copperburr), *M. triptera* (Three-winged Bluebush) and *M. turbinata*.

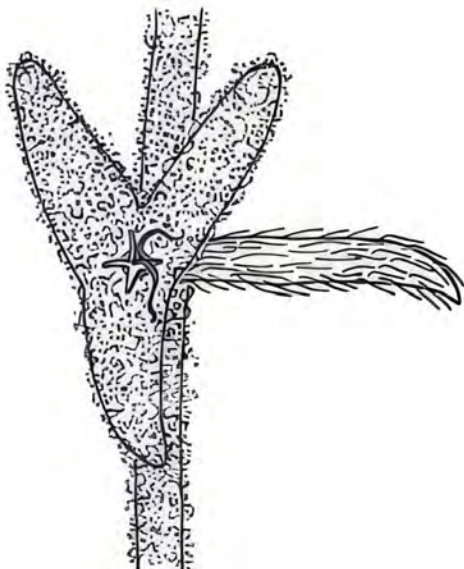
## VALUES & USES:

Many of these species are useful drought resistant fodder, and are very useful in areas subject to soil erosion. Some may be poisonous to stock.

# Malacocera tricornis - Soft-horns

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Goat Head, Soft-horned Saltbush, Three-horn Saltbush, Star Saltbush, Woolly



## HABIT:

White woolly perennial to 70 cm high. Small, solitary flowers. Fruit roughly Y-shaped and woolly hairy. Flowers from September to February.

## HABITAT & SITE PREFERENCE:

Usually in Black Bluebush and Saltbush communities, frequently on clay soils. Prefers lots of sunshine. Tolerates periodic flooding. Prefers 300 to 450 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

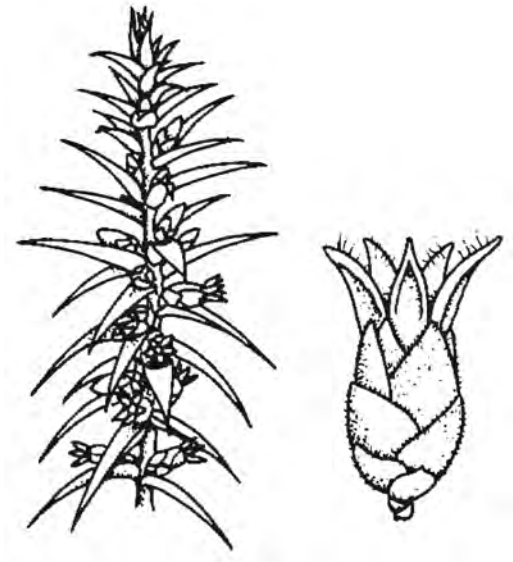
Propagate from seed or cuttings.

## VALUES & USES:

Used as forage for stock. Can be useful in preventing soil erosion as it reclaims scalds and duplex soils.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Urn-heath, Honey-gland Heath



**HABIT:**

Upright, stiffly-branched shrub, 20 cm to 1.5 m high, prickly leaves, downy branches. Crowded white, cream, or yellow-green urn-shaped flowers, Mar-Nov.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest, Cypress Pine woodland, and wattle scrub on skeletal sandy or loamy soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect ripe fruit, wash off or consume pulp, store or sow seed. Difficult propagation from seed. Best propagated from cuttings of relatively soft young growth (may be difficult to strike). Regenerates from lignotuber.

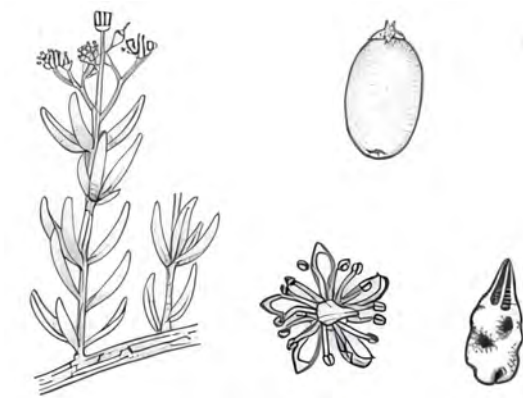
**VALUES & USES:**

Good habitat. Attractive in gardens, benefits from moderate pruning. Edible fruit.

# Nitraria billardierei - Dillon Bush

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Nitre-bush, Karumbil, Wild Grape



**HABIT:**

Spreading perennial, 1-2 m high, often broader than tall. Rigid, spiny branches. Smooth, blue-green or green leaves. Flowers in small white clusters (Sep-Nov). Fruit a fleshy drupe, turning purple, red, or golden when ripe.

**HABITAT & SITE PREFERENCE:**

Commonly found in overgrazed areas on loamy and clay soils, and along loamy, saline creek flats. Tolerates alkaline and saline soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Feb-Mar. Propagate from seed (germinates in 22-50 days) or cuttings of firm but not too young growth. Increases in abundance under heavy grazing. Drought tolerant and frost hardy.

**VALUES & USES:**

Excellent for soil erosion control, colonises overgrazed land. Provides shelter for fauna and birds. First Nations People ate the berries, despite their astringency. Emus, small birds, lizards, and marsupials also consume the fruit.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Dusky Daisy-Bush

**HABIT:**

Small, straggly, hairless, and sticky shrub 1.5 m. Leaves oblong-cuneate shaped. Flowers have purple petals and yellow centres (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Mainly in mallee. Prefers protected warm to hot sites. Prefers 250 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Cuttings of firm young growth or from seed. Seed should be surface sown. Fast growth rate. Moderately frost tolerant. Can be planted in acidic to slightly alkaline soils.

**VALUES & USES:**

A very attractive plant for gardens.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Dwarf to small, sticky, often rounded shrub, 60 cm to 1 m high. White flowers with yellow centres (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Mallee communities and Belah communities associated with mallee. Well-drained, acidic to slightly alkaline soils in full sun. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Sep-Oct. Propagate from cuttings of firm young growth or seed. Seed germinates in 20-45 days and should be surface sown. Fast growth rate. Hardy to extended dry periods and moderate frost.

**VALUES & USES:**

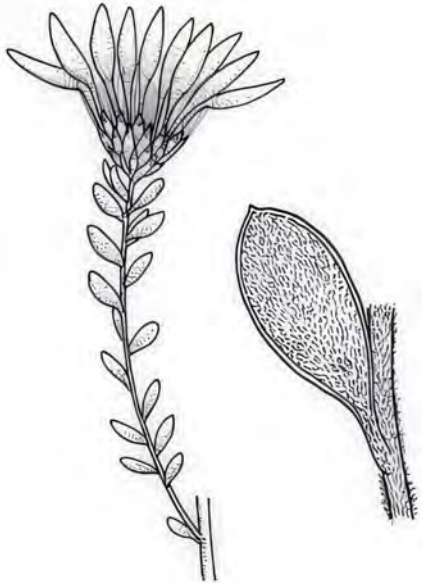
Showy plant suitable for general planting and containers.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Pimelea Daisy-bush, Rice-Flower Daisy-Bush, Burrabunga



**HABIT:**

Small shrub up to 1 m high and in diameter. Greyish hairy branches and leaves. Flowers have white petals with yellow centres (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

A variety of soil and vegetation types. Well-drained acidic to alkaline soils in a warm to hot site. Prefers from 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Dec-Jan. Propagate from cuttings of firm young growth and from seed. Seed should be surface sown. Fast growth rate. Tolerates extended dry periods and moderate frost.

**VALUES & USES:**

A very attractive plant suitable for gardens.

# Pimelea linifolia - Slender Rice-flower

**REGIONAL SUBSPECIES:** *P. l.* subsp. *caesia*, *P. l.* subsp. *collina*, *P. l.* subsp. *linifolia*, *P. l.* subsp. *linoides*

**OTHER NAMES:** Granny's Bonnet, Queen of the Bush, Queen-of-bush, Flax-leaf, and Native Candy-tuft



**HABIT:**

Prostrate or erect shrub to 1.5 m high. Narrow leaves, dark green on upper surface, 4-29 mm long. White, pink or rarely yellow flowers (June-Jan).

**HABITAT & SITE PREFERENCE:**

Mainly on gravelly soil on hillslopes and ridges. Generally requires reasonable drainage and flowers best in full sun. Prefers from 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed early Oct-late Mar. Monitor closely as mature seeds shed quickly. Propagate from cuttings, which are slow to strike. Very difficult from seed. Slow growth rate.

**VALUES & USES:**

Provides good habitat and an important nectar source for native butterflies and other insects. Ornamental and excellent for rockeries. Best planted in groups. Not grazed by stock.

**REGIONAL SUBSPECIES:** *P. m.*  
subsp. *microcephala*

**OTHER NAMES:** Mallee Rice-flower, Shrub Kurrajong, Small-head Pimelea, Yackahbea.



**HABIT:**

Spreading, many-branched shrub to 2 m high. Leaves linear-elliptic, green or grey-green. Small, greenish-yellow or pale cream flowers (male and female on separate plants), flowering from January to December.

**HABITAT & SITE PREFERENCE:**

Woodland communities including Mulga, White Cypress Pine, mallee and Bimble Box. Usually on sandy red soil. Prefers freely drained sandy soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed which may be very difficult. From cuttings of barely firm young growth. Hardy to moderate frost.

**VALUES & USES:**

Potential for soil conservation on unstable sand ridges.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Bush Pea



**HABIT:**

Erect shrub, often 1 m or higher, with silky downy stems. Flowers are orange-yellow with red or crimson markings (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Mallee or dry sclerophyll woodland, on light soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

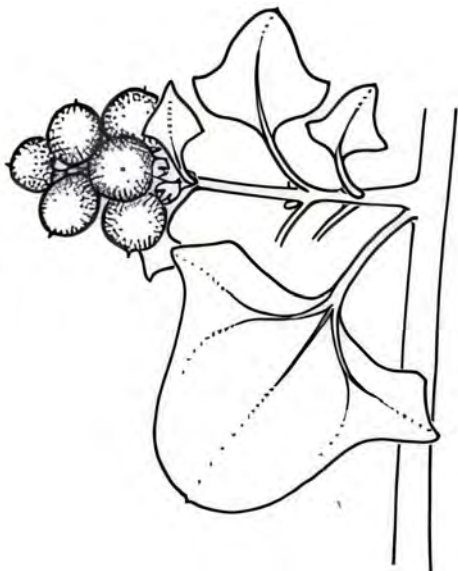
Monitor closely as seeds shed immediately or within 1-2 days of maturity. Propagate from scarified seed, or cuttings of firm young growth (rooting hormones should improve strike rate). Pour boiling or very hot water over seeds and soak until water cools. Dry to prevent rotting and sow. Germination takes 3-4 weeks. Suitable for direct seeding in pots (2-3 seeds per pot). Slow growth rate. Regenerates from seed, particularly after fire.

**VALUES & USES:**

Useful low-level cover in windbreaks. Important component of understorey. Nitrogen-fixing legume, improves soil fertility. Good habitat. Flowers are a nectar source for native wasps and bees. Wallabies graze foliage. Attractive, particularly when flowering.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Berry Saltbush,  
Hedge Saltbush



**HABIT:**

Perennial shrub to 1.5 m high. Branches rigid and often ending in a spine. Leaves oblong and greenish or mealy white. Fruit a deep red berry. Flowers from September to February.

**HABITAT & SITE PREFERENCE:**

Common on a wide range of soils, often on loams, clay loams, and heavy clays. Prefers medium-textured, alkaline soils. Prefers from 300 to 500 mm rainfall in the Riverina region. Drought and saline tolerant.

**SEED COLLECTION & PROPAGATION:**

Collect seed in late summer. Seeds germinate readily, but propagation from seed is difficult as seed is not produced in great quantities. Soak fruit to soften and remove fleshy berry. Sow just under the soil surface.

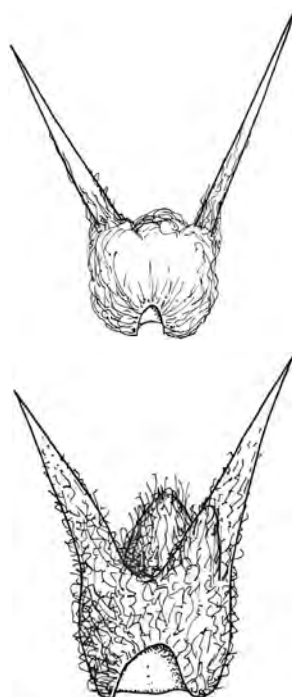
**VALUES & USES:**

Due to drought and saline tolerance it is useful for colonising saline scalds. Excellent low-level shelter. Fruit and seed eaten by birds and reptiles. An attractive long-living ground cover for gardens. Provides good forage during drought periods.

# Sclerolaena bicornis - Goathead Burr

**REGIONAL SUBSPECIES:** *S. b. var. bicornis*, *S. b. var. horrida*

**OTHER NAMES:** Woolly Copperburr,  
Bullhead



**HABIT:**

Erect to spreading perennial shrub to 60 cm high. White-woolly branches, linear leaves. Woody fruit 7-8 mm diameter with spines 10-15 mm long (year round).

**HABITAT & SITE PREFERENCE:**

Variable vegetation communities on river flats and alluvial plains. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year. Seed often remains on windblown plants. Germinates readily from seed

**VALUES & USES:**

Colonises bare scalded areas. Sheep fodder when other options are scarce. Can be weedy in higher rainfall areas, indicates pasture degeneration in low rainfall areas.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Woolerino Burr, Blue Burr, Hermidale Lucerne

**HABIT:**

Spreading, hemispherical shrub to 1 m high. Stems and broadly ovate leaves woolly. Fruit woolly with 4-5 unequal spines (year round).

**HABITAT & SITE PREFERENCE:**

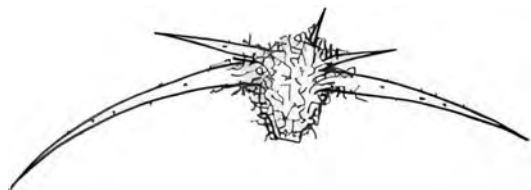
Sandy soils associated mainly with Bimble Box. Also with Cypress Pine and Mulga communities. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year. Propagate from cuttings or seed.

**VALUES & USES:**

Hardy groundcover. Can become weedy and then should be removed and replaced with another groundcover.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Short-winged Saltbush, Hairy Bassia, Short-spined Copperburr

**HABIT:**

Short, ascending, hairy, short-lived perennial. Twice as wide as high, with crowded linear leaves. Fruit has a regular 5-angled wing at the top (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

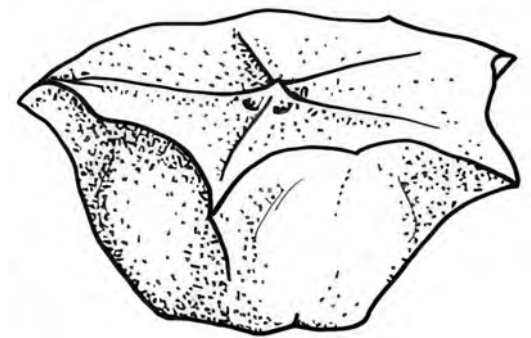
Variable, common in Bladder Saltbush communities on clay soils. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

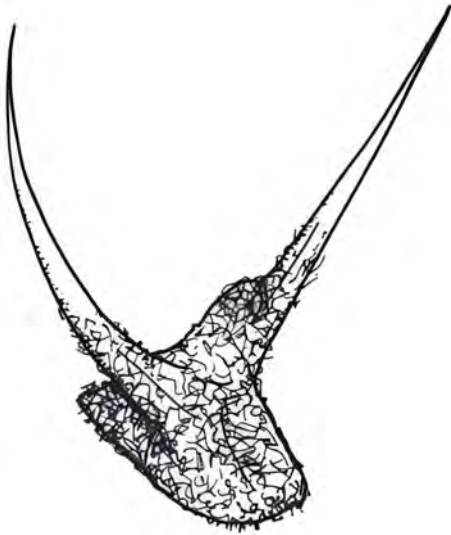
**VALUES & USES:**

Colonises bare scalds and clay pans. Woolly habit traps seed and soil, aiding in soil erosion control.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Two-spined Saltbush, Jelly-burr



**HABIT:**

Greyish or tawny hairy, prostrate to ascending, short-lived perennial to 30 cm high and 40 cm wide. Fruit hairy, except on the points of the two spines (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Variable vegetation types on sandy to clay loam soils. Drought resistant, tolerates salt and limestone. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

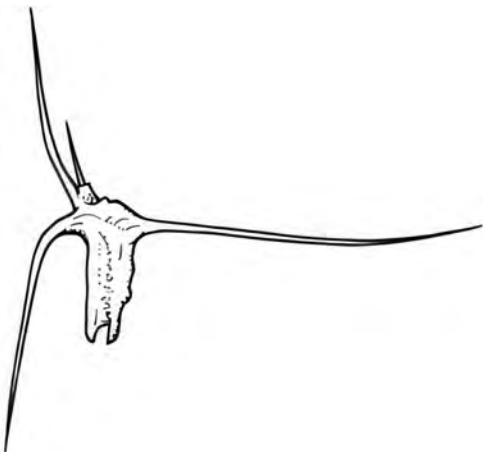
Collect seed all year. Propagate from seed.

**VALUES & USES:**

Combats erosion by protecting bare soils, colonising eroded areas, and sheltering less hardy seedlings. Useful fodder plant in difficult times.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Tangled Saltbush, Roly-poly, Tangled Bassia



**HABIT:**

Rounded and tangled perennial to 70 cm high. Yellow, slender fruit with four spines (three spines 5-15 mm long, the fourth much smaller). Flowers year-round.

**HABITAT & SITE PREFERENCE:**

Range of vegetation communities, often in low-lying areas associated with moisture. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year. Drought resistant.

**VALUES & USES:**

Dominates degraded Bladder Saltbush communities, reducing soil erosion. Colonises scalds and eroded areas, traps soil and seed, protects seedlings.

## *Sclerolaena intricata* - Tangled Poverty-bush

CHENOPODIACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

### **HABIT:**

Rounded hairless perennial to 50 cm high. Tangled, often red branches. Fruit with five downward-pointing spines (year round).

### **HABITAT & SITE PREFERENCE:**

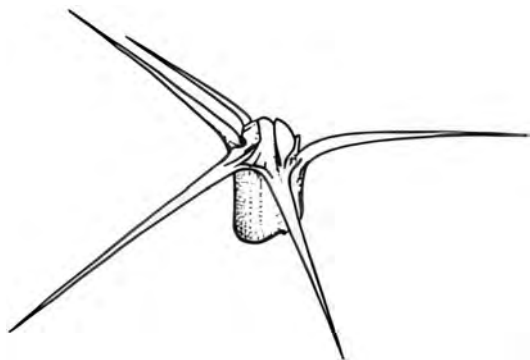
Black/Pearl Bluebush, Black Box, Saltbush, and grassland communities. Thrives in overgrazed or trampled areas. Responds well to flooding. Prefers 300 - 400 mm rainfall in the Riverina.

### **SEED COLLECTION & PROPAGATION:**

Collect seed all year.

### **VALUES & USES:**

Provides groundcover in degraded areas, prevents erosion.



## *Sclerolaena lanicuspis* - Woolly Copperburr

CHENOPODIACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Spinach Burr

### **HABIT:**

Hairy small perennial to 40 cm high. Bunched, linear leaves covered in hairs. Fruit usually with three spreading, hairy spines, almost hidden under long hairs (year round). Short-lived.

### **HABITAT & SITE PREFERENCE:**

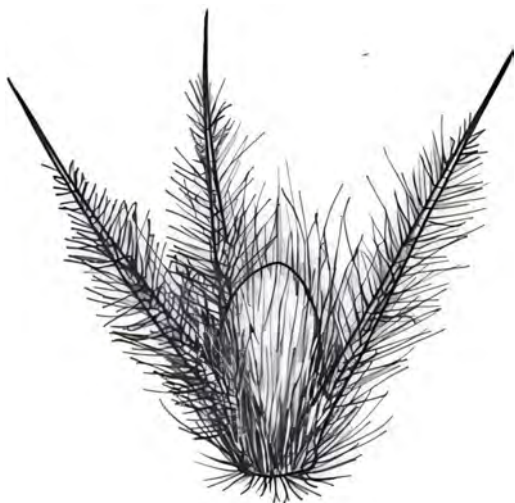
Many vegetation communities on various soils, rarely on heavy clay. Prefers 300 - 450 mm rainfall in the Riverina.

### **SEED COLLECTION & PROPAGATION:**

Collect seed all year. Propagate from seed.

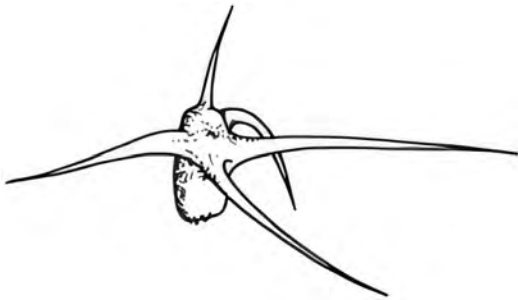
### **VALUES & USES:**

Prevents soil erosion, reclaims scalds. Good for grazing.



**REGIONAL SUBSPECIES:** *S. m.* var. *muricata*, *S. m.* var. *semiglabra*, *S. m.* *villosa*

**OTHER NAMES:** n/a



**HABIT:**

Hemispherical, sometimes short-lived perennial herb to 1.5 m high. Hairy branches. Fruits year-round.

**HABITAT & SITE PREFERENCE:**

Wide range of soils and vegetation types, including low-lying areas subject to occasional inundation. Often on overgrazed or overstocked land, heavier soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year. Propagate from seed.

**VALUES & USES:**

Colonises bare soil (e.g., scalds), collects soil, and provides protection for other plants. Rarely grazed by stock, can cause problems during shearing.

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** Limestone Bindii



**HABIT:**

Grey perennial to 50 cm high, with erect, ascending branches. Fruit with two spines, often red, woolly for half their length (year round).

**HABITAT & SITE PREFERENCE:**

Mulga, mallee, Black Bluebush, and Belah-Rosewood communities on calcareous sandy soils. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year.

**VALUES & USES:**

Grazed by stock when other fodder is low.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Rounded, hairless perennial to 70 cm high. Red-coloured plant with stems streaked red and yellow. Squat fruit with three slender, spreading spines 6-12 mm long (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

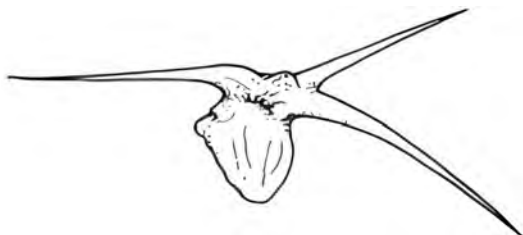
Mainly in depressions in Black Bluebush and Bladder Saltbush communities with duplex and clay soils. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Can collect seed all year. Germinates readily from seed.

**VALUES & USES:**

Populates degraded Bladder Saltbush communities, helping prevent further erosion. Protects seedlings of other plants. Recedes as other species recover.



# *Senecio cunninghamii* - Bushy Groundsel

**REGIONAL SUBSPECIES:** *S. c.* var. *cunninghamii*

**OTHER NAMES:** Branching Groundsel

**HABIT:**

Erect to spreading shrub 1-2 m high. Leaves cottony underneath and stems often red-streaked. Yellow flowerheads without petals (Aug-Feb).

**HABITAT & SITE PREFERENCE:**

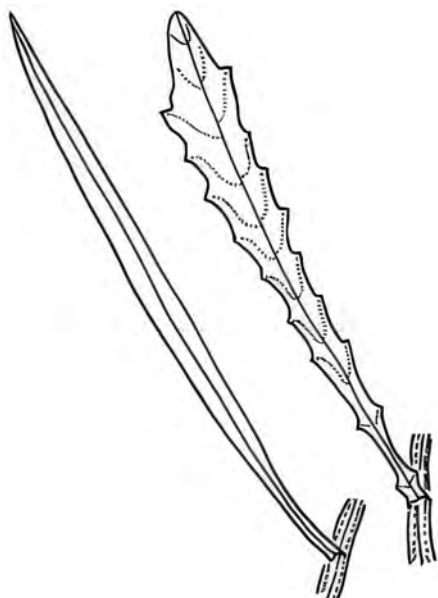
Variable vegetation communities. Often on grey clay and clay loam soil. Tolerates saline soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect entire seedheads when dry into paper bags. Break up and sieve to remove larger material. Propagate from seed, may have 2-3 month after-ripening period.

**VALUES & USES:**

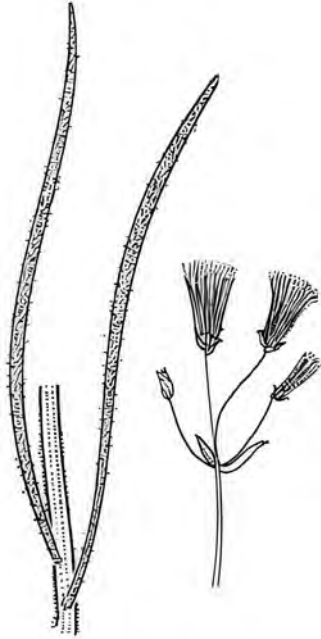
Useful in colonising saline areas. This plant is poisonous to stock.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Usually unbranched, erect, perennial herb to 1 m high. Variable hairs on stems and foliage. Leaves narrow, linear or broader, lanceolate, with variously toothed or dissected margins. Yellow, petaloid or small, discoid flowers in terminal clusters (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Common in various habitats with low fertility soils and without prolonged waterlogging. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed mid Nov-Jan (seeds become fluffy when mature and fall easily). Propagate from seed, may have 2-3 month after-ripening period.

**VALUES & USES:**

Useful coloniser of bare ground after fire or disturbance.

# *Stypandra glauca* - Nodding Blue-lily

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Graceful Blue Lily,  
Grass Lily



**HABIT:**

Tufted or shrubby perennial herb to 1.5 m high, fibrous roots, creeping rootstock. Bright blue flowers, mainly spring.

**HABITAT & SITE PREFERENCE:**

Woodland communities with skeletal soils or red earths. Prefers moist, well-drained soil in semi-shade, drought tolerant. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect Dec-Jan, seeds shed quickly. Propagate from seed (germinates in 3-4 weeks, may be difficult) or division in autumn.

**VALUES & USES:**

Useful for revegetating disturbed and eroded sites, colonises readily after fire. Attractive ornamental, spectacular in flower. Plant in groups, prune regularly for best results.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Desert Broom, Sandalwood, Round Templetonia, Broom Bush, Leafless Pea

**HABIT:**

Much-branched shrub to 3 m high. Leafless, flexible, furrowed branches. Leaves reduced to short, well-spaced scales. Brownish-yellow pea-like flowers (Sep-Nov). Ovoid-oblong pod fruit to 2 mm long, drying black or brown.

**HABITAT & SITE PREFERENCE:**

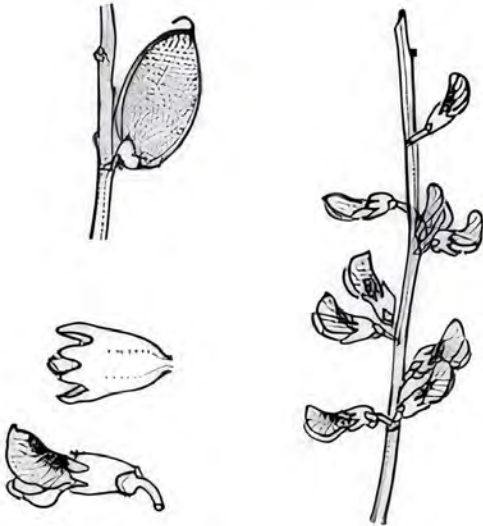
Many woodland communities, usually on loamy or sandy loam red earths. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed treated with near-boiling water and allowed to soak.

**VALUES & USES:**

Flowers are bird and insect attracting; browsed by native herbivores.



# Westringia rigida - Stiff Western Rosemary

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Stiff Westringia

**HABIT:**

Stiff, tangled, multi-stemmed shrub to 1 m tall. Small, white flowers spotted with purple inside (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

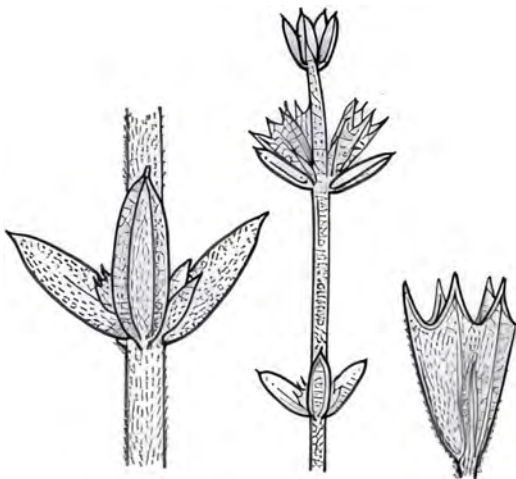
Usually in mallee. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from cuttings.

**VALUES & USES:**

May be useful as low-level shelter. Bird and insect attracting flowers.



# NON-WOODY HERBS



COMMON NAME	BOTANICAL NAME	PAGE
Austral Bugle	<i>Ajuga australis</i>	341
Austral Cranesbill	<i>Geranium solanderi</i>	357
Australian Bindweed	<i>Convolvulus erubescens</i>	352
Blue Crowfoot	<i>Erodium crinitum</i>	355
Blue Devil	<i>Eryngium ovinum</i>	356
Blue Rod	<i>Stemodia florulenta</i>	377
Bogan Flea	<i>Calotis hispidula</i>	349
Broughton Pea	<i>Swainsona procumbens</i>	379
Bulbine Lily	<i>Bulbine bulbosa</i>	346
Climbing Saltbush	<i>Einadia nutans</i>	355
Clustered Everlasting	<i>Chrysocephalum semipapposum</i>	351
Common White Sunray	<i>Rhodanthe floribunda</i>	374
Common Woodruff	<i>Asperula conferta</i>	343
Cranesbill	<i>Geranium retrorsum</i>	357
Creamy Candles	<i>Stackhousia monogyna</i>	377
Daisies	<i>Brachyscome</i> spp.	345
Darling Lily	<i>Crinum flaccidum</i>	353
Dock	<i>Rumex tenax</i>	375
Drumsticks	<i>Pycnosorus globosus</i>	373
Dwarf Amaranth	<i>Amaranthus macrocarpus</i>	342
Early Nancy	<i>Wurmbea dioica</i>	383
Eryngo	<i>Eryngium paludosum</i>	356
Foxtails	<i>Ptilotus</i> spp.	372
Fuzzweed	<i>Vittadinia cuneata</i>	381
Golden Billy-buttons	<i>Pycnosorus chrysanthes</i>	372
Golden Everlasting	<i>Xerochrysum bracteatum</i>	384
Golden Sunray	<i>Hyalosperma glutinosum</i>	361
Grey Germander	<i>Teucrium racemosum</i>	380
Grey Raspwort	<i>Haloragis glauca</i>	360
Grey Sunray	<i>Rhodanthe corymbiflora</i>	373
Hairy Carpet-weed	<i>Glinus lotoides</i>	358
Hill Raspwort	<i>Gonocarpus elatus</i>	358
Hoary Sunray	<i>Leucochrysum molle</i>	364
Irongrass	<i>Lomandra patens</i>	367
Lanky Buttons	<i>Leptorhynchos orientale</i>	363
Leek Lily	<i>Bulbine semibarbata</i>	346
Lemon Beauty-heads	<i>Calocephalus citreus</i>	347
Lesser Joyweed	<i>Alternanthera denticulata</i>	341
Many-flowered Mat-rush	<i>Lomandra multiflora</i>	367
Minnie Daisy	<i>Minuria leptophylla</i>	370

# NON-WOODY HERBS

COMMON NAME	BOTANICAL NAME	PAGE
Monkey-flower	<i>Mimulus</i> spp.	369
New Holland Daisy	<i>Vittadinia dissecta</i>	381
New Zealand Spinach	<i>Tetragonia tetragonioides</i>	379
Orange Sunray	<i>Hyalosperma semisterile</i>	361
Pale Beauty-heads	<i>Calocephalus sonderi</i>	347
Purple Burr-daisy	<i>Calotis cuneifolia</i>	348
Purple Goosefoot	<i>Scleroblitum atriplicinum</i>	375
Pygmy Sunray	<i>Rhodanthe pygmaea</i>	374
Quena	<i>Solanum esuriale</i>	376
River Bluebell	<i>Wahlenbergia fluminalis</i>	382
River Mint	<i>Mentha australis</i>	369
Rough Burr-daisy	<i>Calotis scabiosifolia</i>	349
Rough Raspwort	<i>Haloragis aspera</i>	360
Round-leaf Pigface	<i>Disphyma crassifolium</i>	354
Sandhill Goodenia	<i>Goodenia willisiana</i>	359
Scaly Buttons	<i>Leptorhynchos squamata</i>	363
Scented Mat-rush	<i>Lomandra effusa</i>	365
Showy Isotome	<i>Isotoma axillaris</i>	362
Sida	<i>Sida</i> spp.	376
Slender Darling Pea	<i>Swainsona murrayana</i>	378
Slender Fissure-weed	<i>Maireana pentagona</i>	368
Slender Violet	<i>Hybanthus monopetalus</i>	362
Small Vanilla Lily	<i>Arthropodium minus</i>	343
Small-flowered Goodenia	<i>Goodenia pusilliflora</i>	359
Smooth Flax-lily	<i>Dianella porracea</i>	353
Smooth Minuria	<i>Minuria integerrima</i>	370
Sneezeweed	<i>Centipeda</i> spp.	350
Spiny-fruit Saltbush	<i>Atriplex spinibractea</i>	345
Spiny-headed Mat-rush	<i>Lomandra longifolia</i>	366
Spreading Flax-lily	<i>Dianella revoluta</i>	354
Sticky Everlasting	<i>Xerochrysum viscosum</i>	384
Sturt's Desert Pea	<i>Swainsona formosa</i>	378
Tall Bluebell	<i>Wahlenbergia stricta</i>	383
Tufted Burr-daisy	<i>Calotis scapigera</i>	350
Twin-leaf Bedstraw	<i>Asperula gemella</i>	344
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Vanilla Lily	<i>Arthropodium milleflorum</i>	342
Water Buttons	<i>Cotula coronopifolia</i>	352
Water Weed	<i>Osteocarpum acropterum</i>	371
Wattle Mat-rush	<i>Lomandra filiformis</i>	365
Wilcannia Lily	<i>Calostemma purpureum</i>	348
Wild Flax	<i>Linum marginale</i>	364
Wingless Fissure-weed	<i>Maireana enchylaenoides</i>	368
Woolly New Holland Daisy	<i>Vittadinia gracilis</i>	382
Woolly-head Mat-rush	<i>Lomandra leucocephala</i>	366
Woolly-heads	<i>Myriocephalus rhizocephalus</i>	371
Yellow Buttons	<i>Chrysocephalum apiculatum</i>	351
Yellow Rush-lily	<i>Tricoryne elatior</i>	380

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Decumbent or erect herb to 50 cm high. Basal rosette of hairy leaves, 3-12 cm long, 2-5 cm wide, often toothed. Leafy flowering stem with blue-violet or mauve-pink flowers in leaf axils (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Variety of habitats, including sandplains, hillslopes, ridges, and riverine plains. Dappled shade or partial sun, tolerates full sun. Frost hardy and drought tolerant. Grows in a wide range of soils and climatic conditions. Prefers 250 - 550 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Dec-Jan. Propagate from seed or cuttings.

**VALUES & USES:**

Erosion control in sandy areas. Leaves used for medicinal infusion by First Nations People. Widely cultivated carpeting plant for gardens.



# *Alternanthera denticulata* - Lesser Joyweed

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Rock Joyweed

**HABIT:**

Low, straggly perennial herb, sometimes rooting at nodes. Small whitish flowers, mostly spring to early summer (Sep-Dec), but can occur throughout the year.

**HABITAT & SITE PREFERENCE:**

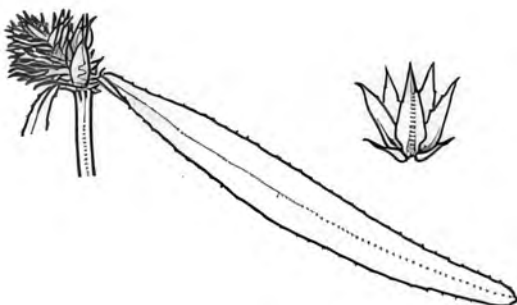
Widespread in moist situations, including heavy clay soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed all year, especially summer. Propagate from seed using bog method or cuttings.

**VALUES & USES:**

Palatable to stock, food source for butterflies and moths. Useful beside ponds.



**REGIONAL SUBSPECIES:** *A. m.* var. *Macrocarpus*.

**OTHER NAMES:** Desert Amaranth



**HABIT:**

Annual hairless forb to 30 cm. Alternate, ovate-oblong leaves. Greenish flowers in clusters (Dec-Feb). Fruit bottle-shaped, dark brown to almost black.

**HABITAT & SITE PREFERENCE:**

Variety of vegetation types, often on clay soils in low-lying and depressed areas. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed capsules in the Autumn, dry for two weeks and rub gently to dislodge the seed. Seeds are very small, non-dormant and germinate readily.

**VALUES & USES:**

Palatable to stock, but rarely abundant enough to provide significant fodder.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Pale Vanilla Lily



**HABIT:**

Tufted perennial herb with leaves 3-60 cm long. White to pale blue or pink fragrant flowers, Nov-Feb. Tuber-like roots.

**HABITAT & SITE PREFERENCE:**

Various habitats. Prefers dappled shade or partial sun, tolerates frost and full sun. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed capsules in summer, monitor closely as seeds shed quickly. Propagate from seed or division.

**VALUES & USES:**

Excellent for gardens and containers.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Slender upright perennial herb or lily to 30 cm high, often forming tussock of blue-green grass-like leaves. Nodding, rich purple, sweetly scented flowers, Aug-Dec. Dies down to tubers in summer and re-shoots in autumn.

**HABITAT & SITE PREFERENCE:**

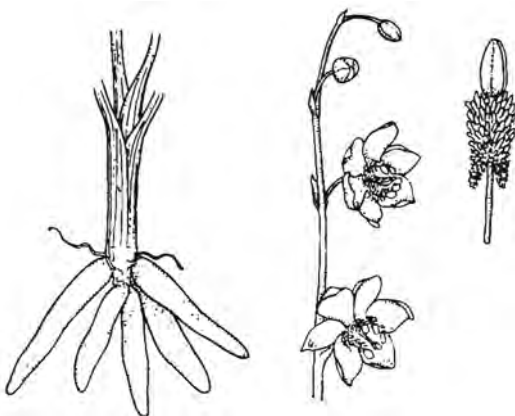
Various habitats, including open grasslands and woodlands, in well-drained to seasonally inundated sites. Prefers moist, well-drained soil and semi-shade. Tolerates drought, wet winter, and dry summer soil. Dislikes permanently poor drainage. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect late Nov-early Feb, seeds released in 3-14 days. Propagate from seed (germinates in 4-8 weeks after 2-3 month dormancy, try cooler temperatures like 16°C) or division.

**VALUES & USES:**

Good habitat. Seeds dispersed by ants and birds. Tubers eaten raw or roasted by First Nations People. Attractive for containers, rockeries, grasslands, and under trees. Plant in groups, fertilise to encourage growth, and remove stems to extend flowering.



# Asperula conferta - Common Woodruff

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Spreading perennial herb, 50 cm to 1 m high, 20-50 cm wide. Narrow leaves to 1 cm long in whorls of 4 or 6, often reflexed. Small white flowers on short stalks (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

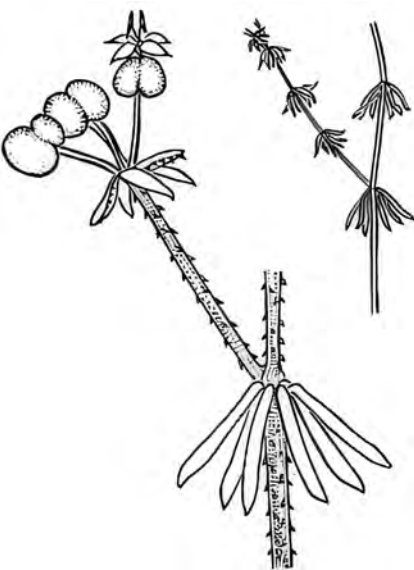
Wide range of vegetation communities, including woodlands, grasslands, and mallee. Prefers dappled shade or partial sun. Frost and drought tolerant. Responds rapidly to spring rains. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Feb. Propagate from seed (no treatment needed) or cuttings.

**VALUES & USES:**

Summer flowering resource for small insects.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Square-stemmed perennial forb to 30 cm high. Linear leaves and cream flowers (Mar-Sep).

**HABITAT & SITE PREFERENCE:**

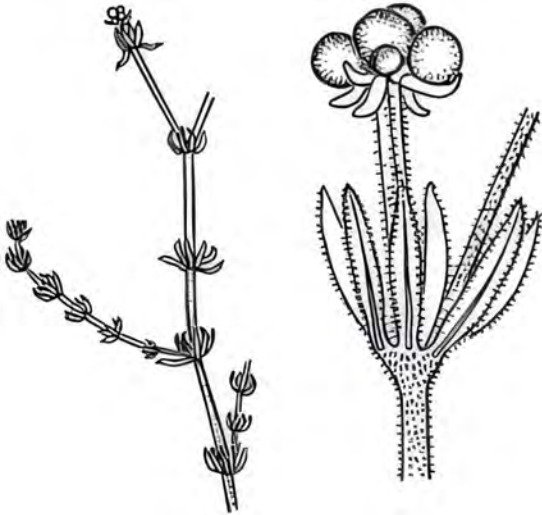
Variety of vegetation communities. Prefers dappled shade or partial sun. Can grow as low groundcover. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Feb. Propagate from seed (no treatment needed) or cuttings. Frost tolerant.

**VALUES & USES:**

Summer flowering resource for small insects.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Northern Woodruff

**HABIT:**

Perennial forb. Hairless to nearly hairless, long linear leaves to 30 cm long. Weak climbing stems. Flowers Sep-Dec.

**HABITAT & SITE PREFERENCE:**

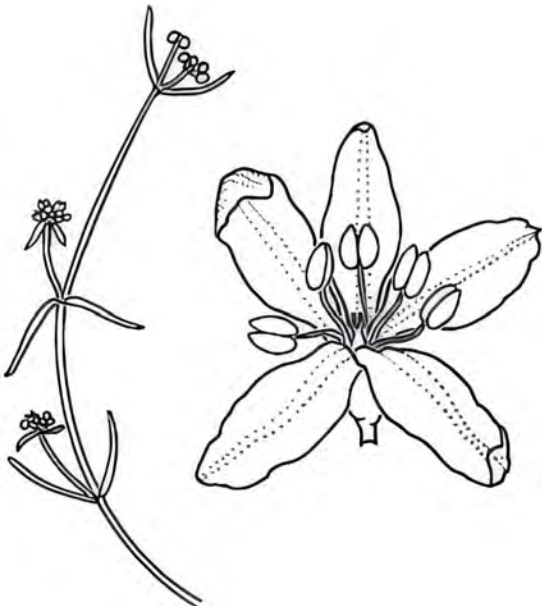
Variety of vegetation types in moist situations, dappled shade or partial sun. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed (no treatment needed) or propagate from cuttings. Frost tolerant.

**VALUES & USES:**

Can grow as low groundcover. Part of a diverse native annual groundcover.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Small perennial prostrate or trailing herb, up to 30 cm high.

**HABITAT & SITE PREFERENCE:**

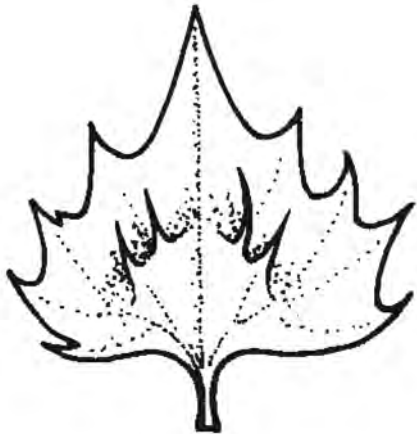
Various drier country habitats. Prefers 250 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mature seed capsules when available.

**VALUES & USES:**

Useful for colonising eroding soils, providing cover for other species. Relatively palatable and grazed by stock, but not a significant fodder source.



## *Brachyscome* spp. - Daisies

**REGIONAL SPECIES /**

**SUBSPECIES:** Many. Notably: *B. decipiens* (Field Daisy), *B. scapigera* (Tufted Daisy), *B. multifida* var. *multifida* (Cut-leaved Daisy)

**OTHER NAMES:** *n/a*

**HABIT:**

Annual or perennial herbs or small shrubs, with low spreading to erect forms. Generally < 45 cm. *B. decipiens* pale blue flowers (Sep-Nov). *B. scapigera* white or mauve flowers (Nov-Mar) [dormant when dry], and *B. multifida* var. *multifida* mauve, pink, or white flowers (Sep-Jun).

**HABITAT & SITE PREFERENCE:**

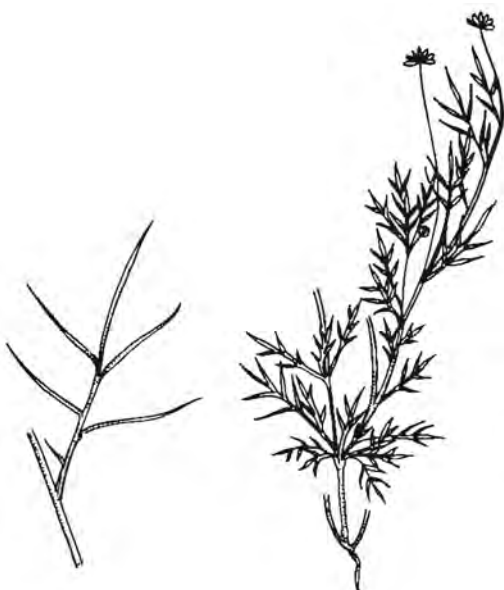
Wide variety of habitats across the Riverina and South West Slopes. Most prefer moist to swampy soils, in full sun to part shade. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Generally collect seeds in summer and propagate from seed or division of rootstock. *B. multifida* var. *multifida* strikes readily from cuttings and regenerates from underground suckers and roots at nodes.

**VALUES & USES:**

Most species provide nectar for native bees, butterflies, or moths. Ornamental value in rockeries, containers, and edges, useful as a soil binder. Water in summer.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Leek, Golden Lily, Native Onion

**HABIT:**

Small tufted perennial herb, 27-75 cm high. Thick roots, succulent strap-like leaves. Yellow flowers, Nov-Feb. Dies down to underground tuber after flowering, re-shoots in autumn.

**HABITAT & SITE PREFERENCE:**

Damp sites in woodland, grassland, and sclerophyll forest. Requires well-drained soil, tolerates frost, but sensitive to drought. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect late Nov-late Dec, seeds shed in 3-14 days. Propagate from seed sown in autumn or by division in autumn. Transplants readily. Seeds germinate in 4-8 weeks after 2-3 month dormancy, try 16°C for germination. Can be direct seeded into pots. Regenerates readily from seed.

**VALUES & USES:**

Roots eaten year-round by First Nations People. Very attractive ornamental for rockeries and containers. Plant in groups, fertilise to encourage growth.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Leek, Wild Onion

**HABIT:**

Annual to biannual herb. Fibrous roots without tubers. Succulent, strap-like leaves. Yellow flowers (Sep-Dec). Generally smaller than the similar *B. bulbosa*.

**HABITAT & SITE PREFERENCE:**

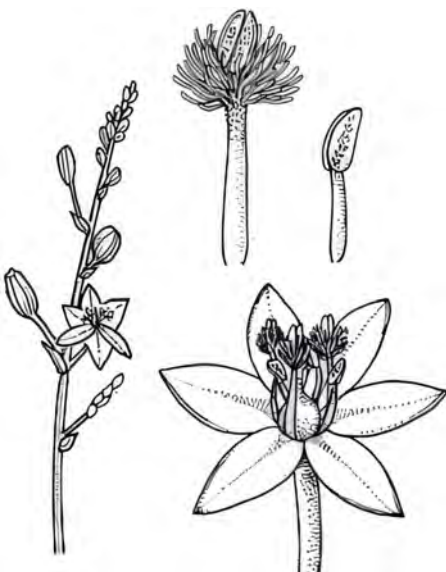
Often on sandy soils (where *B. bulbosa* is not usually found) in various vegetation types. Well-drained soils with partly filtered light. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Nov-late Dec. Sow in autumn or propagate by division in autumn. Transplants readily. Germinates in 4-8 weeks after 2-3 month dormancy, try 16°C. Can be direct seeded. Monitor closely as seeds shed quickly after maturity.

**VALUES & USES:**

Utilised by stock, but has been suspected of poisoning sheep. Can dominate degraded sandy areas.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect, perennial daisy, 15-60 cm high. Hairy branches, narrow hairy leaves 1-11 cm long, opposite or alternate. Terminal inflorescence, globose to ovoid, to 1.5 cm long, bright yellow (Sep-Mar).

**HABITAT & SITE PREFERENCE:**

Grasslands and open woodlands, loamy and clay soils. Well-drained soils in full or partial sun. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Feb (monitor closely as seeds shed quickly). Surface sow or lightly cover seed. Germination in 3-7 weeks. Also from cuttings or division. Tolerates frost and extended dry periods.

**VALUES & USES:**

Attractive ornamental and potential container plant. Adaptable to well-drained soils.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yellow Poverty Bush

**HABIT:**

Small, many-branched annual, 10-30 cm tall. Linear-lanceolate leaves, yellow flowers (Nov-Jan).

**HABITAT & SITE PREFERENCE:**

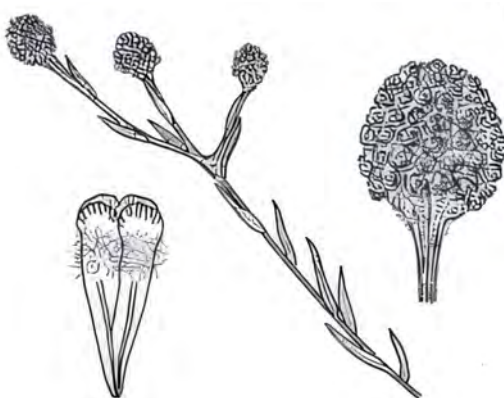
Myall and Black Box woodland, open grasslands, and Saltbush communities. Often in low-lying areas with grey or grey-brown compact heavy clay and scalded soils. Relatively well-drained soils. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Feb (monitor closely as seeds shed quickly). Surface sow or lightly cover seed. Germination in 3-7 weeks. Also from cuttings or division.

**VALUES & USES:**

Attractive, suitable for gardens. Considered a weed of crops. Produces strong aroma when bruised or damaged.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Garland Lily, Yellow Garland Lily, Pink Garland Lily, Hattah Lily



**HABIT:**

Perennial herb with 30-40 cm linear, flaccid or erect, dark green leaves. Purplish or yellow flowers (Jan-Apr).

**HABITAT & SITE PREFERENCE:**

Clay and clay loam soils in relatively flat areas, various vegetation types. Prefers damp areas. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or division of bulbs. Growth improved by slow-release fertiliser. For best flowering, withhold water after leaves yellow. Tolerates dry conditions but resents old or poorly drained soil.

**VALUES & USES:**

Popular as a rockery plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Lachlan Calotis, Bindi-eye, Bogan Flea, Blue Burr-Daisy



**HABIT:**

Perennial erect or prostrate herb to 60 cm high, woody at base. Lilac, purple, or white flowers with yellow centres, mainly spring, year-round.

**HABITAT & SITE PREFERENCE:**

Various soils and situations. Prefers 300 - 400 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mature seed heads when available. Propagate from seed or cuttings. Regenerates from seed or old plants in autumn.

**VALUES & USES:**

Regarded as useful stock forage, especially for cattle, despite barbed seeds.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Bindy eye

**HABIT:**

Annual prostrate or ascending herb to 10 cm high. Hairy leaves and stems. White flowers (most often in winter) and yellow florets.

**HABITAT & SITE PREFERENCE:**

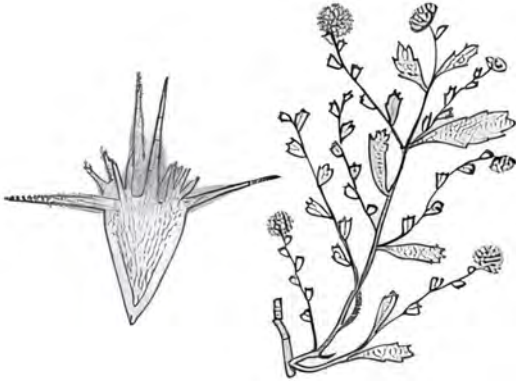
All vegetation and soil types, from heavy clays to shallow stony soils, but not very wet areas. Often associates with acacia woodlands and chenopod shrublands. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Seeds long-lived in soil. Propagate from seed or cuttings.

**VALUES & USES:**

Popular rockery plant, hardy. Burrs may irritate stock.



# *Calotis scabiosifolia* - Rough Burr-daisy

**REGIONAL SUBSPECIES:** *C. s. var. integriolia*, *C. s. var. scabiosifolia*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect or ascending, stoloniferous, perennial herb to 45 cm high. White or mauve flowers with yellow centres, mainly spring, year-round. Usually dries off over summer but may persist in moist conditions.

**HABITAT & SITE PREFERENCE:**

Open woodland and grassland, often on heavy clay soils. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect early Jan-late Feb, seeds shed in 3-14 days. Propagate from seed or cuttings.

**VALUES & USES:**

Part of a diverse native groundlayer. Burrs may irritate stock.



**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a

**HABIT:**

Tufted, stoloniferous perennial daisy to 30 cm high. Basal cluster of narrow, entire leaves, 4-20 cm long, 1-8mm wide. Flowers on unbranched stems, 10-15mm diameter, white sometimes flushed pink beneath (Sep-Mar).

**HABITAT & SITE PREFERENCE:**

Scattered on heavy clay soils prone to inundation. Grows best in partial or full sun, tolerates dappled shade. Adapts to relatively well-drained soils.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Mar. Propagate from seed or cuttings. Can form dense stands.

**VALUES & USES:**

Useful for soil erosion control, groundcover, or in containers. Extensive flowering period. Not popular due to prickly burrs.



# Centipeda spp. - Sneezeweed

**REGIONAL SPECIES / SUBSPECIES:** refer to text

**OTHER NAMES:** n/a

**HABIT:**

Aromatic annual or perennial forb to 30 cm high. Flowers are reddish, yellowish, or green. Grows mainly in summer (semi-dormant in winter).

**HABITAT & SITE PREFERENCE:**

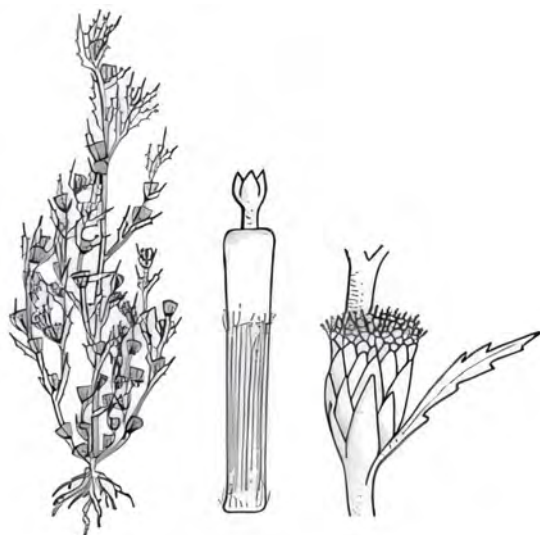
Most soil types from sand to clay. Prefers damp areas, and dislikes permanently dry soil and drought. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Seed or cuttings which readily strike. Prune to encourage bushiness. Species recommended: *C. crateriformis* subsp. *compacta* (Sneezeweed), *C. cunninghamii* (Common sneezeweed), *C. minima* (Spreading sneezeweed), *C. thespidioides* (Desert sneezeweed) [pictured].

**VALUES & USES:**

Coloniser of bare ground and a ground cover for bog gardens and pond edges. Medicinal powers highly regarded by First Nations People. Used as a tonic to cure colds, chest complaints, tuberculosis and as a general tonic. Also used externally for eye and skin complaints.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Common Everlasting

**HABIT:**

Variable perennial herb, 7-60 cm high, forming loose clumps of woolly silver-leaved stems. Golden-yellow flowers, mostly spring.

**HABITAT & SITE PREFERENCE:**

Various communities and vegetation types on a range of soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect Dec-Jan, seeds dispersed by wind. Propagate from surface-sown seed (germinates in 2-5 weeks, use capillary watering) or cuttings. May die back in dry conditions but re-shoots after rain.

**VALUES & USES:**

Excellent groundcover for bare or disturbed sites. Plant in groups for best effect. Nectar source for native bees and butterflies, attracting insect-eating birds. Ornamental for groundcover, rockeries, slopes, containers, hanging baskets, and cut/dried flowers. Historically used to kill intestinal worms.



**REGIONAL SUBSPECIES:** *C. s. subsp. asperum*, *C. s. subsp. brevifolium*, *C. s. subsp. lineare*, *C. s. subsp. semipapposum*

**OTHER NAMES:** Yellow Buttons

**HABIT:**

Variable aromatic perennial herb, 15-60 cm high. Yellow flowerheads most of the year, mainly spring-early summer. May die back in dry conditions, but re-shoots after rain.

**HABITAT & SITE PREFERENCE:**

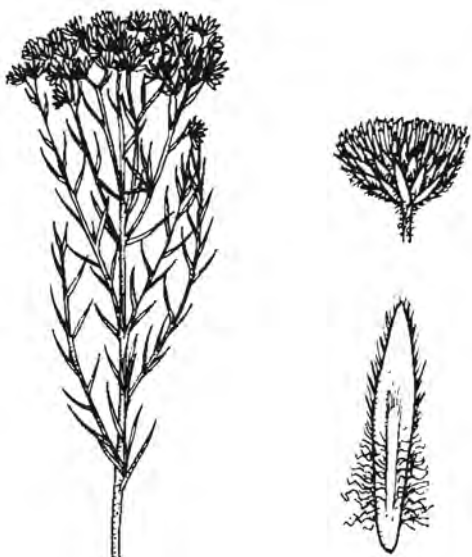
Woodland and grassland of hills or mountains, or on isolated rocky rises. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect Dec-Jan, seeds dispersed by wind. Propagate from seed.

**VALUES & USES:**

Excellent groundcover for bare and disturbed sites. Plant in groups for best effect, at 60-70 cm spacing. Main growth in autumn and spring. Good habitat, flowers are a nectar source for butterflies, attracting insect-eating birds. Ornamental for groundcover, rockeries, slopes, containers, hanging baskets, and for cut and dried flowers. Not highly palatable to stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Blushing Bindweed, Pink Bindweed, Morning Glory, Australian Dodder

**HABIT:**

Perennial with trailing and twining stems, highly variable leaves. Pink flowers throughout the year, mainly spring-summer.

**HABITAT & SITE PREFERENCE:**

Wide range of habitats across the Riverina and South West Slopes. Prefers well-drained soil and full sun. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mid-Jan to late Feb. Propagate from cuttings (strikes readily) or scarified seed.

**VALUES & USES:**

Plant parts used by First Nations People to treat diarrhoea and stomach ache. Useful small climber or trailer for gardens, attractive in flower. Grazed readily by stock.



# *Cotula coronopifolia* - Water Buttons

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Hairless, creeping perennial forb. Succulent stems, leaves entire to toothed or lobed. Yellow, button-like flowers (Jun-Nov). Forms dense mats to 1 m across.

**HABITAT & SITE PREFERENCE:**

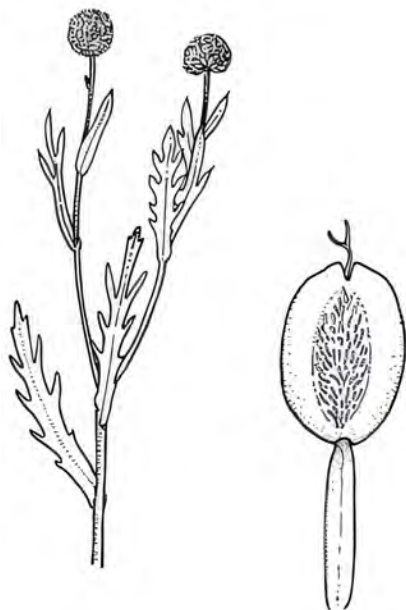
Edges of swamps, lakes, and streams. Damp soil in full to partial sun. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings. Fast growth rate.

**VALUES & USES:**

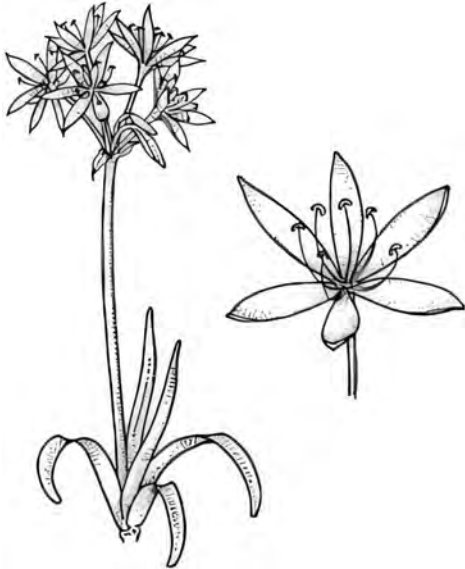
Useful plant in gardens around ponds and areas with standing water.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Macquarie Lily, Murray Lily, White Lily, Sandover Lily, Native Crinum, Desert Lily, Flaccid Lily



**HABIT:**

Perennial. Weakly erect or spreading leaves, 30-60 cm long. Strongly scented, white or creamy flowers, 12-14 cm across (Oct-Jan).

**HABITAT & SITE PREFERENCE:**

Common on alluvial soils of floodplains and ephemeral streams, usually in open country. Also found on a variety of other soil types. Prefers well-drained soils in a sunny position. Prefers 300-500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed, which germinates rapidly when kept moist. Frost tolerant.

**VALUES & USES:**

Attractive garden plant, suitable for rockeries or warm, protected spots under eaves.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Riverine Flax-lily, Pale Flax-lily, Greater Blueberry Lily



**HABIT:**

Tufted perennial herb with fleshy-fibrous or tuberous roots. Strap-like leaves to 80 cm long, inflorescence to 1.5 m high. Pale blue flowers with orange or yellow anthers, spring-summer. Globular pale blue berries.

**HABITAT & SITE PREFERENCE:**

Variable from sandy red earths to alluvial soils. Prefers moist, well-drained soil in semi-shade. Tolerates frost, but dislikes extended wet periods. Hardy, long-lived once established, susceptible to heavy grazing. Prefers 300 - 450 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

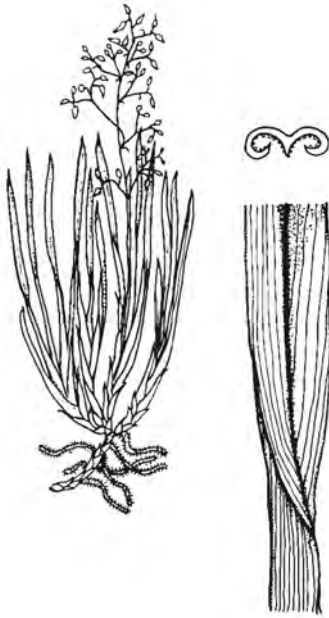
Collect pale blue berries late Dec-mid Jan. Seeds remain viable for 6-12 months. Propagate from fresh seed (remove fleshy fruit by soaking in sugary solution), division, or aerial growths.

**VALUES & USES:**

Good habitat, berries attract seed-eating birds. Tough leaves yield silky fiber used for baskets and cord by First Nations People. Attractive ornamental for rockeries, groundcover, with shrubs, containers, and under trees. Edible fruit.

**REGIONAL SUBSPECIES:** *D. r.* sp.  
Reservoir Hill, *D. r.* var. *revoluta*, *D. r.*  
var. *vinosa*

**OTHER NAMES:** Black-anther Flax-  
lily, Murmbal



## HABIT:

Tufted perennial herb to 1 m high, forming mats with fibrous roots. Strap-like leaves to 85 cm long, dark blue or violet flowers with black anthers, chiefly spring-summer.

## HABITAT & SITE PREFERENCE:

Sclerophyll forest, woodland, and mallee. Prefers moist, well-drained soil in semi-shade, tolerates frost and drought. Dislikes extended wet periods. Hardy and long-lived once established. Prefers 200 - 500 mm rainfall in the Riverina.

## SEED COLLECTION & PROPAGATION:

Collect pale blue berries late Dec-mid Jan. Seeds remain viable for 6-12 months. Propagate from fresh seed (germination hastened by removing fleshy fruit by soaking in sugary solution to ferment), division, or aerial growths.

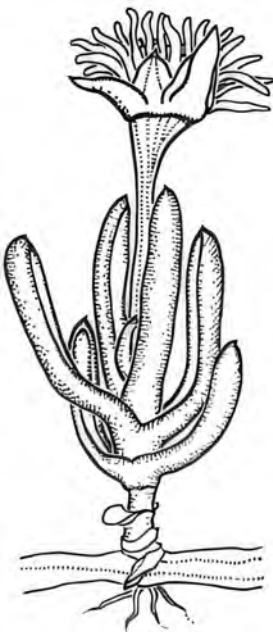
## VALUES & USES:

Good habitat, berries attract seed-eating birds. Leaves yield silky fiber used for baskets and cord by First Nations People. Attractive ornamental for rockeries, groundcover, with shrubs, containers, and under trees. Edible fruit.

# *Disphyma crassifolium* - Round-leaf Pigface

**REGIONAL SUBSPECIES:** *D. c.*  
subsp. *clavellatum*, *D. c.* subsp.  
*crassifolium*

**OTHER NAMES:** Rounded Noon-  
flower



## HABIT:

Succulent forb with prostrate stems that root at the nodes. Large showy purple or pink flowers (Sep-Feb).

## HABITAT & SITE PREFERENCE:

Variety of soils and vegetation communities. Common in Bladder Saltbush communities on grey clay soils. Full sun. Prefers 300 to 500 mm rainfall in the Riverina region.

## SEED COLLECTION & PROPAGATION:

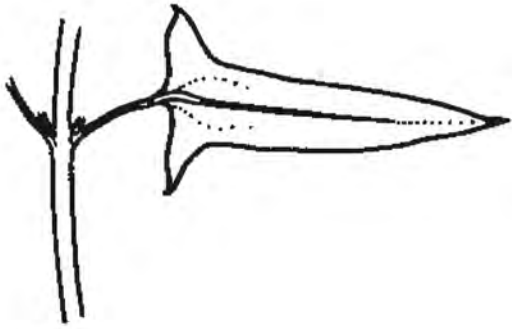
Collect seed mid Dec-Feb. Propagate from stem or leaf cuttings, that root readily. Also from seed, soak fruit in warm water to extract seed and then ferment by leaving to soak for a few days. Frost, drought and salt tolerant.

## VALUES & USES:

Useful to protect against erosion. One of Australia's tastiest wild fruits. Flesh tastes like salty strawberries or fresh fig. Showy plant that grows well in rockeries.

**REGIONAL SUBSPECIES:** *E. n.* subsp. *eremaea* *E. n.* subsp. *linifolia*, *E. n.* subsp. *nutans*, *E. n.* subsp. *oxycarpa*

**OTHER NAMES:** Nodding Saltbush



**HABIT:**

Herbaceous perennial with weak trailing or climbing stems. Produces red or orange berries, flowering mainly in summer-autumn.

**HABITAT & SITE PREFERENCE:**

Adaptable to a wide range of soils and found in most vegetation communities. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

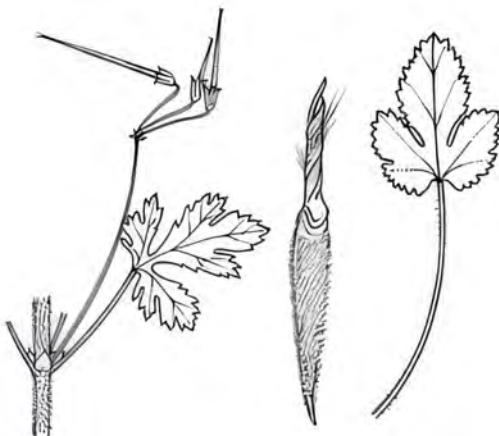
Propagate from seed or cuttings, which should germinate within 2-5 weeks.

**VALUES & USES:**

Serves as useful and relatively palatable forage for livestock.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Crowfoot, Blue Heron's-bill, Wild Geranium, Blue Storks-bill.



**HABIT:**

Robust, hairy, ascending or sprawling annual or biennial forb to 90 cm high. Leaves deeply three-lobed, toothed or lobed. Deep blue flowers (Sep-Nov) and fruit a tapering beak 4-7 cm long.

**HABITAT & SITE PREFERENCE:**

Wide range of soil types and vegetation communities. Often on sandy, well-drained soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed and cuttings. Fast growth rate. Hardy to frost and extended dry periods.

**VALUES & USES:**

Good source of fodder, readily eaten by stock. Seed may lodge in sheep's wool and pierce the flesh. Potential as a container plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Eryngo

**HABIT:**

Erect, perennial herb to 60 cm high. Short rootstock with clusters of blackish tubers. Basal leaves to 45 cm long, bluish-green, deeply divided and spine-tipped. Showy, metallic blue-purple flowers (Nov-Jan) surrounded by spiny bracts.

**HABITAT & SITE PREFERENCE:**

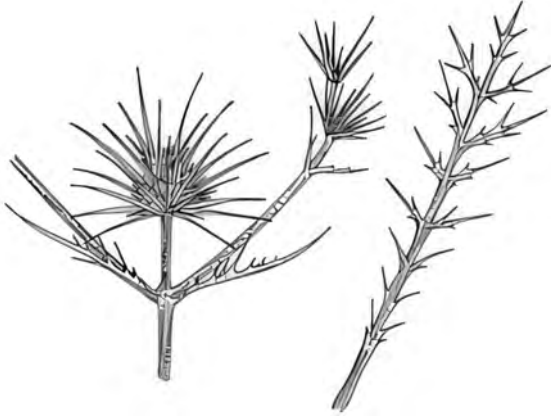
Open woodland with moist clay soil. Sunny situations. Prefers 300-400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Feb (seedheads are prickly, wear gloves). Harvest entire stalk and dry fully. Extract seeds when ripe (may need to beat stalks). Propagate from seed, germination in 3-4 weeks. Available from specialist nurseries. Fast growth rate. Frost hardy and tolerates extended dry periods.

**VALUES & USES:**

Ornamental. Very showy plant, blue colouration in stems intensifies as plants mature. Good container plant, in rockeries or interspersed with shrubs in open, sunny situations. Prickly.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Long Eryngium

**HABIT:**

Variable erect annual forb to 40 cm high. Stems often branching near apex, leaves basal, and flowers small with purple fringed petals (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

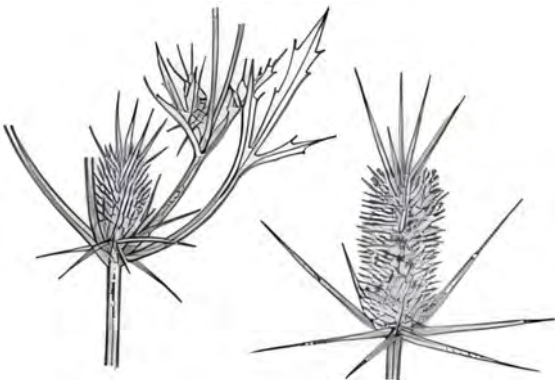
Found in areas subject to flooding, mainly on brown or grey heavy clay soils. Prefers areas with periodic flooding, and 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late January to February. Propagate from seed, which may germinate best after a period of storage. Fast growth rate.

**VALUES & USES:**

Plants are attractive when in flower and suitable for pots.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Common Cranesbill

**HABIT:**

Perennial prostrate or ascending herb with stems to 50 cm long. Pink flowers mainly Jun-Feb. Dies off over summer, re-shooting from taproot in autumn.

**HABITAT & SITE PREFERENCE:**

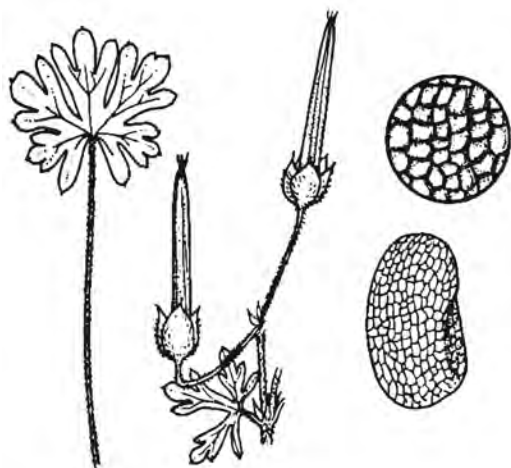
Noted in most areas of region. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Starch-rich tuberous roots roasted and eaten by First Nations People.

**VALUES & USES:**

Collect late Dec-mid Feb, seeds shed quickly. Propagate from seed, enhance germination with hot water treatment at 60°C for 30 minutes.



# *Geranium solanderi* - Austral Cranesbill

**REGIONAL SUBSPECIES:** *G. s. var. grande*, *G. s. var. solanderi*

**OTHER NAMES:** Australian Cranesbill, Native Geranium, Cut-leaf Cranesbill, Hairy Geranium

**HABIT:**

Perennial prostrate or ascending herb to 50 cm high, turnip-like taproot. Pink flowers throughout year, mainly Aug-Dec. Sometimes roots at nodes.

**HABITAT & SITE PREFERENCE:**

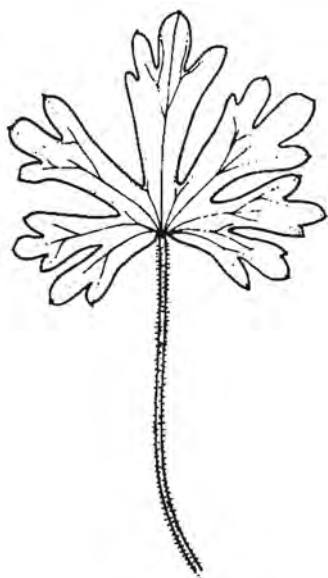
Woodland and grassland, more prevalent in stock-free areas. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect late Dec-mid Feb, seeds shed quickly. Propagate from seed, enhance germination with hot water treatment at 60°C for 30 minutes.

**VALUES & USES:**

Starch-rich tuberous roots eaten by First Nations People. Probably grazed by stock. Plant where space allows for full development and regeneration, may become a problem in permanently moist soil.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Annual or short-lived perennial, softly hairy and mat-forming. Leaves stalked, orbicular, oblong, or spoon-shaped. Flowers from Jan-Dec.

**HABITAT & SITE PREFERENCE:**

Areas that have been wet in the past and dried out, such as depressions, roadside drains, and lake margins. Often on clay soils or shallow sandy soil overlying clay. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagates from seed but difficult to germinate. Not frost tolerant.

**VALUES & USES:**

May be useful for soil erosion control on embankments and in slightly saline soil. Has medicinal uses in First Nations culture



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect, perennial herb or sub-shrub, 18-35 cm high, with slightly ribbed stems covered in long, stiff, spreading hairs. Leaves are alternate, sessile, hairy, and toothed in the upper half. Small flowers with reddish-brown petals are borne on terminal racemes, blooming from Oct-Jany.

**HABITAT & SITE PREFERENCE:**

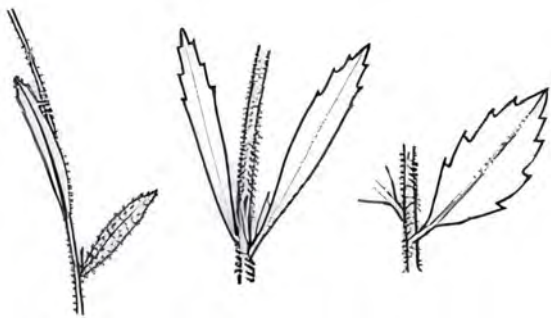
Dry, rocky hillsides and rock outcrops with well-drained soils. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Seed collection is from Nov-Feb. Propagate from cuttings, as propagation from seed has not been reported, though it could be tried. It has a fast growth rate. Should tolerate light to moderate frost.

**VALUES & USES:**

Some plants develop reddish leaves which are attractive.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Decumbent to ascending annual forb with stems to 20 cm high. Many-stemmed, with deeply lobed leaves and small yellow flowers (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Variable, often where water is retained for short periods after rain, especially on clay and clay loams. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

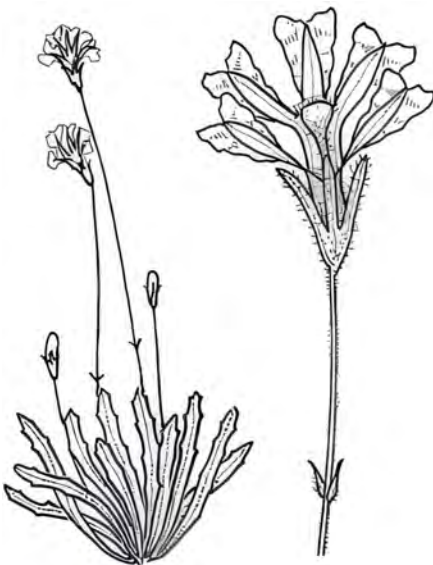
Collect seed in late spring, when flowers wither. Fast growth rate.

**VALUES & USES:**

When green, a good forage plant. Attractive and would make a valuable garden plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect, whitish tomentose forb to 20 cm high. Leaves basal, narrow-elliptic to lanceolate with entire to wavy margins. Has yellow flowers (Aug-Feb).

**HABITAT & SITE PREFERENCE:**

Found growing in mallee communities. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate mainly from cuttings. Seed takes three months to germinate.

**VALUES & USES:**

Sometimes forming dense small colonies, although occurrences are spasmodic. This plant can be one of the first to re-establish on burnt areas.

## Haloragis aspera - Rough Raspwort

HALORAGACEAE

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Grey Raspwort

### HABIT:

Many-stemmed perennial to 50 cm tall. Green to reddish, erect stems. Leaves grey and flowers green to yellow. Flowers from September to May.

### HABITAT & SITE PREFERENCE:

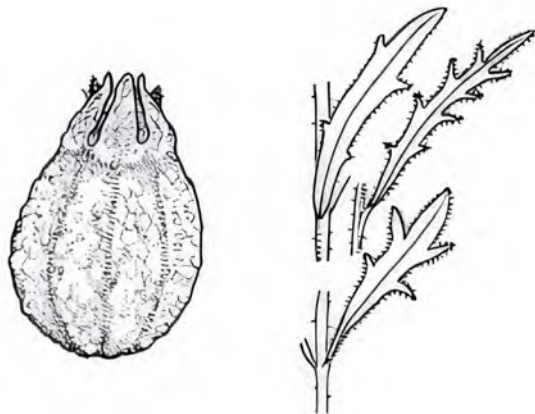
Often in low-lying areas in Bimble Box, Mitchell Grass, and River Red Gum communities. Also on ephemeral creek beds. Prefers heavy clay soils. Prefers 300 to 400 mm rainfall in the Riverina region.

### SEED COLLECTION & PROPAGATION:

Propagate from seed (which may be slow to germinate) or cuttings. Fast growth rate. Can be weedy in cultivated land.

### VALUES & USES:

A useful fodder plant. Stoloniferous roots allow it to colonise.



## Haloragis glauca - Grey Raspwort

HALORAGACEAE

**REGIONAL SUBSPECIES:** *H. g. f. glauca*

**OTHER NAMES:** Grey Raspweed

### HABIT:

Perennial forb 30-40 cm high. Green to reddish, erect stems rising annually from a stoloniferous rootstock. Leaves oblanceolate, blue-grey. Flowers green to yellow in clusters (Dec-May).

### HABITAT & SITE PREFERENCE:

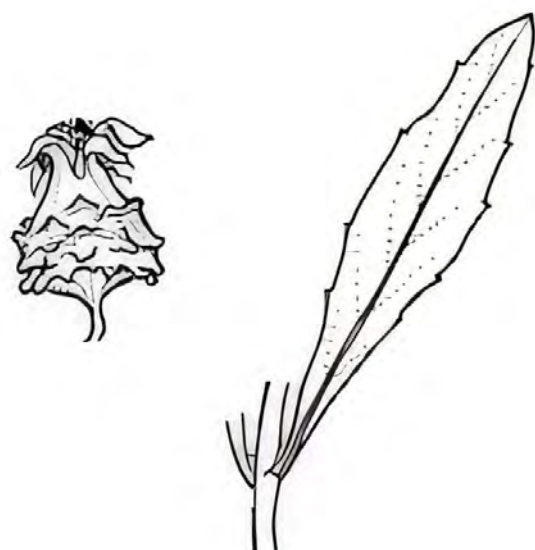
Close to water sources, usually on heavy clay soils. Prefers 300 to 500 mm rainfall in the Riverina region.

### SEED COLLECTION & PROPAGATION:

Seeds typically ripen in late summer to autumn. Look for the small, dry fruits that develop after flowering. Carefully collect the mature fruits, ensuring they are dry to avoid mold during storage. Gently rub the fruits to release the seeds. Store the cleaned seeds in a cool, dry place.

### VALUES & USES:

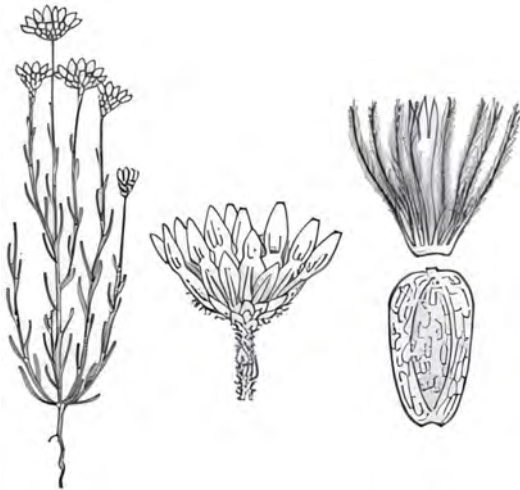
Can be a useful fodder plant when other fodder is low.





**REGIONAL SUBSPECIES:** *H. g.*  
subsp. *glutinosum*

**OTHER NAMES:** Sunray, Yellow  
Paper-daisy



**HABIT:**

Erect and slender annual forb to 20 cm high. Branches at the base. Linear and slender leaves to 10 mm long. Solitary yellowish flowers at the end of branches (Sep-Nov). Tolerates light to moderate frost.

**HABITAT & SITE PREFERENCE:**

Grasslands on sandy to clay soils. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

**VALUES & USES:**

Attractive ornamental. Provides a source of nectar and pollen for various pollinators, including bees, butterflies, and other insects.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sunray



**HABIT:**

Erect, annual herb to 15 cm high. Often branched from the base. Narrow linear leaves 5-15 mm long, and small, showy yellow-orange button flowers (Aug-Oct).

**HABITAT & SITE PREFERENCE:**

Found in a variety of plant communities on most soil types. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

ollect seed in summer. Propagate from seed which germinates readily. Fast growth rate. Tolerates light to moderate frosts.

**VALUES & USES:**

Showy when grown in mass plantings, or individually in containers or gardens. Potentially useful in the cut flower trade.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Slender Violet-bush

**HABIT:**

Dwarf, hairless perennial forb to 30 cm high. Linear leaves. Bright blue or violet-pink flowers with prominent veins, one petal conspicuous to 2 cm long and other petals inconspicuous. Flowers from August to November.

**HABITAT & SITE PREFERENCE:**

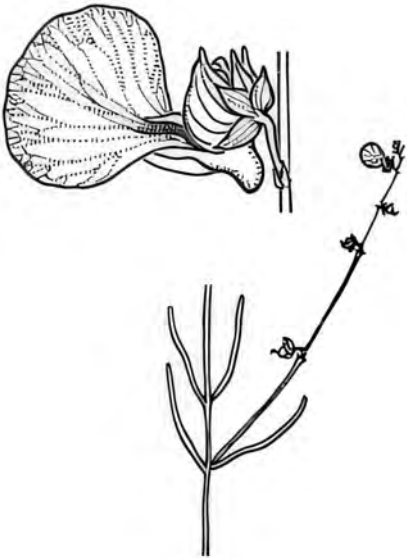
From red earth in Bimble Box to shallow sandy soils on rocky hillsides. Prefers free drainage in semi-shade. Prefers from 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings. Resents light frost.

**VALUES & USES:**

Attractive plant with potential for gardens.



# *Isotoma axillaris* - Showy Isotome

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Showy Axillaris,  
Rock Isotome

**HABIT:**

Low bushy perennial herb to 50 cm high. Bright blue to mauve flowers, Sep-May.

**HABITAT & SITE PREFERENCE:**

Crevice on rocky cliffs (especially granite and sandstone), shallow sandy soils of slopes and around rocky waterholes. Tolerates frost and extended dry periods. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect mature seed capsules when available. Propagate from fresh seed, cuttings of firm growth (root readily), or division. Germinates in 4-6 weeks.

**VALUES & USES:**

Excellent attractive ornamental for rockeries and containers. Produces a spectacular informal effect. Regenerates well in gardens. Milky sap can irritate skin and eyes. Rejuvenate plants over 2 years old by harsh pruning in autumn.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Annual Buttons (also used for *L. scaber*)

**HABIT:**

Small hairy annual herb to 20 cm high. Stems sparingly branched with green, hairy, and oblong-linear leaves. Solitary, bright yellow flowers up to 2 cm across (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Native grasslands. Well-drained soil. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Nov-Dec. Propagate from seed. Cuttings are worth trying. Fast growth rate.

**VALUES & USES:**

Attractive and suitable for garden or container planting.



**REGIONAL SUBSPECIES:** *L. s.* subsp. *alpinus*, *L. s.* subsp. *squamatus*

**OTHER NAMES:** *n/a*

**HABIT:**

Perennial herb 10-40 cm high. Branching from the base, often with hairy stems especially beneath the inflorescence. Leaves are linear, usually 1-4 cm long, with recurved margins, dark green above and woolly white beneath. Small, yellow button flowers (Sep-Dec) are on long, scaly stems, overtopping leaves.

**HABITAT & SITE PREFERENCE:**

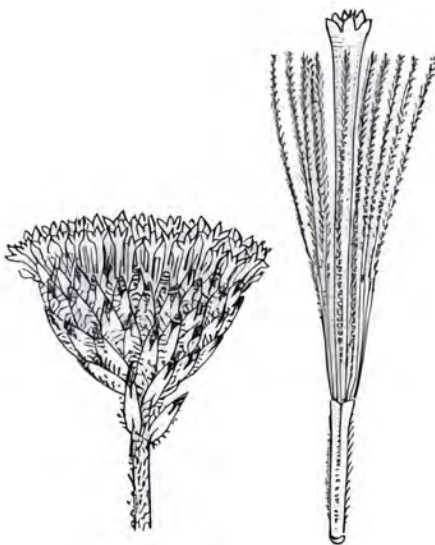
Mainly low-lying areas with clay loam and clay soils. Adapted to most well-drained soils. Tolerates full sunshine to dappled shade. Prefers from 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Nov-Dec. Propagate from seed or cuttings of firm new growth. Seed requires storage of 3-6 months. Good results after storage with germination in 2-5 weeks. Fast growth rate. Available from specialist nurseries.

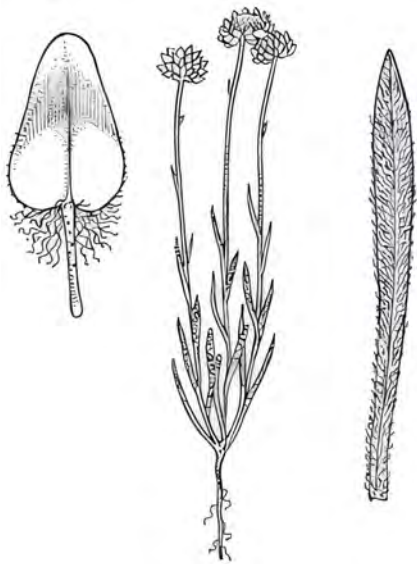
**VALUES & USES:**

Showy flowers, and very suitable for gardens and containers. Prune old plants hard in the growing season to rejuvenate plants.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Soft Sunray,  
Golden Paper-daisy



**HABIT:**

Grey, woolly, erect annual forb to 30 cm high. Golden yellow flowers with a papery appearance (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

Variable, more common on clayey soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed (usually germinates within 21 days) or from cuttings. Fast growth rate. Hardy to moderate frost.

**VALUES & USES:**

Acceptable to stock. Showy plant suitable for mass planting in the garden or in containers.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Flax



**HABIT:**

Delicate perennial herb, 10-70 cm high. Bright green, linear leaves 5-20 cm long, extending up unbranched stems. Pale blue or rarely white flowers (Sep-Feb) loosely grouped at the end of stems.

**HABITAT & SITE PREFERENCE:**

Found growing in grassland and woodland communities and along drainage lines. Prefers good drainage in a sunny position. Prefers from 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

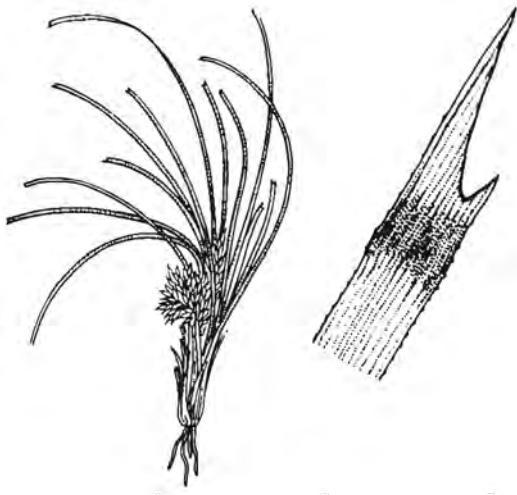
Collect seed Dec-Jan, when round papery capsules turn tan-brown. Crush seed pods and sieve to clean seed. Seed retains viability for several years. Propagate from seed (germinates readily in 3-4 weeks) or from cuttings. Fast growth rate. Available from specialist nurseries.

**VALUES & USES:**

Attractive and easy to grow. Has potential for mass plantings in containers and gardens, or amongst shrubs. First Nations People used the fibrous bark of the stems for making cord and net, and ate the seeds which have a delicious flavour similar to sesame seed. Suspected of being poisonous to stock.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Robust, perennial tussocky herb, 20-50 cm high, up to 60 cm wide. Flat, bluish-grey leaves up to 50 cm long, much-branched inflorescence, strongly scented flowers.

**HABITAT & SITE PREFERENCE:**

Wide range of vegetation types in sandy soil, sometimes clay, near salt pans, or granite outcrops. Requires well-drained soil and tolerates heavy frost. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

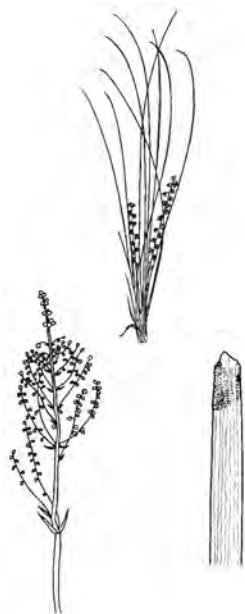
Collect mature seed capsules when available. Propagate from seed or by division of clumps.

**VALUES & USES:**

Useful for stabilising soil and reducing erosion. Attracts seed-eating native birds. Ornamental for gardens and containers. Grazed by stock in exceptionally poor years.

**REGIONAL SUBSPECIES:** *L. f.* subsp. *coriacea*, *L. f.* subsp. *filiformis*, *L. f.* subsp. *flavior*

**OTHER NAMES:** *n/a*



**HABIT:**

Perennial tussock with blue-grey or light-green leaves, forming short, dense mats up to 20 cm in diameter. Yellow or cream, wattle-like flowers, chiefly Oct-Nov.

**HABITAT & SITE PREFERENCE:**

Dry sclerophyll forest, usually on well-drained sandy or rocky soil. Requires very well-drained soil, tolerates full sun to semi-shade. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Jan-late Feb. Watch closely as seeds shed quickly.

**VALUES & USES:**

Good habitat, attracts seed-eating and insect-eating native birds. Food plant for caterpillars of native butterflies and moths. Useful in rockeries, among small shrubs, or in containers.

**REGIONAL SUBSPECIES:** *L. l.* subsp. *leucocephala*, *L. l.* subsp. *robusta*

**OTHER NAMES:** Irongrass, White Mat-rush, Woolly Mat-rush



**HABIT:**

Perennial tussock with drooping, greyish leaves 20-40 cm long. Whitish flowers in dense, globular or cylindrical woolly heads. Flowers Sep-Dec.

**HABITAT & SITE PREFERENCE:**

Mallee communities with sandy red earth and in White Cypress Pine communities with red-brown earths. Well-drained soils in sunny positions. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or division of the clumps. Tolerates most frost.

**VALUES & USES:**

Occasionally foraged by kangaroos.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Honey Reed



**HABIT:**

Tufted perennial herb with leaves usually 50 cm to 1 m long. Creamy or yellow, strongly honey-scented flowers in spring.

**HABITAT & SITE PREFERENCE:**

Various habitats. Very hardy, prefers moist, well-drained soil and semi-shade. Tolerates dryness, poor drainage, waterlogging, and full sun to full shade. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

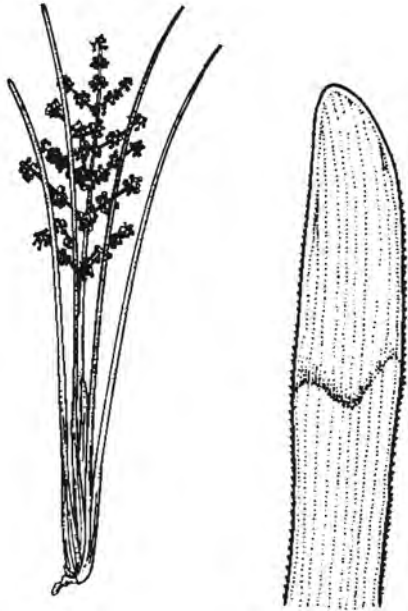
Collect mid Dec-early Mar, seeds shed quickly. Propagate from seed (germinates in 8-10 weeks) or by dividing clumps.

**VALUES & USES:**

Low-level shelter. Excellent for stabilising banks. Excellent habitat for ground fauna, food for butterfly caterpillars and insect-eating birds. Attracts seed-eating birds. Leaves used for weaving by First Nations People. Useful accent plant in mixed plantings, ponds, and under trees. Also good for open spaces and containers. Nectar and leaf bases edible.

**REGIONAL SUBSPECIES:** *L. m.*  
subsp. *multiflora*

**OTHER NAMES:** n/a



**HABIT:**

Rigid, tufted perennial herb with slender to robust leaves, 25-90 cm long. Flowers Jun-Jan.

**HABITAT & SITE PREFERENCE:**

Chiefly in woodland and forest, on various soils. Prefers 300 - 500 mm rainfall in the Riverina.

**SEED COLLECTION & PROPAGATION:**

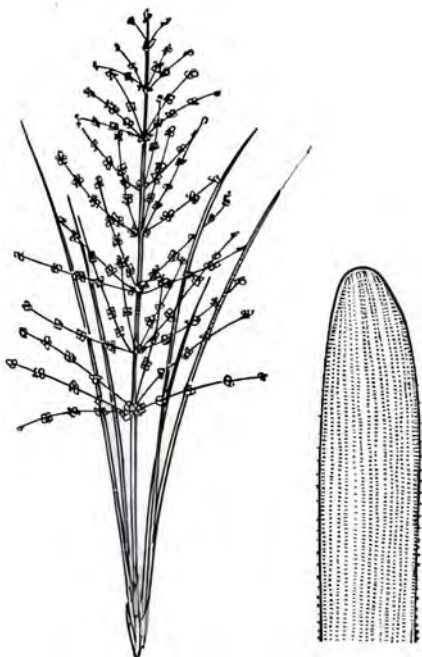
Collect early Oct-mid Mar, as mature seeds are shed quickly. Propagate from seed or by division of clumps.

**VALUES & USES:**

Attracts seed-eating native birds and is a food plant for caterpillars of native butterflies and moths. Striking inflorescences make it an excellent container plant.

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a



**HABIT:**

Perennial rhizomatous herb, forming a robust but sparse tussock. Leaves narrow, hard, and bluish-green. Inflorescence slightly longer than leaves, with wide-spreading, branched flower-stems. Flowers from Sep-Nov.

**HABITAT & SITE PREFERENCE:**

Usually in rocky positions on slopes and crests of hills and mountains. Prefers well-drained soils in filtered sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or division of clumps. Tolerates moderate to heavy frost.

**VALUES & USES:**

Attracts seed-eating native birds and is a food plant for caterpillars of native butterflies and moths. Striking inflorescences make it an excellent container plant.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Wingless Bluebush

**HABIT:**

Prostrate or weakly erect perennial shrub to 30 cm high, with a strong taproot. Branches may be hairy. Leaves are alternate, fleshy, and linear, 5-20 mm long. Flowers are sessile and inconspicuous (Jan-Feb). Fruit develops five papery 'wings' and blackens as they dry.

**HABITAT & SITE PREFERENCE:**

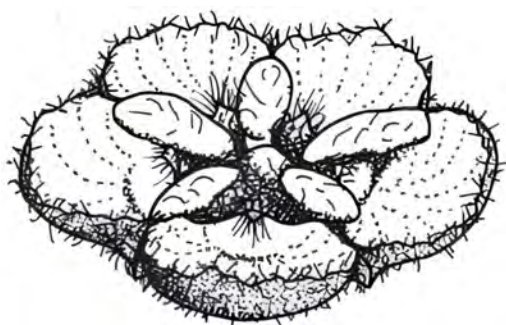
Grasslands and woodlands on heavier loamy soils. Tolerates salinity to some degree. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed generally in summer. Propagate from seed or cuttings. Seed may lose viability after a year or so. Medium growth rate. Available from specialist nurseries.

**VALUES & USES:**

Good coloniser on heavy soils. Rarely grazed by stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Hairy Bluebush

**HABIT:**

Prostrate perennial sub-shrub to 30 cm high with a long taproot. Woolly branches. Leaves alternate, fleshy and linear 4-16 mm long, with dense silky hairs, at least on the lower surface. Dense, long silky hairs cover the flowers. Fruits also hairy and sometimes developing narrow wings. Flowers Sep-Feb.

**HABITAT & SITE PREFERENCE:**

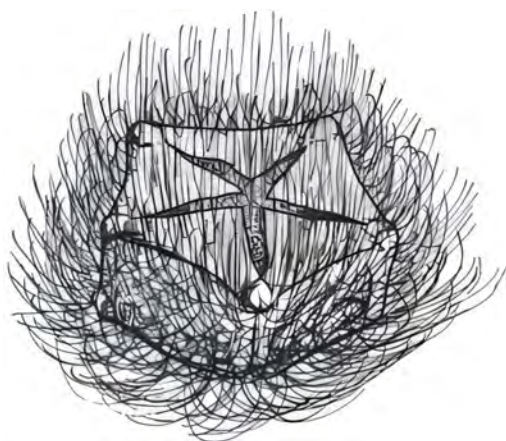
Grasslands, open woodland and Bladder Saltbush communities, often on clay soils. Prefers full sun. Prefers from 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed generally in summer. Propagate from seed or cuttings. Seed may lose viability after a year or so. Medium growth rate.

**VALUES & USES:**

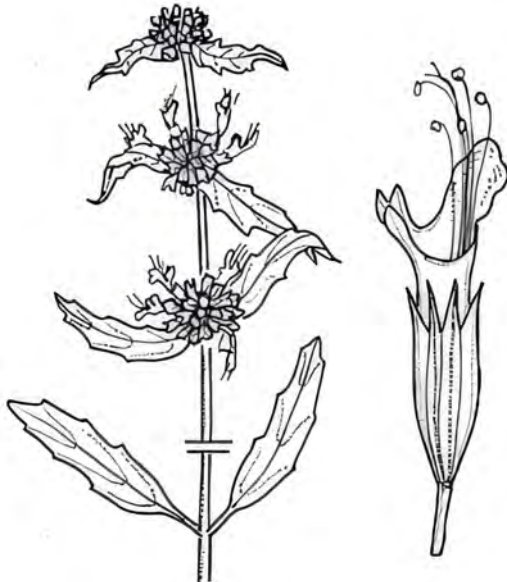
Good coloniser on heavy soils. Stabilises bare or scalded soil. Not grazed by stock when more palatable species present, but makes good reserve fodder. Tolerates most frosts and extended dry periods. Appreciates flooding for limited periods.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Native Mint, Native Peppermint, Australian Mint



**HABIT:**

Aromatic, slender, perennial forb to 80 cm high and 1 m in diameter. Stems sprawling or erect, and leaves opposite, 2-5 cm long, tapering at the tip. Small flowers white or purplish, numerous on short stalks (Dec-May).

**HABITAT & SITE PREFERENCE:**

Areas subject to periodic flooding on sandy or heavy clay soils. Prefers moisture-retentive soil. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

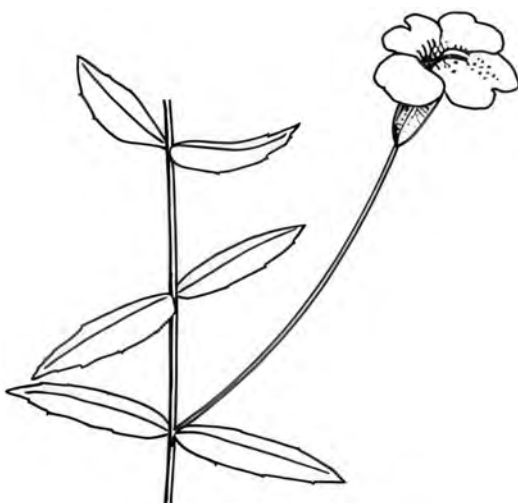
Propagate from seed, cuttings or division of clumps. Hardy to frost.

**VALUES & USES:**

Leaves are used to make minty drinks. First Nations People used a boiled extract to treat coughs and colds and to induce abortions. Crushed leaves relieve headaches.

**REGIONAL SPECIES /SUBSPECIES:**  
*refer to text*

**OTHER NAMES:** *n/a*



**HABIT:**

Small perennial forb with opposite leaves and purplish-blue flowers (Aug-Dec).

**HABITAT & SITE PREFERENCE:**

Found in a range of vegetation communities. Prefers moisture-retentive soils in open sunny areas. Prefers 300 to 400 mm rainfall in the Riverina region. Slender Monkey-flower (*M. gracilis*) [pictured] often on clay and in damp places; Small Monkey-flower (*M. prostratus*) often in low-lying saline areas.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed, cuttings, and division of layered stems. Available from specialist nurseries. Fast growth rate.

**VALUES & USES:**

Attractive species that do well in gardens.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Blue-green, hairless, erect perennial herb to 60 cm high. Much branched near the top with a carrot-like rootstock. Flowers small, white or mauve with yellow centres (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

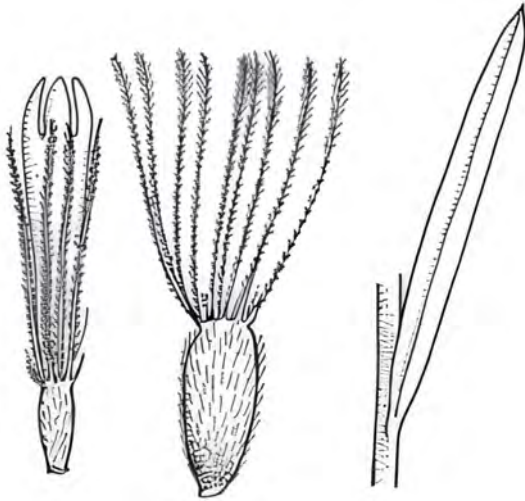
Mainly in areas where water pools after rain with grey clay soils. Also in loamy red earth in low-lying areas. Found in a variety of vegetation communities. Prefers plenty of water in a sunny, warm to hot site. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings of firm young growth. Hardy to moderate frost.

**VALUES & USES:**

Ornamental species suitable for gardens or containers.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Perennial herb or sub-shrub to 20 cm high. Branches spreading to erect with bright green, narrow-linear leaves up to 25 mm long. White or pink-purple flowers with yellow center. Can flower throughout the year, primarily Sep-Nov.

**HABITAT & SITE PREFERENCE:**

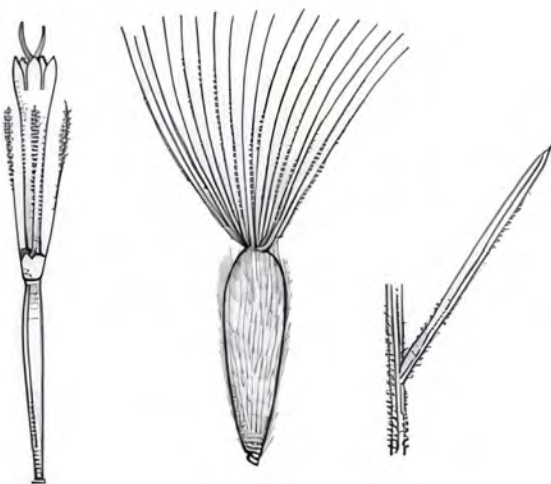
Across most soil and vegetation types. Prefers sandy red earth or stony soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed from December to February. Propagate from seed (germinates in 8-20 days) or from cuttings of firm young growth. Hardy to heavy frost.

**VALUES & USES:**

Palatable to stock. Very attractive in rockeries and containers.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Prostrate annual herb, 2-8 cm high. Grass-like leaves with upper ones longer than flowers. Flowers without petals, woolly, greenish-white with yellow centres (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

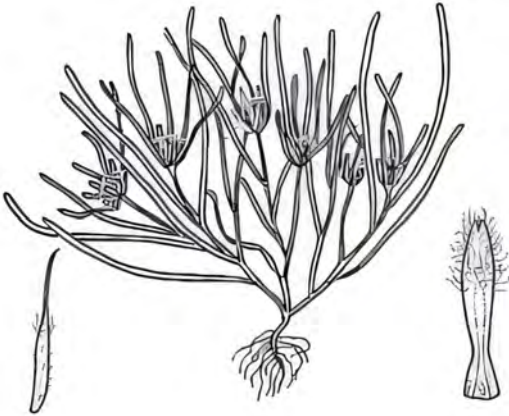
Variable, but usually restricted to gilgais and damp, low-lying situations. Prefers moisture-retentive loams and clay loams subject to flooding. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed, which germinates readily.

**VALUES & USES:**

Has potential for garden planting.



# *Osteocarpum acropterum* - Water Weed

**REGIONAL SUBSPECIES:** *O. a.* subsp. *acropterum*, *O. a.* subsp. *deminutum*

**OTHER NAMES:** Babbagia, Water Bush

**HABIT:**

Short-lived perennial to 20 cm high. Club-shaped, succulent leaves. Fruits with two unequal, small horns less than 2 mm long. Flowers Sep-May.

**HABITAT & SITE PREFERENCE:**

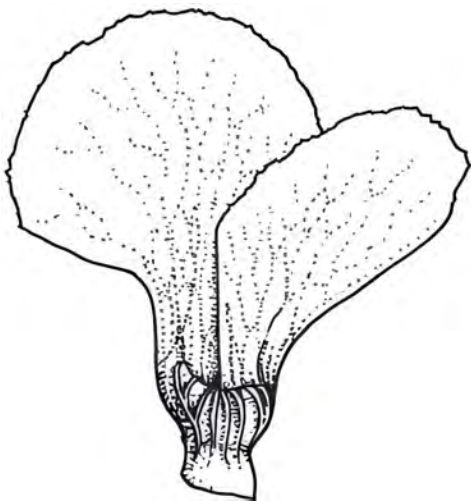
Variable, common on scalds and in slightly saline situations. Prefers full sun and 250 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

**VALUES & USES:**

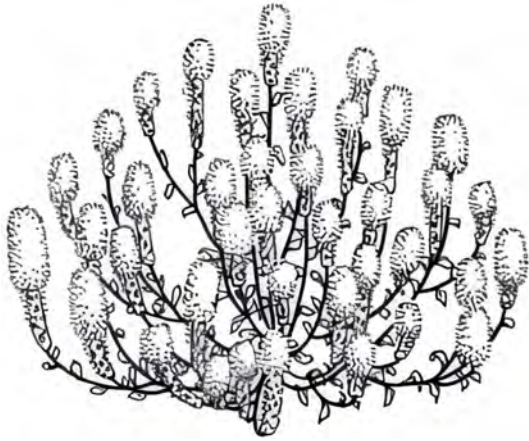
Colonises bare ground and is useful in soil erosion control, which is enhanced by reclamation treatment like ponding banks.



**REGIONAL SPECIES /**

**SUBSPECIES:** *P. erubescens* (Hairy-tails), *P. exaltatus* var. *exaltatus* (Showy Foxtail), *P. macrocephalus* (Square-headed Foxtail), *P. nobilis* (Regal Foxtail), *P. polystachyus* (Long Tails), *P. spathulatus* (Pussy-tails)

**OTHER NAMES:** as above



**HABIT:**

Perennial forbs with flowers in globular to cylindrical spikes (Jul-Feb).

**HABITAT & SITE PREFERENCE:**

Prefer 300 to 400 mm rainfall in the Riverina region. Different species have varying habitat and soil preferences, including hill plains (*P. erubescens*), mallee and other woodlands on red sands and sandy loams (*P. exaltatus* var. *exaltatus*); clays and clay loams in grasslands, Bladder Saltbush and open woodland communities, and sands in mallee and hillslopes (*P. spathulatus*).

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Feb. Collect the fruit heads when dried to a pale straw colour (some species contain fine hairs that may cause an allergic reaction in some people). To clean, rub the fruit head gently to dislodge the seed at the base of each fruit. Seeds are non-dormant, viable seed should germinate readily.

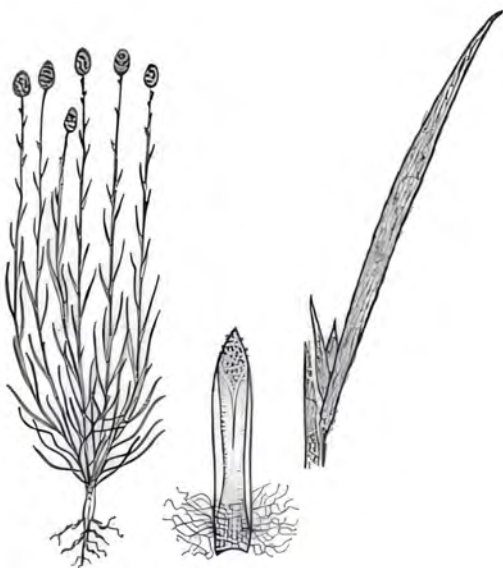
**VALUES & USES:**

Utilised by stock as forage. They are also ornamental plants that can be grown in gardens.

*Pycnosorus chrysanthes* - Golden Billy-buttons

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yellow Drumsticks



**HABIT:**

Branched, annual, grey-woolly forb 6-25 cm high. Linear leaves and firm, globular, yellow flowers (Aug-Jan).

**HABITAT & SITE PREFERENCE:**

Low-lying areas, mainly on grey clay soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

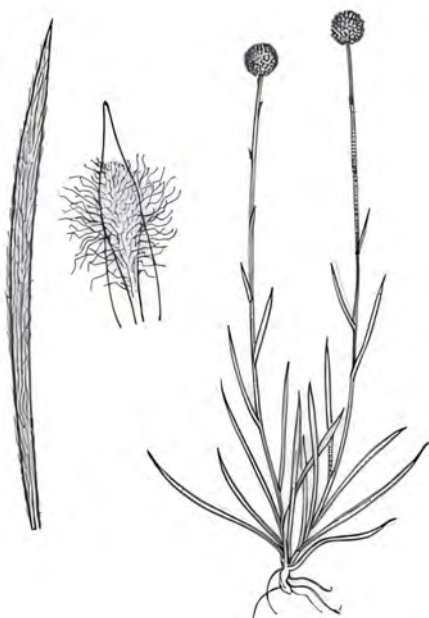
Propagate from seed collected late Dec-Jan.

**VALUES & USES:**

A very ornamental species suitable for gardens.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Billy Buttons



**HABIT:**

Erect, perennial herb, 40 cm to 1 m high. It has a few unbranched, woolly stems. Basal rosette of a few linear leaves. Leaves also on stems, mostly 5-12 cm long and white-grey hairy. Flowers are a globular head, bright yellow, blooming Sep-Feb.

**HABITAT & SITE PREFERENCE:**

Native grasslands, Grey Box, and Bladder Saltbush communities on heavier soils prone to inundation. Requires moist to swampy soils. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seeds from November to December. Monitor closely as seeds shed in 3-14 days. Propagate from seed. May have a 3-month after-ripening period. Break up seedheads before surface sowing in autumn. Most viable seed germinates in 2-4 weeks. Medium growth rate. Available from specialist nurseries.

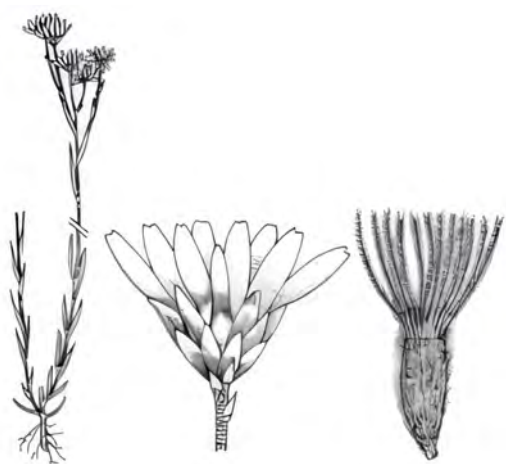
**VALUES & USES:**

Spectacular when flowering. Excellent cut flowers, fresh or dried. Suitable for containers or mass plantings.

# *Rhodanthe corymbiflora* - Grey Sunray

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Small White Sunray



**HABIT:**

Erect, annual herb to 35 cm high. Dense cottony stems and linear to lanceolate leaves (10-50 mm long). Loosely clustered terminal head of white papery daisy flowers (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

Wide range of communities, mainly floodplain areas with clayey soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Oct-Jan (monitor closely as seeds shed quickly). Propagate from seed in autumn, may have 1+ month after-ripening period. Surface sow or lightly cover as light is required for germination. Tolerates light frost.

**VALUES & USES:**

Showy in mass plantings with white flowers and grey foliage. Potential for dried flower arrangements. Provides good soil protection due to upright dead stems. Not eaten by rabbits, only by stock in absence of more palatable species.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Bushy, spreading annual forb to 40 cm high. Masses of white flowers with yellow centres (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

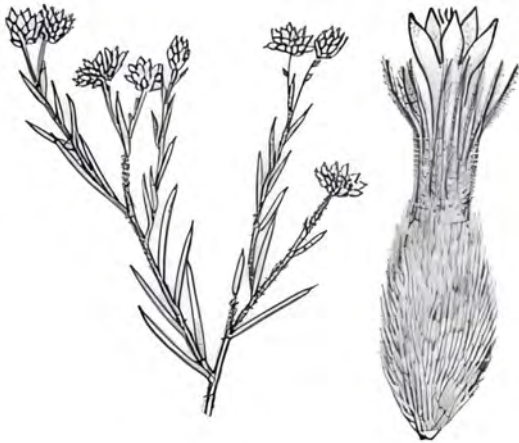
Variable, found in most plant communities. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed when mature and fluffy (monitor closely as seeds are wind-dispersed). Propagate from seed.

**VALUES & USES:**

Useful groundcover. Dead flower heads eaten by stock during drought.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Ascending, slender, sparsely hairy forb 2-10 cm high. Branches from the base; small linear leaves; and small white or brown flowers (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

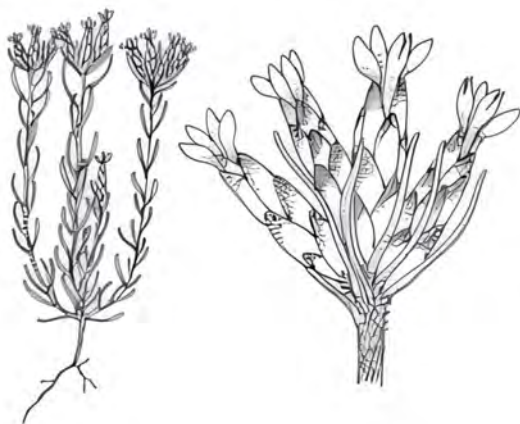
Various vegetation communities, often on clay soils. Prefers 250 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed when mature and fluffy (monitor closely as seeds are wind-dispersed). Propagate from seed.

**VALUES & USES:**

Attractive in mass plantings.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Shiny Dock

**HABIT:**

Perennial forb to 40 cm high. Lanceolate leaves same length as stalks. Leaves with flower cluster linear and longer (Sep-Mar). Triangular fruit.

**HABITAT & SITE PREFERENCE:**

Variable, low-lying or damp areas, usually on clay soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed when red-brown and easily detachable. Propagates readily from seed.

**VALUES & USES:**

Useful groundcover.



# *Scleroblitum atriplicinum* - Purple Goosefoot

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Starry Goosefoot, Lamb's Tongue

**HABIT:**

Almost hairless annual forb. Stem prostrate and ascending to 50 cm long. Leaves slightly succulent, green or purple-tinged. Tiny flowers <3 mm (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

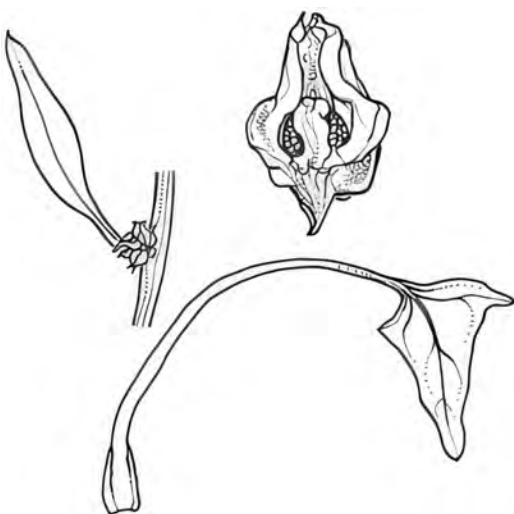
Variable vegetation communities in moist depressions and on floodplains. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagates from seed or cuttings.

**VALUES & USES:**

Valuable component of stock forage.



**REGIONAL SPECIES:** *S. corrugata* (Corrugated Sida) [pictured], *S. cunninghamii* (Ridge Sida), *S. fibulifera* (Pin Sida), *S. intricata* (Twiggy Sida), *S. trichopoda* (High Sida)

**OTHER NAMES:** n/a



**HABIT:**

Perennial herbs to sub-shrubs with stellate hairs and yellow flowers (Sep-Nov). Specific species vary in growth habit.

**HABITAT & SITE PREFERENCE:**

Clay soils on floodplains. Habitat preferences vary, but include: Bimble Box and Grey Box communities (*S. cunninghamii*); Black Box, Myall, and Saltbush communities (*S. fibulifera*); Bladder Saltbush and Black Bluebush communities (*S. intricata*); and Open grassland, Mitchell Grass, and Bladder Saltbush communities (*S. trichopoda*). Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed in summer. Propagate from seed, germination may be improved by hot water treatment (3-6 weeks).

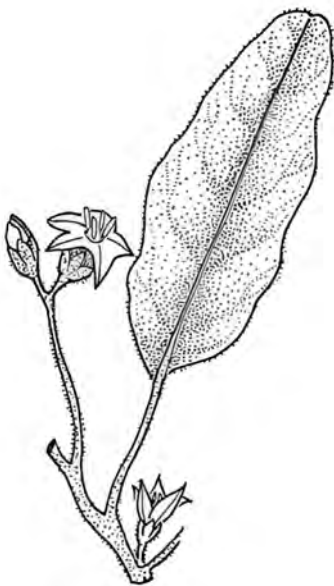
**VALUES & USES:**

Useful ground cover. Highly palatable fodder for stock.

# *Solanum esuriale* - Quena

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a



**HABIT:**

Greyish-green, hairy, perennial forb to 30 cm high. Oblong-lanceolate and linear-lanceolate leaves. Purple (sometimes white) flowers year-round. Berry pale yellow to light yellow-brown (no stripes).

**HABITAT & SITE PREFERENCE:**

Mainly low-lying areas on loamy or clay soils.

**SEED COLLECTION & PROPAGATION:**

Fruits are usually ready to harvest Dec-Jun. Pick ripened fruits, soak fruits in water to separate seed from flesh, and then dry out seed. May need some pre-treatment for germination such as leaching in water. Prefers 300 to 450 mm rainfall in the Riverina region.

**VALUES & USES:**

Valuable ground cover. May be poisonous to stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Creamy Stackhousia



**HABIT:**

Upright perennial herb, generally to 40 cm high. Short leaves on slender stems from rhizome. Sweet-scented creamy flowers, late winter-early summer. May die down in hot summers and re-shoot in autumn.

**HABITAT & SITE PREFERENCE:**

Heath, grassland, woodland, and sclerophyll forest, rarely in swamps. Prefers moist, well-drained soil and semi-shade. Tolerates wet winter/dry summer soil, full sun to full shade, and drought. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early to late Dec, seeds shed quickly. Difficult from seed, propagate from cuttings of new leafy stems emerging from rootstock.

**VALUES & USES:**

Provides nectar for native butterflies and moths. Useful in rockeries and containers, plant in groups for best effect.

# *Stemodia florulenta* - Blue Rod

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect, bright green, many branched forb 20-50 cm high. Tubular flowers are blue or violet with darker streaks (Year Round).

**HABITAT & SITE PREFERENCE:**

Areas periodically flooded and grassland and Mulga communities on clay soils. Prefers 300 to 400 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Fruits mainly Oct-Nov. Propagate from seed.

**VALUES & USES:**

Appears to be unpalatable to stock and is poisonous to sheep.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Sturt Pea

**HABIT:**

Annual or perennial prostrate herb. Densely hairy branches, grey-green oval leaves. Pea-shaped red and black, red, or red and white flowers (Aug-Nov). Leathery pods with soft hairs, up to 6 cm long.

**HABITAT & SITE PREFERENCE:**

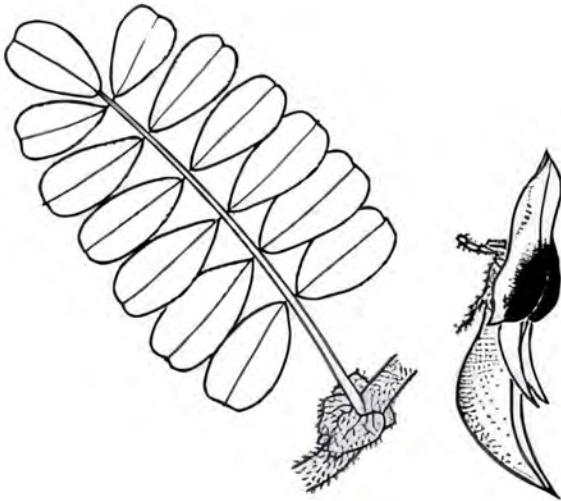
Belah-Rosewood and Mulga communities on sandplains with calcareous soils. Sunny areas with good air movement. Prefers 200 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Feb. Germinates in 7-10 days. Soak seed in warm water for 6-48 hours or scarify and soak in cool water until swollen before sowing Aug-Dec.

**VALUES & USES:**

Sparingly grazed by stock. Highly valued ornamental plant for gardens.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Prostrate, ascending to erect, slender perennial 10-30 cm high. Pea-like flowers are pink with red stripes (Sep-Nov). Greyish pod fruit.

**HABITAT & SITE PREFERENCE:**

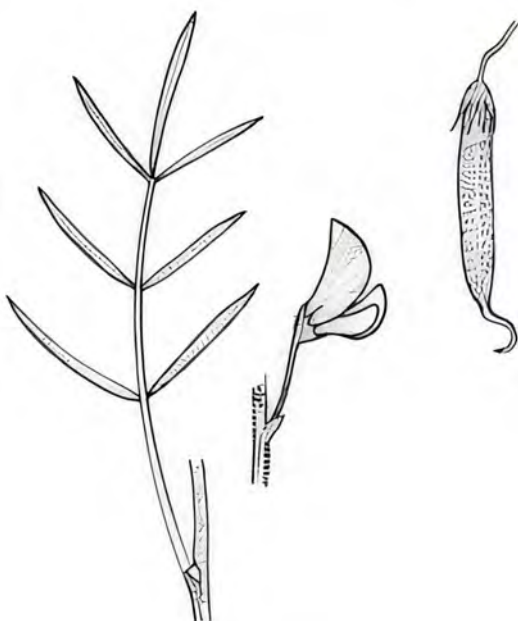
Bladder Saltbush, Black Box, and grassland communities with grey and brown heavy clay and clay loam soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Harvest pods when seeds are hard and turning orange. Dry pods, rub with firm object to release seeds, and sieve to remove unwanted material. Store seeds in airtight container with desiccant. Seed viability is high. Nick or soften seeds before sowing to aid germination.

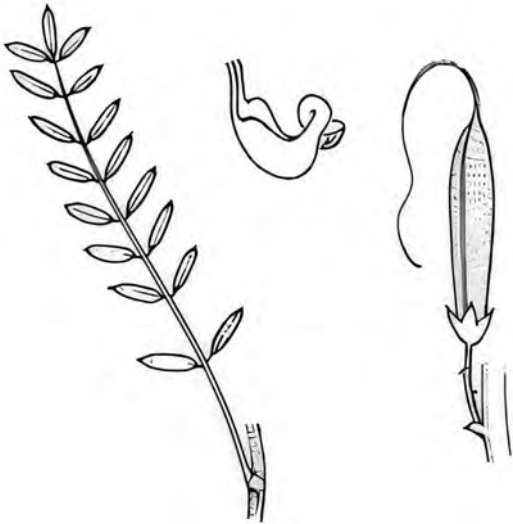
**VALUES & USES:**

Heavily grazed by stock. Can form an attractive flowering shrub.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Swamp Pea



**HABIT:**

Perennial herb to 50 cm high, erect or spreading stems. Pinnate leaves 5-15 cm long with 15-25 linear leaflets. Conspicuous mauve, purplish, or pink pea flowers with yellow keel tips (Aug-Nov).

**HABITAT & SITE PREFERENCE:**

Heavy, seasonally inundated soils in grasslands and grassy woodlands. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

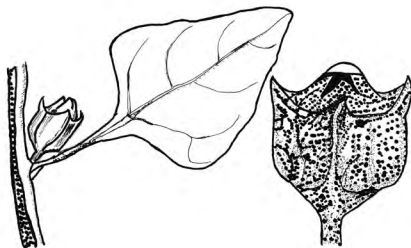
Collect seed Nov-Jan when pods dry. Propagate from scarified seed (soak in hot water, dry, then sow). Germination takes 3-4 weeks.

**VALUES & USES:**

Attractive plant for native grassland or grassy woodland plantings.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Warrigal Greens



**HABIT:**

Annual or biennial large forb. Thick, triangular, bright green leaves with small glistening watery blisters. Small greenish flowers (Sep-Feb). Fast growing.

**HABITAT & SITE PREFERENCE:**

Variable, common in Bladder Saltbush and Bluebush communities. Loam soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Sow soaked seeds in spring or autumn. Propagate from division and cuttings.

**VALUES & USES:**

Eaten by First Nations Peoples. Cultivated internationally as a vegetable (Warrigal Greens). Nutritious and tasty.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Forest Germander

**HABIT:**

Grey, suckering perennial to 60 cm high. White, basal, tubular flowers ending in two divided lips (Sep-Nov).

**HABITAT & SITE PREFERENCE:**

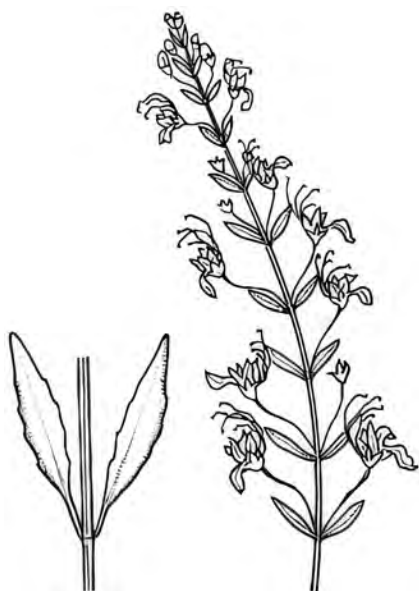
Variable, from sands to clay. Common in grasslands. Tolerates alkaline soils and can grow on hard surfaces. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from division and cuttings.

**VALUES & USES:**

Potential low-level shelter for stock. Provides excellent shelter for small wildlife.



# *Tricoryne elatior* - Yellow Rush-lily

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yellow Autumn-lily

**HABIT:**

Spreading or erect, wiry-stemmed herb to 70 cm high. Basal leaves linear, wither early. Smaller stem leaves. Yellow star flowers in clusters of 2-10 (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

Various vegetation communities and soil types. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Jan-Feb (monitor closely as seeds shed quickly). Fruits remain green when seeds mature. Propagate from seed (may require smoke treatment) or by division.

**VALUES & USES:**

Attractive, long flowering. Looks best in mass plantings.



**REGIONAL SUBSPECIES:** *V. c.* var. *cuneata*, *V. c.* var. *hirsuta*

**OTHER NAMES:** n/a



**HABIT:**

Woody annual or perennial herb, 10-40 cm high, rigidly erect stems. Pale blue to mauve flowers throughout the year.

**HABITAT & SITE PREFERENCE:**

Various natural and disturbed habitats. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect late Nov-late Jan, seeds shed within 3-14 days.

**VALUES & USES:**

Not particularly palatable, but eaten by stock when alternative feed is scarce.

**REGIONAL SUBSPECIES:** *V. d.* var. *hirta*

**OTHER NAMES:** Dissected New Holland Daisy



**HABIT:**

Erect, annual to short-lived perennial herb 10-35 cm tall. Hairy leaves are three-lobed. Produces white-blue flowers most of the year (Jan-Dec).

**HABITAT & SITE PREFERENCE:**

Woodland, mallee, and cleared land. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Nov-Jan. Propagate from seed. Germination usually occurs in 1-3 weeks and may be improved by soaking or leaching seed for 10 days. Fast growth rate.

**VALUES & USES:**

An attractive ornamental. Insect attracting.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Woody, annual or perennial herb, 10-40 cm high. Stems and young leaves covered with dense white, cottony hairs. Mauve flowers throughout the year, mostly Oct-Mar.

**HABITAT & SITE PREFERENCE:**

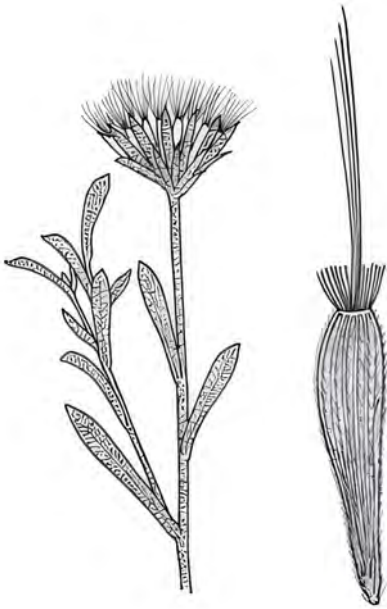
Loamier soils of the plains. Well-drained soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed late Nov-Jan (monitor closely as seeds shed quickly). Propagate from seed, germination usually occurs in 1-3 weeks. Soaking or leaching seed for 10 days may improve germination.

**VALUES & USES:**

Not particularly palatable, but eaten by stock when alternative feed is scarce.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect, tufted perennial herb, 5-80 cm high. Taproot with multiple stems. Narrow, linear leaves. Pale blue bell-shaped flowers (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

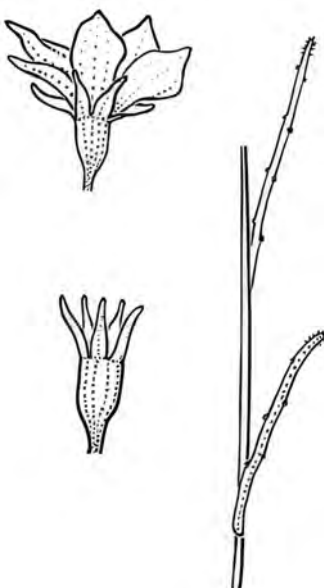
Riparian woodland on alluvial sediments subject to regular inundation. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Dec-Jan (monitor closely as seeds shed quickly). Propagate from seed (may require 3-month stratification at 3-5°C) or cuttings. Germination takes about 3-4 weeks.

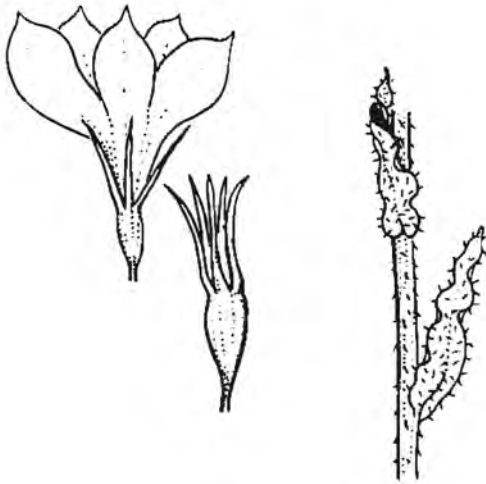
**VALUES & USES:**

Ornamental, edible flowers for salads. Readily grazed by stock.



**REGIONAL SUBSPECIES:** *W. s.* subsp. *alternata*, *W. s.* subsp. *stricta*

**OTHER NAMES:** n/a



**HABIT:**

Perennial tufted herb, 10-90 cm high. Blue flowers throughout the year. May die off in summer on dry sites.

**HABITAT & SITE PREFERENCE:**

Various plant communities, including shallow stony soils, loams, and clay loams in open woodlands and grasslands. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect late Dec-late Jan, seeds shed in 3-14 days. Propagate from seed (may have 4-6 month after-ripening, stratify for 3 months at 3-5°C) or cuttings. Germination takes about 3-4 weeks.

**VALUES & USES:**

Readily grazed by stock. Ornamental. Attracts nectar-feeding birds and insects.

**REGIONAL SUBSPECIES:** *W. d.* subsp. *dioica*

**OTHER NAMES:** n/a



**HABIT:**

Small, tufted, perennial lily, 5-30 cm high. Long narrow leaves, honey-scented whitish flowers, Aug-Sep. Dies down to tubers over summer, re-shoots in autumn.

**HABITAT & SITE PREFERENCE:**

Forest and woodland. Prefers open position in moist, well-drained soil and full sun. Prefers 250 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Nov-early Dec, mature seeds shed within 3-14 days. Propagate from fresh seed sown in autumn, germinates in 3-5 weeks. Generally takes 3 years to flower from seed.

**VALUES & USES:**

Starchy corms eaten by First Nations People. Attractive ornamental for rockeries and containers, plant in groups. May be difficult to grow outside preferred conditions.

## *Xerochrysum bracteatum* - Golden Everlasting

ASTERACEAE

**REGIONAL SUBSPECIES:** *X. b.*  
*subsp. barringtonense*

**OTHER NAMES:** n/a

### **HABIT:**

Erect, usually annual herb, 20-80 cm high. Rarely branched at base, yellow flowers, mostly spring.

### **HABITAT & SITE PREFERENCE:**

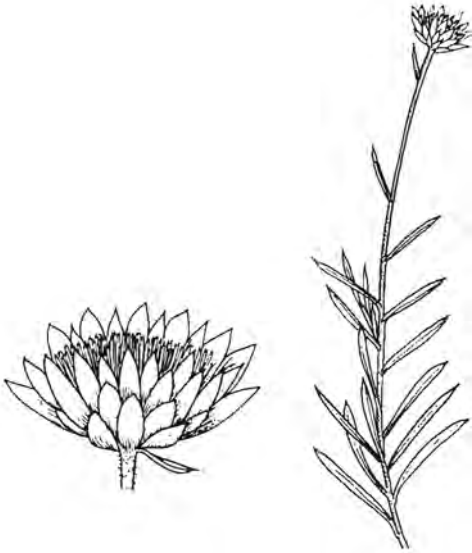
Open woodland or forest, usually on sandy to sandy loam soils. Prefers frost-hardy conditions and grows mainly during autumn and spring.

### **SEED COLLECTION & PROPAGATION:**

Collect Dec-Jan, seeds dispersed by wind. Propagate from seed sown in late summer (germinates in 7-30 days) or tip cuttings 7-10 cm long under mist (strikes in 3 weeks).

### **VALUES & USES:**

Good habitat, flowers provide nectar for native bees, butterflies, and moths. Palatable to stock and damaged by grazing. Spectacular ornamental, best in mass plantings. Cut flowers long-lasting.



## *Xerochrysum viscosum* - Sticky Everlasting

ASTERACEAE

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a

### **HABIT:**

Erect, sticky, usually annual herb, 20-80 cm high. Usually multi-branched, yellow flowers in spring.

### **HABITAT & SITE PREFERENCE:**

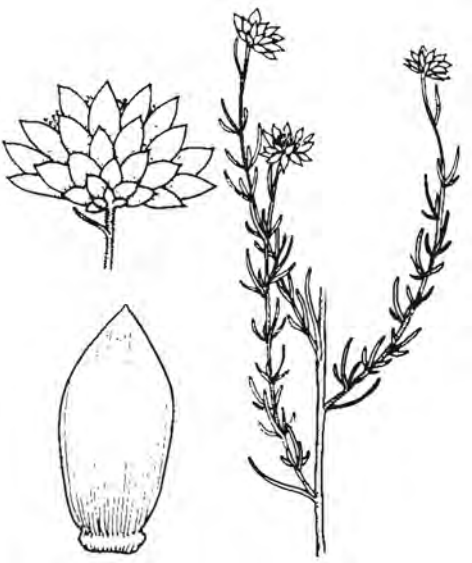
Open woodland and sclerophyll forest, usually on sandy to sandy loam soils.

### **SEED COLLECTION & PROPAGATION:**

Collect Dec-Jan, seeds dispersed by wind. Propagate from seed sown in late summer (germinates in 7-30 days) or cuttings (strikes rapidly and readily).

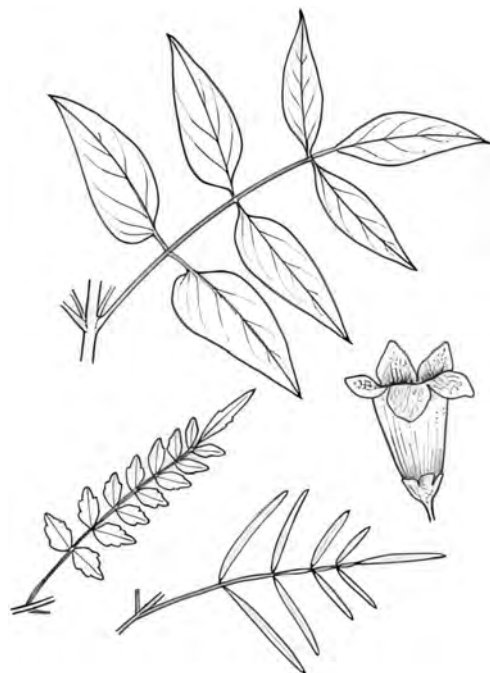
### **VALUES & USES:**

Good habitat, flowers provide nectar for native bees, butterflies, and moths. Spectacular ornamental, best in mass plantings.





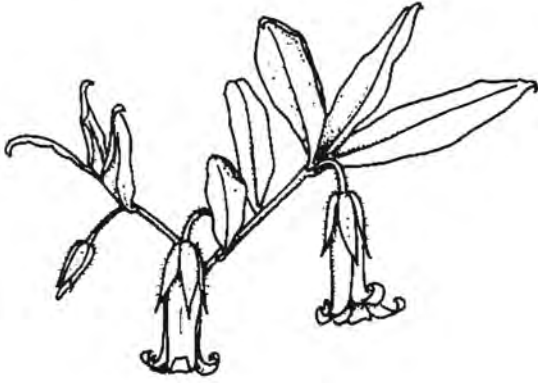
# CLIMBERS



COMMON NAME	BOTANICAL NAME	Page
Gargaloo	<i>Parsonsia eucalyptophylla</i>	388
Hairy Apple Berry	<i>Billardiera scandens</i>	386
Inland Wonga Vine	<i>Pandorea pandorana</i>	388
Native Jasmine	<i>Jasminum didymum</i>	387
Small-leaved Clematis	<i>Clematis microphylla</i>	386
Twining Glycine	<i>Glycine clandestina</i>	387

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Apple Berry, Snot Berry, Apple Dumplings



**HABIT:**

Shrubby climber or scrambler with stems to 3 m long. Cream to greenish-yellow (rarely orange) flowers, spring-summer.

**HABITAT & SITE PREFERENCE:**

Mallee, forests and woodlands. Prefers well-drained soil in full or partial sun. Tolerates moderate frost. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect pale yellow, pulpy berries when ripe (seeds red-brown). Extract seeds by soaking, mashing, and rinsing. Propagate from fresh seed (may take 8-10 weeks or longer to germinate) or cuttings of firm new growth in spring/autumn.

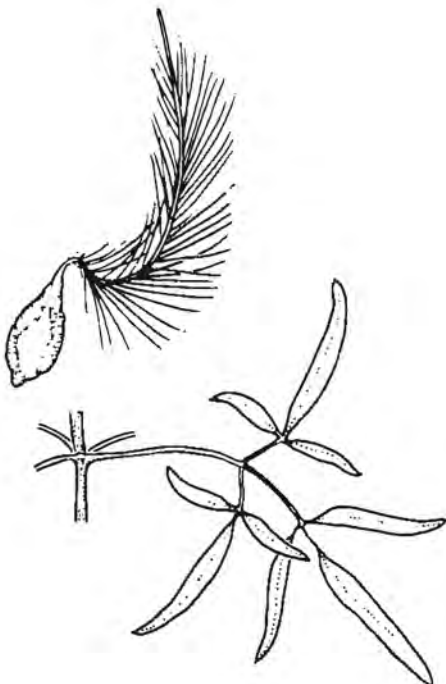
**VALUES & USES:**

Good habitat, flowers and fruit provide food for birds. Ripe fruits eaten by First Nations People (said to resemble kiwi fruit). Attractive understory plant for gardens. Flowers, leaves, and stems produce lemon-coloured dye with alum as mordant.

# *Clematis microphylla* - Small-leaved Clematis

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Old Man's Beard, Narrow-leaf Headache Vine, Kenam



**HABIT:**

Slender-stemmed, woody climber or groundcover to 3 m high, densely massed leaves, profuse creamy-white flowers, Jul-Dec. Moderate growth rate, lifespan up to several decades.

**HABITAT & SITE PREFERENCE:**

Highlands and woodlands, climbing on trees and shrubs. Prefers well-drained soil in full sun, tolerates drought, moderate frost, wet winter, dry summer soil, and full sun to full shade. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-early Mar, seeds released in 3-14 days. Attractive feathery seed balls. Propagate from seed (fresh seeds germinate in 1-3 months) or stem cuttings.

**VALUES & USES:**

Good habitat, fluffy seedheads used by birds for nests. Tough, starchy roots cooked and eaten by First Nations People, leaves used medicinally. Attractive ornamental for screening, groundcover, cascading over rocks/walls, and containers. Easily cultivated.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Slender climber with fine leaves. Mauve to rose-purple or white flowers, mainly in spring, arising from stout woody rootstock.

**HABITAT & SITE PREFERENCE:**

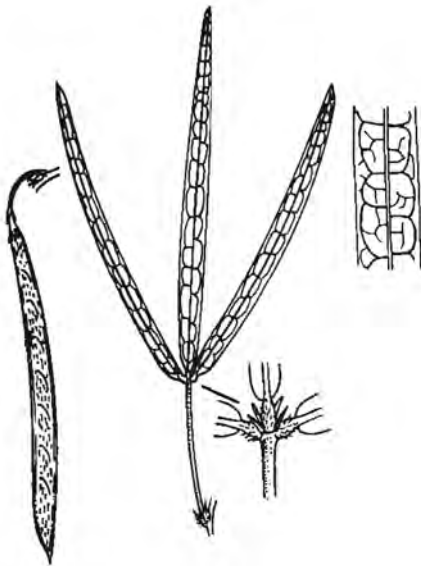
Widespread across drier slopes and hills, mostly found where grazing is excluded. Tolerates moderate frost and dry periods once established. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Oct-late Feb, seeds released very soon after maturity. Propagate from scarified seed (soak in boiling water, then dry) or cuttings taken in summer. Germination takes 3-4 weeks, direct seeding into pots is suitable (2-3 seeds per pot). Regenerates from seed and suckers, particularly after fire.

**VALUES & USES:**

Improves soil fertility through nitrogen fixation (legume). Good habitat, providing nectar and pollen for native insects. Attractive light climber for gardens, fences, and logs. Hardy when established, responds to pruning, prefers root protection. Heavily grazed by stock due to nutritional and palatable qualities.



# *Jasminum didymum* - Native Jasmine

**REGIONAL SUBSPECIES:** *J. d. lineare*

**OTHER NAMES:** Desert Jasmine

**HABIT:**

Strong climber with twining stems, forming a tangled shrub on trees up to 4 m high. Leaves with three linear lobes, small white flowers (Jul-Sep), and black berries.

**HABITAT & SITE PREFERENCE:**

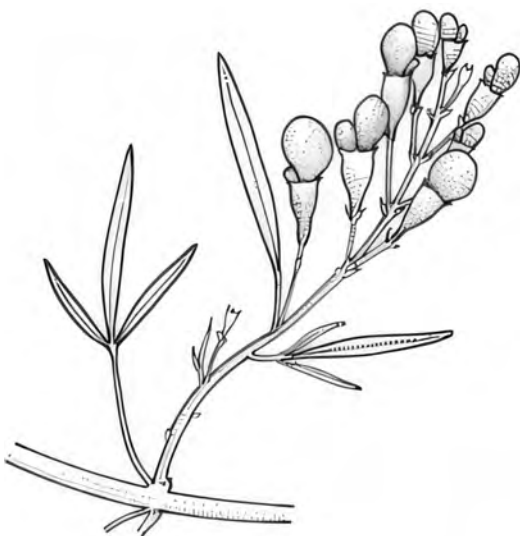
Woodland communities on variable soil. Prefers well-drained soil with partial or filtered sun. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed or cuttings which strike readily. Tolerates moderately heavy frost.

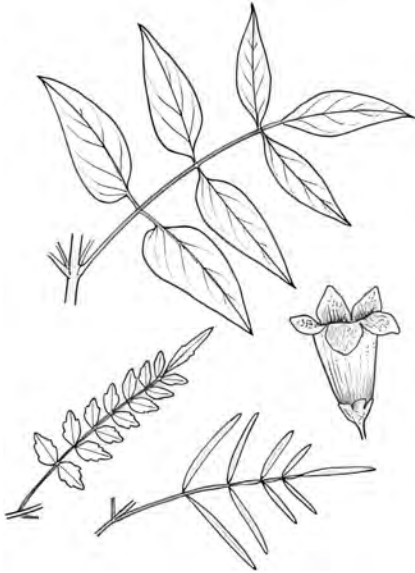
**VALUES & USES:**

Excellent fodder for stock. Hardy climber with profuse fragrant flowers, suitable for gardens. Attracts butterflies.



**REGIONAL SUBSPECIES:** *P. p.* subsp. *austrocaledonica*, *P. p.* subsp. *pandorana*

**OTHER NAMES:** Wonga Wonga Vine, Boat Vine, Spearwood



## **HABIT:**

Woody, hairless scrambler or climber with branches 2-5 m long. Leaves divided into 5-9 ovate-oblong to ovate-lanceolate leaflets. Tubular flowers, cream or whitish with dark red spots inside (Jun-Nov).

## **HABITAT & SITE PREFERENCE:**

Rock outcrops of sandstone/quartzite. Prefers 300 to 450 mm rainfall in the Riverina region.

## **SEED COLLECTION & PROPAGATION:**

Collect seeds from November to December. Propagate from fresh seed or cuttings, which strike readily. Hardy to most frost.

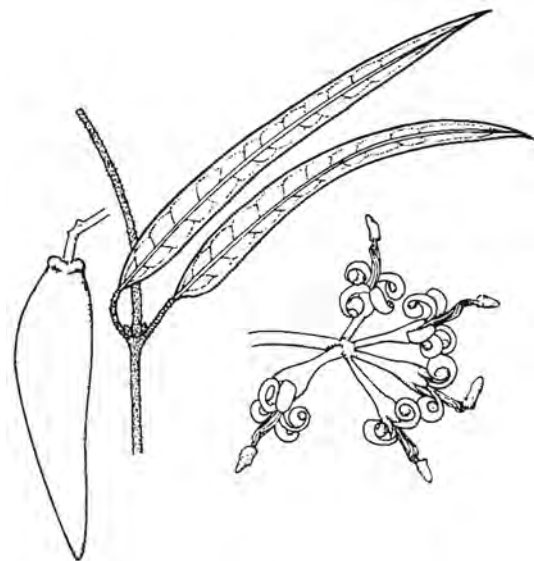
## **VALUES & USES:**

Good ornamental plant with profuse flowering.

# *Parsonsia eucalyptophylla* - Gargaloo

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Monkey Vine, Woodbine, Vinetree



## **HABIT:**

Tall, vigorous, woody climber with linear leaves. Sweetly-scented pale yellow flowers, spring-autumn. Young shoots climb by clinging roots, older plants have twining stems.

## **HABITAT & SITE PREFERENCE:**

Woodland and scrub in inland areas. Prefers 300 to 500 mm rainfall in the Riverina region.

## **SEED COLLECTION & PROPAGATION:**

Collect pods when dry but not split.

## **VALUES & USES:**

Grazed by cattle and sheep, especially in dry periods. Cut for fodder in drought.

# FERNS



COMMON NAME	BOTANICAL NAME	Page
Rock Fern	<i>Cheilanthes austrotenuifolia</i>	390
Woolly Cloak-fern	<i>Cheilanthes lasiophylla</i>	390

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Rock Lip Fern

**HABIT:**

Ground fern up to 30 cm high. Rhizome-tufted or short-creeping.

**HABITAT & SITE PREFERENCE:**

Widespread including woodlands, rocky hillslopes and pastures. Generally prefers moist, well-drained soil in full or semi-sun. Prefers from 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from division or spore. May die back over summer and re-shoot in autumn.

**VALUES & USES:**

Can be toxic to stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Woolly Cloak Fern,  
Woolly Lip Fern

**HABIT:**

Ground fern up to 30 cm high. Rhizome-tufted or short-creeping.

**HABITAT & SITE PREFERENCE:**

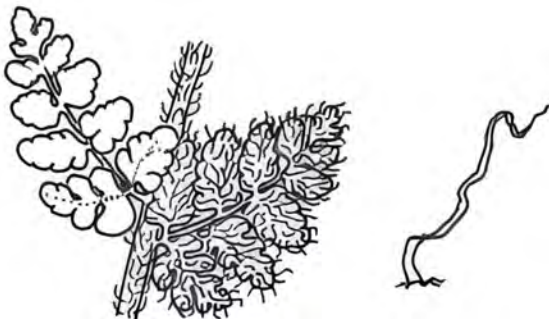
Widespread including woodlands, rocky hillslopes and pastures. Generally prefers moist, well-drained soil in full or semi-sun. Prefers from 300 to 500 mm rainfall.

**SEED COLLECTION & PROPAGATION:**

Propagate from division or spore. May die back over summer and re-shoot in autumn.

**VALUES & USES:**

Can be toxic to stock.



# GRASSES



COMMON NAME	BOTANICAL NAME	PAGE
Brush Wiregrass	<i>Aristida behriana</i>	393
Canegrass	<i>Eragrostis australasica</i>	397
Curly Windmill Grass	<i>Enteropogon ramosus</i>	396
Fairy Grass	<i>Sporobolus caroli</i>	399
Long-nosed Swamp Wallaby-grass	<i>Amphibromus macrorhinus</i>	392
Mulga Grass	<i>Thyridolepis mitchelliana</i>	400
Mulka	<i>Eragrostis dielsii</i>	397
No. 9 Wiregrass	<i>Aristida jerichoensis</i>	393
Pappus Grass	<i>Enneapogon nigricans</i>	395
Porcupine Grass	<i>Triodia scariosa</i>	400
Red Grass	<i>Bothriochloa macra</i>	394
Spear Grasses	<i>Austrostipa</i> spp.	394
Spider Grass	<i>Enteropogon acicularis</i>	396
Tussock Grasses	<i>Poa</i> spp.	398
Veined Swamp Wallaby-grass	<i>Amphibromus nervosus</i>	392
Wallaby Grasses	<i>Rytidosperma</i> spp.	399
Weeping Grass	<i>Microlaena stipoides</i>	398
Windmill Grass	<i>Chloris truncata</i>	395

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Tufted perennial grass to 1.2 m high. Spreading panicle inflorescence with loosely arranged, green or purplish spikelets, awns 10-20 mm long (Oct-Dec).

**HABITAT & SITE PREFERENCE:**

Floodplains and riverbanks. Not drought resistant. Prefers 400 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Dec-Jan. Can be propagated by division.

**VALUES & USES:**

Attractive, graceful grass for wet areas like dams, swamps, or bog gardens. Responds well to cutting back after flowering.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Tufted perennial grass to 1.2 m high. Slender, erect panicle inflorescence with loosely arranged green spikelets, awns 12-22 mm long (Oct-Jan). Attractive, graceful, weeping habit.

**HABITAT & SITE PREFERENCE:**

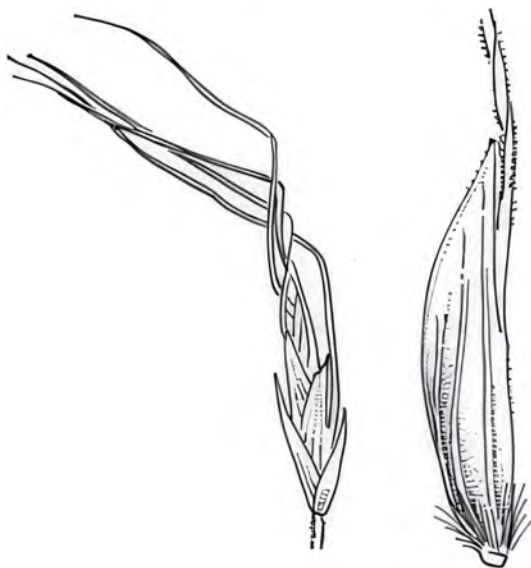
Widespread in various habitats on floodplains and riverbanks. Prefers wet areas. Coexists with *A. macrorhinus*. Prefers 400 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Dec-Feb. Propagate by division or from seed.

**VALUES & USES:**

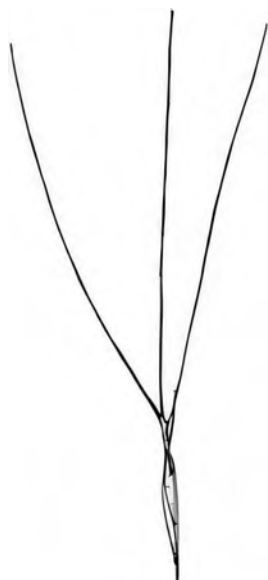
Suitable for wet areas like dams, swamps, or bog gardens. Responds well to cutting back after flowering.





**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Bunch Wiregrass, Emu Speargrass, Long-awned Wiregrass, Wiregrass, Brush Speargrass, Three-awned Grass



**HABIT:**

Short, tufted, tussocky perennial with simple erect stems to 40 cm high. Leaves mostly basal, smooth. Flowers mainly Oct-Jan.

**HABITAT & SITE PREFERENCE:**

Open woodland and grassland areas on red loamy or sandy loam soils. Also in Grey Box and Bimble Box communities on gravelly loams. Tolerates severe drought. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect mature seeds when they are pale or purplish and fall to the ground in a tangled mass. Propagate by division or from seed, though seed may be slow to germinate. Fast growth rate.

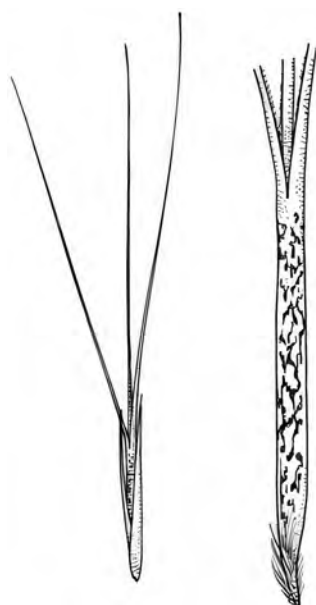
**VALUES & USES:**

Valuable as fodder during drought. Seeds are sharp and can damage animal hides and contaminate wool.

# *Aristida jerichoensis* - No. 9 Wire Grass

**REGIONAL SUBSPECIES:** *A. jerichoensis* var. *jerichoensis*, *A. jerichoensis* var. *subspinulifera*

**OTHER NAMES:** Jericho Wiregrass, Blue Speargrass, Number Nine



**HABIT:**

Tufted perennial with stem erect to 60 cm high. Leaves mostly basal. Flowers (Oct-Feb) are slender to about 12 cm long, and seeds have three awns.

**HABITAT & SITE PREFERENCE:**

Often in woodland communities on gravelly loam, clay loam and sandy loam soils. Sometimes found on deep sandy soils on sandplains. Tolerates severe drought. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Mature seeds are pale or purplish, and fall to the ground in a tangled mass. Propagate by division or from seed. Seed may be slow to germinate. Fast growth rate.

**VALUES & USES:**

Not valuable as fodder except during drought. Seeds are sharp, damage animal hides and contaminate wool.

**REGIONAL SPECIES /**

**SUBSPECIES:** *A. blackii* (Crested speargrass), *A. densiflora* (Foxtail speargrass), *A. elegantissima* (Feather speargrass), *A. mollis* (Soft speargrass), *A. nodosa* (speargrass), *A. scabra* subsp. *falcata* (Rough speargrass), *A. setacea* (Corkscrew grass)

**OTHER NAMES:** n/a

**HABIT:**

Coarsely tufted perennial grasses, up to about 1 m high. Leaves rough to touch. Seed with long awns and corkscrew twists.

**HABITAT & SITE PREFERENCE:**

Widespread across the Riverina region in many landscapes. Temperate regions. Prefer 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect hard, dark seeds when they easily part from heads, shed quickly. Propagate from one-year-old seed stored in a cool, dry place. Sow in autumn or spring.

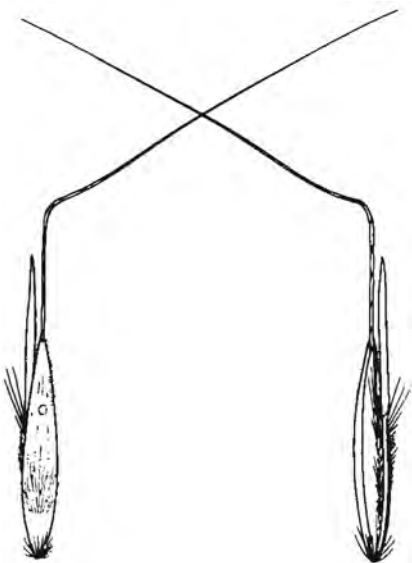
**VALUES & USES:**

Good habitat, providing food for seed-eating birds and attracting moths and butterflies. Ornamental for specimens, groundcovers, rockeries, and under trees. Moderate forage, but sharp awns can cause problems.

# *Bothriochloa macra* - Red Grass

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** Red-leg Grass, Pitted Beard Grass

**HABIT:**

Perennial, tufted grass with basal leaves. Numerous wiry stems, reddish-purple flowering stems, 30-50 cm high. Flowers mostly in summer. Summer-growing, appears red/purple after frost.

**HABITAT & SITE PREFERENCE:**

Drier open forests and low-lying sites prone to brief flooding. Tolerates severe drought and low to moderate frost. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

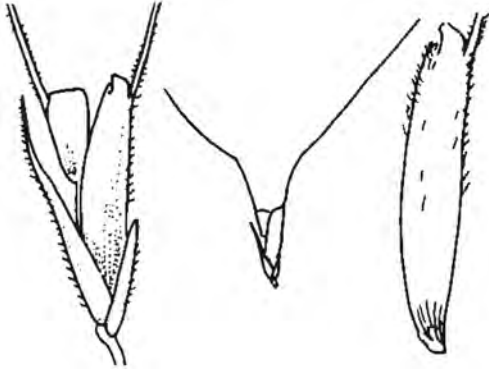
Collect late Dec-early Feb. Propagate from seed or division of tussock. Seedling establishment may be slow.

**VALUES & USES:**

Useful garden ornamental, rejuvenate by pruning or burning and watering heavily. Moderate forage value, increases under grazing pressure and increased fertility.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Umbrella Grass, Star Grass, Blow-Away Grass.



**HABIT:**

Erect, hairless perennial to 50 cm high, forming dense low crown of small fibrous leaves. Sometimes with short, branched stolons. Distinctive flower spike, late winter to summer. Relatively short-lived.

**HABITAT & SITE PREFERENCE:**

Many soil and community types, more common on red or black earths. Moderate drought tolerance, low frost tolerance. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Jan-mid Mar, seeds shed in 3-14 days. Store for 12 months or remove enclosing structures to overcome dormancy. Germinates at 15-35°C, suitable for direct seeding into pots (2-3 per pot) or field.

**VALUES & USES:**

Useful resilient lawn grass or spectacular ornamental, plant in groups. Good habitat, seeds eaten by birds, provides cover for reptiles. High forage value, but not readily grazed unless young. Increases in response to grazing and raised fertility.

# *Enneapogon nigricans* - Pappus Grass

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Black-heads, Bottlewashers, Nine-awn Grass, Niggerheads



**HABIT:**

Short-lived tufted perennial grass to 55 cm high. Flat or inrolled leaves, sometimes woolly at the base. Flowering stem densely bearded at the nodes. Inflorescence dense, ovoid and bristly, becoming dark purple or blackish as seed matures. Florets (lemma) have nine prominent awns with stiff hairs on the margins. Flowers Aug-May.

**HABITAT & SITE PREFERENCE:**

Various woodland and shrub communities on sandy or gravelly textured soils. Prefers dry, well-drained soils in open positions without competition. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Oct-Jun. Propagate by division or from seed. Seed has an after-ripening period, store for at least 3 months before sowing. Slow growth rate. Available from specialist nurseries.

**VALUES & USES:**

Ornamental, attractive flowerheads.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Large Windmill Grass, Curly Windmill Grass, Star Grass, Umbrella Grass.



**HABIT:**

Tufted perennial grass to about 40 cm high. Generally bluish-green leaves. Flowers after rain.

**HABITAT & SITE PREFERENCE:**

Often found in cracking clay soils. Tolerates drought and floods. Grows abundantly after warm-season rains. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Harvest entire seedheads by hand or with secateurs. Propagate from seed, some *Enteropogon* species may have an after-ripening period.

**VALUES & USES:**

Stabilises sandy soils. Young growth is palatable, but older growth becomes harsh and unpalatable if ungrazed.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Tufted perennial grass to about 1 m high. Generally bluish-green leaves. Inflorescence an umbel. Flowers after rain (Dec-Feb).

**HABITAT & SITE PREFERENCE:**

Grows on clayey soil or sand overlaying clay. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

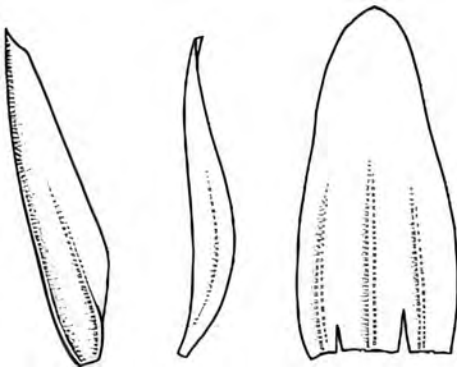
Harvest entire seedheads by hand or cut with secateurs (Dec-Feb). Propagate from seed, may have an after-ripening period, so store for 6-12 months before sowing.

**VALUES & USES:**

Stabilises sandy soils. Young growth is palatable, but older growth becomes harsh and unpalatable if ungrazed.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Tall Canegrass, Swamp Canegrass, Bamboo Grass.



**HABIT:**

Tall perennial, cane-like grass to 2.4 m high, forming tussocks or spreading clumps. Inflorescence a variable panicle. Flowers Aug-Feb.

**HABITAT & SITE PREFERENCE:**

Low-lying areas subject to periodic flooding. Slightly saline, compact, heavy clay soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

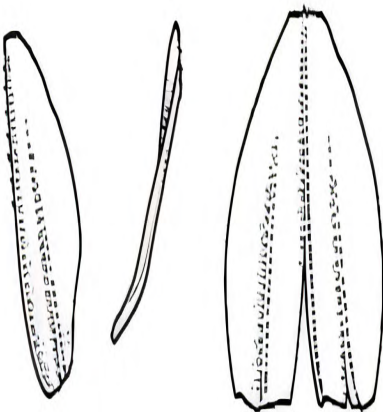
Readily by division of rhizomes.

**VALUES & USES:**

Useful for larger ponds and dams as a windbreak and shelter for birds and fish. Has been used as a construction material, such as thatching.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Lovegrass, Mallee Lovegrass



**HABIT:**

Short-lived perennial grass to 30 cm high. Flowerhead a dense, one-sided, spike-like panicle. Flowers any time of the year.

**HABITAT & SITE PREFERENCE:**

Often found on sandy red earth on sandplains. Prefers 250 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate by seed or division.

**VALUES & USES:**

A high forage producer and useful in protecting sandy soils against erosion.

**REGIONAL SUBSPECIES:** *M. s.* var. *brevisetata*, *M. s.* var. *stipoides*

**OTHER NAMES:** Meadow Rice-grass



## **HABIT:**

Tufted slender perennial grass to 70 cm high. Green all year with rhizomes. Slender green drooping flowerhead, summer-autumn, and throughout the year.

## **HABITAT & SITE PREFERENCE:**

Moist, well-drained, moderately to highly fertile soils in semi-shaded areas. Common along creeklines. Tolerates drought and frost. Prefers 300 to 500 mm rainfall in the Riverina region.

## **SEED COLLECTION & PROPAGATION:**

Collect light-brown ripe seed by running stems through fingers when mature, as seeds drop easily. Propagate from seed (germinates readily) or division.

## **VALUES & USES:**

Good habitat, providing cover for reptiles and seeds for native birds. Food for butterfly caterpillars. Decorative ornamental for rockeries, groundcover under trees, and low-maintenance native lawns. Good forage, highly competitive, increases under grazing and rising fertility.

# *Poa spp.* - Tussock Grasses

**REGIONAL SPECIES:** Many, including: *P. labillardieri* (Tussock Grass), *P. sieberiana* (Fine-leaf Tussock Grass)

**OTHER NAMES:** n/a



## **HABIT:**

Tufted annuals or perennials, often forming large tussocks. Sometimes with rhizomes or stolons. Generally flower in spring.

## **HABITAT & SITE PREFERENCE:**

Widespread and common throughout region. Prefer 300 to 500 mm rainfall in the Riverina region.

## **SEED COLLECTION & PROPAGATION:**

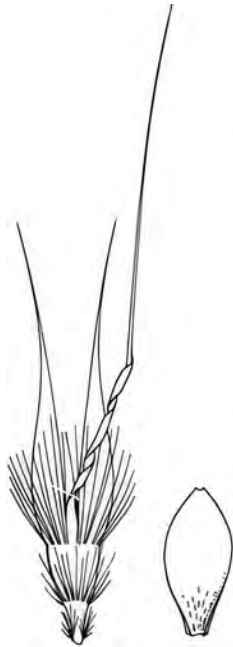
Collect seeds when seedheads turn light brown. Propagate from seed (stratify for 3 weeks to improve germination) or by division (easier).

## **VALUES & USES:**

Useful for controlling soil erosion. Good habitat, providing refuge for small birds and reptiles. Important habitat for insects, seeds eaten by native birds. Some species are valuable fodder. Attractive grasses for rockeries and other gardens, plant in groups for best effect. Rejuvenate by cutting back or burning, then watering heavily.

**REGIONAL SPECIES / SUBSPECIES:** *refer to text*

**OTHER NAMES:** *n/a*



**HABIT:**

Tufted perennial grasses with fine leaves and fluffy seedheads. Grows year-round.

**HABITAT & SITE PREFERENCE:**

Variable soil and vegetation types. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed when seedheads turn off-white, dry out, and start to disintegrate. Propagate from surface-sown seed, division of clumps, or transplants. Fast growth rate. Tolerates severe frost and drought. Recommended species: *R. bipartita*, *R. caespitosum* (Common Wallaby Grass), *R. duttonianum* (Brown-black Wallaby Grass), *R. erianthum* (Hill Wallaby Grass) [pictured], *R. fulvum*, *R. laeve*, *R. linkii* var. *fulvum* (Wallaby Grass), and *R. setaceum* (Bristly Wallaby Grass). Available from specialist nurseries.

**VALUES & USES:**

Excellent grazing value and a vital part of natural pastures; valued for persistence, palatability, and productivity. Beneficial on recharge areas. Tends to produce high-quality forage in winter and withstands seasonal grazing. Provides excellent habitat, serving as food for seed-eating birds and cover for reptiles, including legless lizards. Also a food source for native grazers and butterfly larvae. Offers excellent contrast in native landscaping and rockeries. Rejuvenate old plants by severe trimming or burning, followed by watering to encourage growth.

# Sporobolus caroli - Fairy Grass

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yakka Grass



**HABIT:**

Slender annual or perennial grass to 60 cm high, often dense and leafy at base. Flowers mostly summer-autumn and after rain.

**HABITAT & SITE PREFERENCE:**

Floodplains of inland rivers and creeks. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

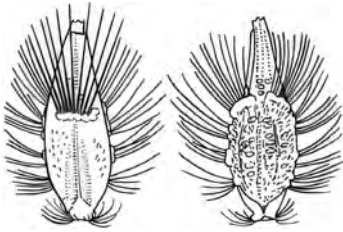
Collect mature seed heads when available. Propagate from seed after allowing for an after-ripening period.

**VALUES & USES:**

Useful coloniser of scalds due to prolific seed production. Useful summer-growing grass, provides quality feed, especially when other feed is scarce.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Mulga Mitchell, Window Mitchell Grass, Soft Wanderrie



**HABIT:**

Perennial grass to 30 cm high. Tufted, numerous stems. Pointed, relatively thick leaves on stems. Flowerhead a dense, spike-like panicle (Sep-May).

**HABITAT & SITE PREFERENCE:**

Bimble Box, Mulga, and Cypress Pine communities. Often on red earth soils. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate from seed.

**VALUES & USES:**

Useful grazing species.

# Triodia scariosa - Porcupine Grass

**REGIONAL SUBSPECIES:** *T. s. subsp. scariosa*, *T. s. subsp. yelarbonensis*

**OTHER NAMES:** Southern Porcupine Grass, Spinifex



**HABIT:**

Perennial forming tussocks and hummocks, 45 cm to 1 m high. Folded, blade-pointed leaves. Flowers in response to rain (Sep-Dec).

**HABITAT & SITE PREFERENCE:**

Mallee areas. Prefers 300 to 450 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

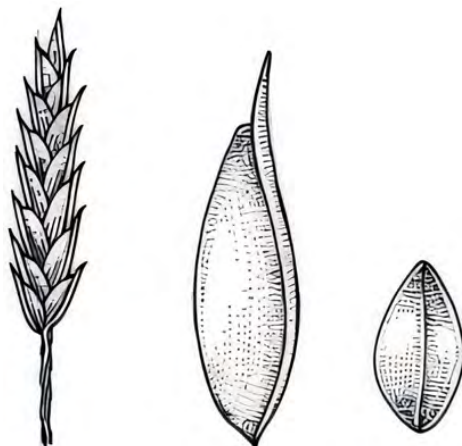
Collect seed Dec-Mar. No after-ripening period, highly viable when surface sown or lightly covered.

**VALUES & USES:**

Numerous threatened species and ecosystems are reliant on this foundation species, such as emu, grasswrens and small mammals. First Nations People valued this plant for its resin.



# RUSHES, SEDGES & WATER PLANTS



COMMON NAME	BOTANICAL NAME	PAGE
Australian Mudwort	<i>Limosella australis</i>	407
Common Nardoo	<i>Marsilea drummondii</i>	408
Common Reed	<i>Phragmites australis</i>	411
Common Spike-rush	<i>Eleocharis acuta</i>	404
Common Water-milfoil	<i>Myriophyllum crispatum</i>	409
Cumbungi	<i>Typha</i> spp.	413
Hyssop Loosestrife	<i>Lythrum hyssopifolia</i>	408
Mud Grass	<i>Pseudoraphis spinescens</i>	412
Pale Spike-rush	<i>Eleocharis pallens</i>	405
Pondweed	<i>Potamogeton</i> spp.	411
Ribbed Spike-rush	<i>Eleocharis plana</i>	405
Ribbonweed	<i>Vallisneria australis</i>	413
Rushes	<i>Juncus</i> spp.	406
Sedges	<i>Carex</i> spp.	402
Sedges	<i>Cyperus</i> spp.	403
Starfruit	<i>Damasonium minus</i>	403
Swamp-lily	<i>Ottelia ovalifolia</i>	410
Tall Spike-rush	<i>Eleocharis sphacelata</i>	406
Water-milfoil	<i>Myriophyllum papillosum</i>	409
Water Plantain	<i>Alisma plantago-aquatica</i>	402
Water Primrose	<i>Ludwigia peploides</i>	407
Water Ribbons	<i>Cycnogeton procerum</i>	412
Waterwort	<i>Elatine gratioloides</i>	404
Wavy Marshwort	<i>Nymphoides crenata</i>	410

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Erect emergent aquatic perennial to 1.5 m high, pale pink or almost white flowers in summer.

**HABITAT & SITE PREFERENCE:**

Shallow margins of creeks and swamps to 50 cm deep, and drying mud. Prefers 400 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect tan-brown seeds mid Dec-late Jan, they shed in 3-14 days. Propagate by dividing rootstock or using the bog method for seeds.

**VALUES & USES:**

Valuable part of aquatic environment, providing food for native wildlife. Useful in farm dams. Ornamental for garden ponds, easily grown.



# *Carex spp.* - Sedges

**REGIONAL SPECIES:** *C. appressa* (Tall Sedge), *C. breviculmus*, *C. inversa* (Knob Sedge), *C. tereticaulis*

**OTHER NAMES:** *n/a*

**HABIT:**

Perennial grass or rush-like tussocky plants. Tussocks vary in height and width between species; *C. appressa* to 1 m high and 1 m wide.

**HABITAT & SITE PREFERENCE:**

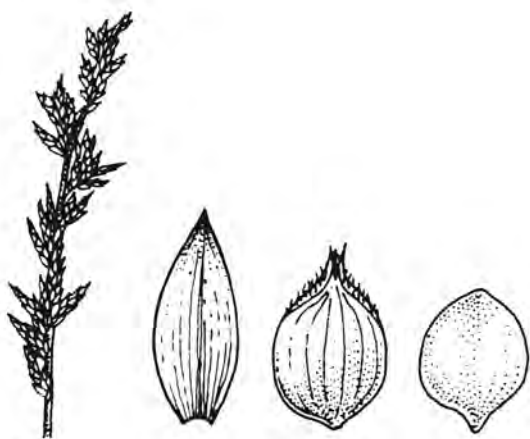
Poorly-drained areas, along watercourses and swamp margins. Prefer 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Cut seedheads when dry and golden-brown. Dry in paper bags and rub to extract seed. Propagate by division of rhizomes or from seed using the bog method (keep seed tray in water).

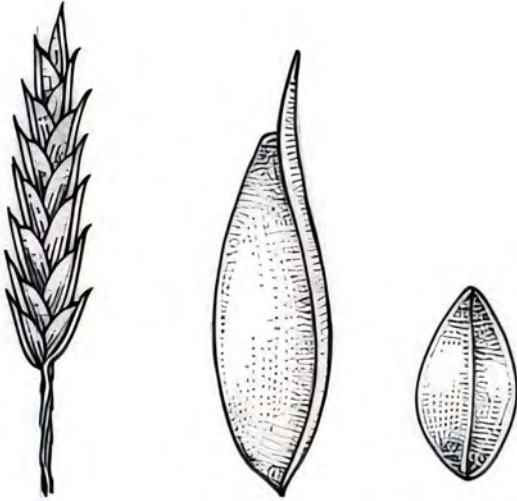
**VALUES & USES:**

Valuable in preventing creekbank erosion and slowing water movement due to fibrous roots. Excellent habitat and cover for frogs and insects. Food plants for butterfly caterpillars. Some species are ornamental for garden ponds.



**REGIONAL SUBSPECIES:** refer to text

**OTHER NAMES:** n/a



**HABIT:**

Tufted perennial sedges. Size and flowering vary between species; *C. exaltatus* tussocks to 1.8 m high

**HABITAT & SITE PREFERENCE:**

Near water: creek and river banks, lake shores, and swamp margins. Prefer 300 to 500 mm rainfall in the Riverina region. Can become weedy in irrigation channels.

**SEED COLLECTION & PROPAGATION:**

Collect seed January to February. Propagate from seed or by division of rhizomes. Recommended species: *C. exaltatus* (Giant Sedge) [pictured] and *C. gymnocaulos* (Spiny Sedge).

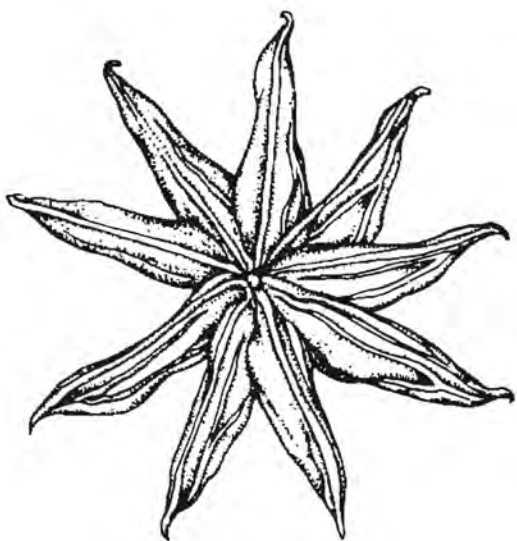
**VALUES & USES:**

Valuable for soil erosion control along streams due to fibrous roots. Provides good habitat for small birds and frogs, and food for caterpillars of native butterflies and moths. Ornamental for wet garden positions or as an emergent aquatic. Occasionally utilised by stock in poor feed times.

# Damasonium minus - Starfruit

**REGIONAL SUBSPECIES:** n/a

**OTHER NAMES:** n/a



**HABIT:**

Erect emergent annual or short-lived perennial to 1 m high, with floating and/or emergent leaves. White or pink flowers in early summer.

**HABITAT & SITE PREFERENCE:**

Shallow stationary or slow-moving freshwater up to 30 cm deep, in various habitats. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect late Dec-late Jan, seeds shed in 3-14 days. Propagate from seed or transplants.

**VALUES & USES:**

Useful in farm dams. Attractive ornamental for garden ponds. Occasionally grazed by cattle, but only sparingly.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Mat-forming herb spreading to 15 cm diameter, or with stems up to 40 cm high when submerged. Leaves are ovoid, 2-5 mm long (or up to 15 mm on submerged plants). Small, inconspicuous, green or pink flowers nestled in only one leaf axil per pair. Short-lived.

**HABITAT & SITE PREFERENCE:**

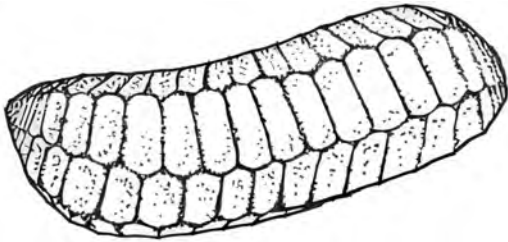
On wet mud beside lakes, dams, watercourses, and occasionally in still or slow-moving water to 1 m deep. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Mar. Propagate from stem pieces or from seed sown onto mud or using the bog method. Fast growth rate.

**VALUES & USES:**

Useful for stabilising wet areas around dams or wetlands, as it can be fast-growing in strong light.



# *Eleocharis acuta* - Common Spike-rush

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Fast growing perennial forming vertical, fine, leafless, grey-green, hollow stems. Has a short rhizome. Forms dense stands under favourable conditions. Flowers at tips of stems and are usually dark-brown or variegated (Sep-May).

**HABITAT & SITE PREFERENCE:**

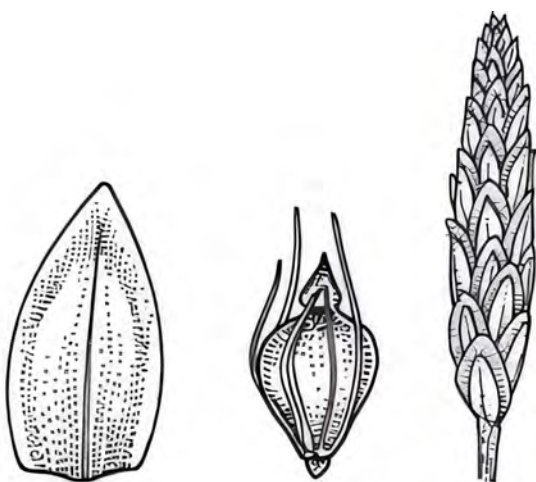
In shallow water in streams, swamps, gilgais, drains, roadside table-drains and depressions where water lies periodically. Common in margins of irrigation channels. Prefers clay sediment. Wet or flooded soils and moist situations. Grows year-round if sufficient moisture available. Dense growth may reduce irrigation channel flow, but probably removes pollutants from waste water. Prefers 300-500 mm rainfall in Riverina region.

**SEED COLLECTION & PROPAGATION:**

Seedheads turn dry and brown when ripe. Easily propagated by division of rhizome in spring or early summer, or from seed using bog method.

**VALUES & USES:**

Useful for ponds, edges of dams and bog gardens. Best planted over summer (establishes easily, but may spread rapidly in shallow water). Useful protection for waterbirds and fish in dams. Important for some frog species, such as Sloane's Froglet which lay their eggs on the fine stems. Fruit a food source for wildlife. Tubers can be eaten raw, baked, or ground into flour.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Perennial aquatic. Rhizomes very short, stems densely tufted. Densely flowered, brown or tawny flowerheads. Forms dense stands in favourable conditions.

**HABITAT & SITE PREFERENCE:**

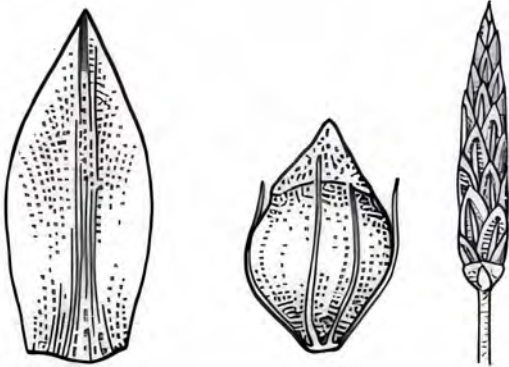
Clay soils in shallow water of swamp margins, gilgais, lakebeds, roadside drains, and claypans. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed in Jan. Propagate by division.

**VALUES & USES:**

Provides cover for young fish. Could be used around the margins of ponds and dams.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Perennial aquatic with long, creeping rhizomes. Stems flattened and broad, wider than the pallid or brownish flowerheads.

**HABITAT & SITE PREFERENCE:**

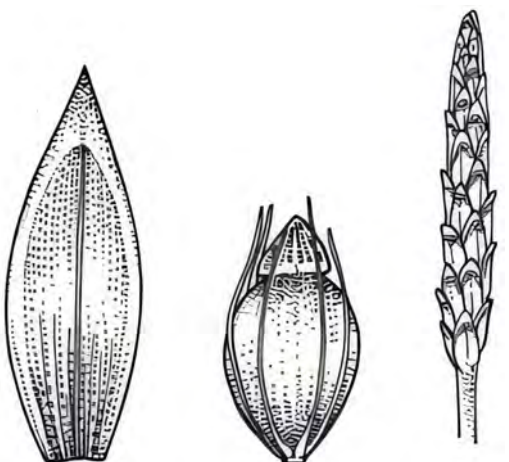
Little known about specific habitat requirements, but thought to occur on heavy clay soils. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed in Jan. Propagate by division.

**VALUES & USES:**

Useful for plantings in dams, ponds, and water gardens.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Very robust perennial aquatic with a stout rhizome and big hollow stems 4-12 mm wide, forming dense stands.

**HABITAT & SITE PREFERENCE:**

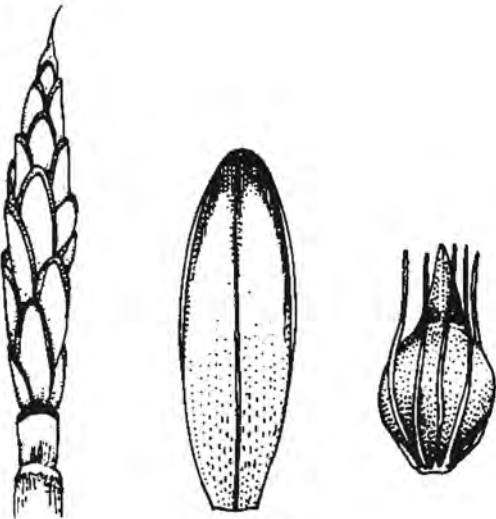
Relatively still water to 2 m deep, but commonly 90 cm deep. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect mid-late Jan, monitor closely as mature seeds shed in 3-14 days. Propagate by seed and division.

**VALUES & USES:**

Excellent cover for waterfowl and fish in dams. Ornamental for garden ponds. Good summer-growing stock forage.



# *Juncus* spp. - Rushes

**REGIONAL SPECIES /**

**SUBSPECIES:** *J. aridicola* (Tussock Rush), *J. flavidus* (Yellow Rush), *J. ingens* (Giant Rush), *J. radula* (Hoary Rush), *J. subsecundus* (Finger Rush) and *J. usitatus* (Common Rush).

**OTHER NAMES:** *n/a*

**HABIT:**

Annual or perennial erect or spreading tussocky herbs. Tussocks vary in height and width between species; *J. ingens* 1.5- 5 m high.

**HABITAT & SITE PREFERENCE:**

In or near water in seasonally wet places. Common on clays and clay loams. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-early Mar when seedheads are fully formed and brown, seeds shed in 3-14 days. Dry in paper bag and sieve to extract. Propagate from fresh seed using the Bog method (keep seed tray in water) or by division of rhizomes in clumps 5-10 cm or larger.

**VALUES & USES:**

Useful for soil erosion control along watercourses and around dams due to fibrous roots. Excellent habitat for small birds, frogs, fish, and crustaceans. Seeds likely eaten by finches, pigeons, and parrots. Some species have ornamental potential for wet areas in gardens.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*

**HABIT:**

Semi-aquatic, mat-forming, tufted forb. Leaves linear-oblong, shorter than the stalk, and erect. Flowers pink or whitish (Dec-Feb).

**HABITAT & SITE PREFERENCE:**

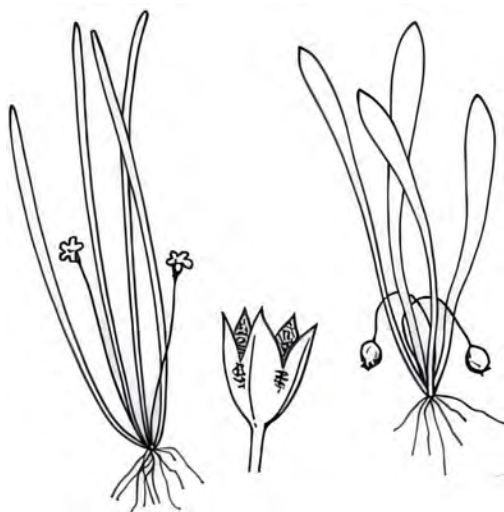
Areas where shallow water pools for a considerable time. Wet areas with plenty of sun. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate by seed or division of stolons. Hardy to most frost.

**VALUES & USES:**

Useful for edges of garden ponds.



# *Ludwigia peploides* - Water Primrose

**REGIONAL SUBSPECIES:** *L. p.*  
*subsp. montevidensis*

**OTHER NAMES:** *n/a*

**HABIT:**

Prostrate, often villous herb, 10 cm to 1 m high, rooting at nodes or floating. Glossy green leaves on floating stems up to 4 m long, prolific bright yellow flowers in summer-autumn.

**HABITAT & SITE PREFERENCE:**

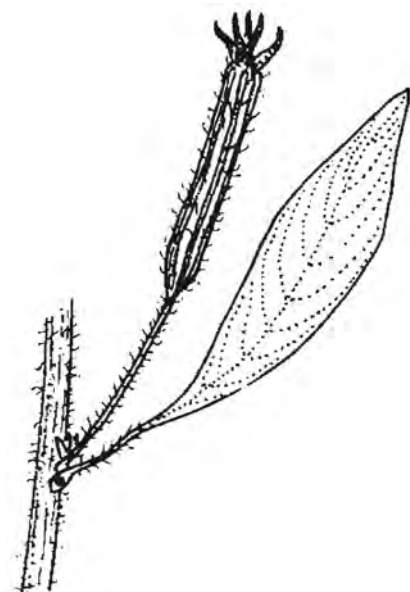
Low areas subject to flooding, margins of lakes, and streambanks. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect mature seed capsules when available. Propagate from cuttings (strike readily) or seed.

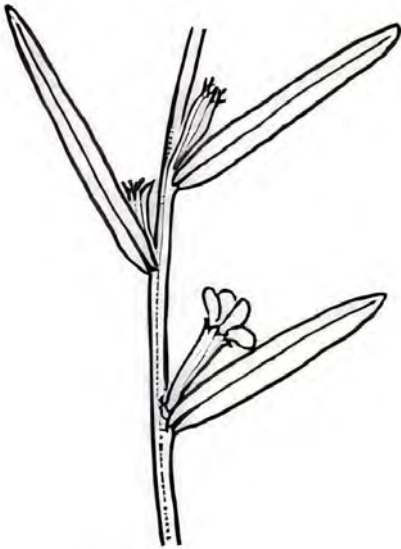
**VALUES & USES:**

Useful in dams. Highly ornamental due to attractive leaves and flowers. Grazed sparingly by stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Erect or spreading annual herb to 50 cm high. Glabrous, ribbed stems up to 60 cm long; linear to oblong leaves up to 4 cm long; and diminutive blue, purple or pink flowers in leaf axils (Sep-Feb).

**HABITAT & SITE PREFERENCE:**

On damp or flooded sediments. Grows in a wide range of soil and climatic conditions. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed Nov-Feb. Propagate from seed which germinates easily. Fast growth rate. Frost hardy. Tolerates both sunny and shaded sites. Sometimes regarded as weedy, but quite inoffensive.

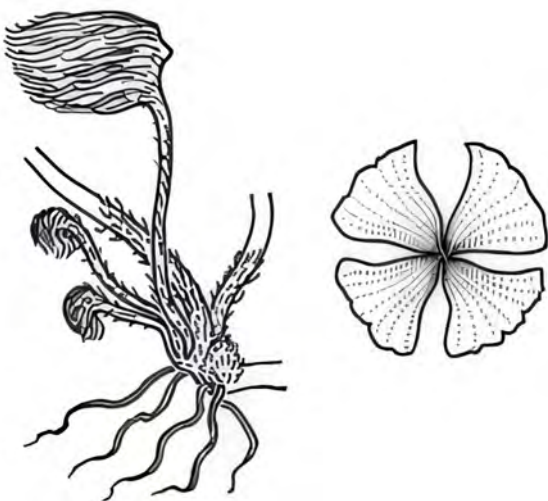
**VALUES & USES:**

Excellent pioneer plant in disturbed areas.

# *Marsilea drummondii* - Common Nardoo

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Southern Cross, Dullum Dullum



**HABIT:**

Rhizomatous, perennial, semi-aquatic fern, less than 20 cm high, with silky floating leaves. Appears as a mat of glossy green carpet. Distinctive fronds appear clover-like. Produces spores from capsules (sporocarps) from Nov-Mar.

**HABITAT & SITE PREFERENCE:**

Ephemeral swamps, stationary and slow-moving water bodies, and adjacent drying areas. Prefers damp places in seasonally waterlogged soils in full sun. Prefers 300 to 500 mm rainfall in the Riverina region. Dislikes drought.

**SEED COLLECTION & PROPAGATION:**

Propagate by spores or division. Fast growth rate. Fruits as waters recede. Following dry periods, old plants are capable of re-absorbing water and growing.

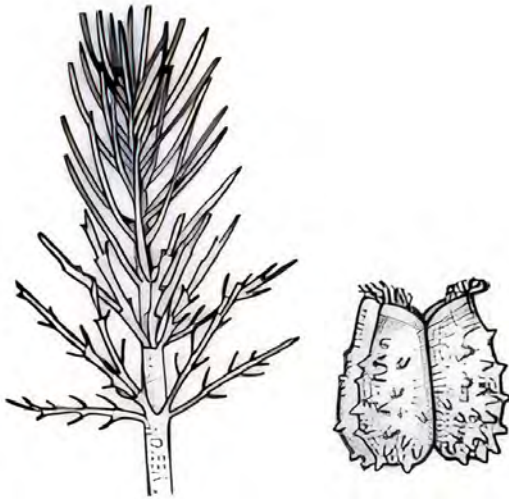
**VALUES & USES:**

Attractive plant for bog gardens, pond edges, and aquaria. Without being invasive, may cover large areas in ideal situations. First Nations People made edible flour from the sporocarps. Toxic to stock when grazed heavily.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** *n/a*



**HABIT:**

Stout, perennial aquatic or marsh herb, rooting at the nodes in mud, with stems 25-60 cm high, and usually hairy. Submerged leaves pinnate, in whorls of 5-8 mm broad and 10-40 mm long. Emergent leaves in whorls of 6-9, narrow and 5-20 mm long. Inconspicuous red-brown flowers (Oct-Apr). Forms dense underwater masses. Distinguished from relatives by the presence of crisped hairs on stems and leaf bases.

**HABITAT & SITE PREFERENCE:**

Swamps, still or flowing water. Areas that dry to mud in summer. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Early December to mid-March. Propagate from cuttings, from seed, or division of layered stems. Fast growth rate. Can form dense growth in irrigation channels in summer and is considered by some to be a problem.

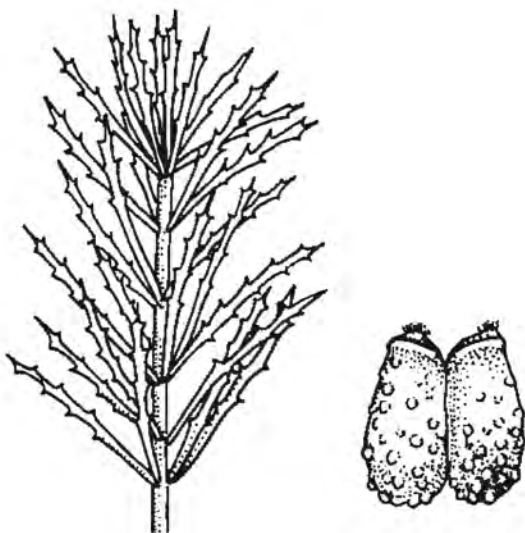
**VALUES & USES:**

Useful for dams. Oxygenates water and filters out pollutants. Provides food, shelter, and breeding sites for fish. Easily trampled but apparently not palatable to stock.

# *Myriophyllum papillosum* - Water-milfoil

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Common Water-milfoil



**HABIT:**

Aquatic or fully emergent perennial herb, rooting at nodes, trailing stems to 2 m, erect stems to 20 cm. Inconspicuous flowers.

**HABITAT & SITE PREFERENCE:**

Still or slow-moving freshwater to 1 m deep, stems extend into deeper water. Also in damp areas around lakes and swamps. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-mid Mar. Propagate from cuttings, seed, or division of layered stems.

**VALUES & USES:**

Useful for dams. Attractive ornamental for garden ponds.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Yellow Fringe

**HABIT:**

Robust perennial with floating bright green waxy leaves, floating stolons to 2 m long, and fringed yellow flowers about 3 cm across, blooming spring-autumn.

**HABITAT & SITE PREFERENCE:**

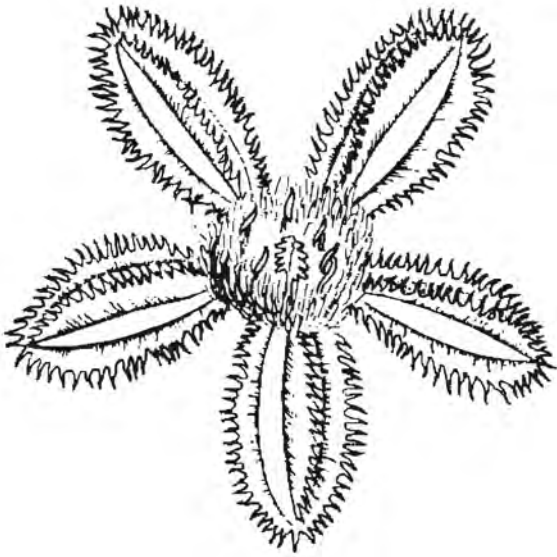
Mud and drying mud or slow-moving water up to 1.5 m deep. May be frost sensitive. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate by division.

**VALUES & USES:**

Useful in dams and ornamental for garden ponds.



# *Ottelia ovalifolia* - Swamp-lily

**REGIONAL SUBSPECIES:** *O. o.*  
subsp. *ovalifolia*

**OTHER NAMES:** *n/a*

**HABIT:**

Tufted aquatic perennial herb with submerged and floating leaves. Flowers emerge above water on stalks up to 30cm long, white with a maroon base, and appear Nov-Mar.

**HABITAT & SITE PREFERENCE:**

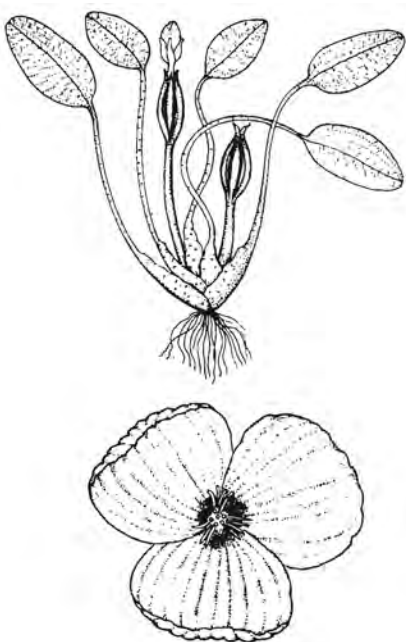
Slow-moving or stationary freshwater up to 1 m deep, often in water with high nutrient levels. Frost resistant. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect early Dec-late May. Immature fruit is withdrawn underwater where it matures and produces numerous finely hairy seeds, 2-3 mm long. Propagate from seed, germinates readily on mud and in warm shallow water. Keep seedling leaves submerged.

**VALUES & USES:**

Useful in dams and ornamental for garden ponds or aquariums. Not known to be grazed by stock.



**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Phragmites, Cane Grass, Djarg



**HABIT:**

Semi-aquatic, bamboo-like perennial grass, up to 4 m high, with strongly creeping rhizomes.

**HABITAT & SITE PREFERENCE:**

Permanently or seasonally inundated areas with high water tables, including marshes, lagoons, and creek/river banks. Prefers fresh or slightly brackish water up to 2 m deep, on mud or sand. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect in late autumn to mid-winter. Propagate by division in spring, seed using the Bog method (keep seed tray in water), layering, stem cuttings in spring, or rhizome cuttings. Fast-growing.

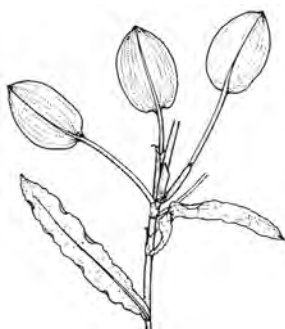
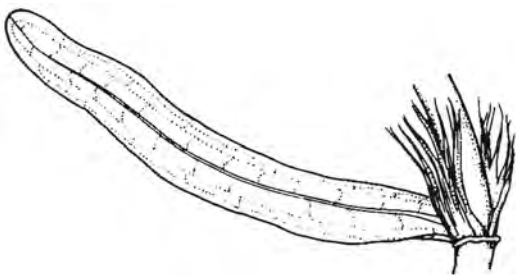
**VALUES & USES:**

Excellent for streambank erosion control and siltation filtering. Provides habitat for waterbirds and fish. Attractive waterside plant for large ponds.

# Potamogeton spp. - Pondweed

**REGIONAL SPECIES / SUBSPECIES:** *refer to text*

**OTHER NAMES:** *n/a*



**HABIT:**

Aquatic forb with leaves floating on the surface and flower spikes rising above the water. Flowers Oct-May.

**HABITAT & SITE PREFERENCE:**

Thrives in fresh water up to 4 m deep, whether still or fast-flowing. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect seed from January to November. Propagate from seed, cuttings, or division. Fast growth rate. Tolerates cold water but may choke irrigation channels. Recommended species include *P. crispus* (Curly Pondweed), *P. ochreatus* (Blunt Pondweed), and *P. tricarinatus* (Floating Pondweed).

**VALUES & USES:**

Provides habitat and food for freshwater wildlife. Also an attractive plant for dams and ponds.

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Spiny Mud-grass, Floating Couch Grass, Water Couch Grass

**HABIT:**

Semi-aquatic, stoloniferous perennial grass, growing in tufts on mud or as a floating mass in shallow water. Stolons can reach up to 10 m long. Flowers Dec-May.

**HABITAT & SITE PREFERENCE:**

Usually found on clay soils around the edges of permanent water areas. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Grows vegetatively from fragments.

**VALUES & USES:**

Useful in preventing river and creek bank erosion.



# *Triglochin procerum* - Water Ribbons

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Swamp Arrowgrass, Ngareli, Pol-an-go

**HABIT:**

Robust rhizomatous emergent perennial aquatic with tuberous roots, semi-erect or floating leaves, and tall greenish cylindrical flower/seed spike.

**HABITAT & SITE PREFERENCE:**

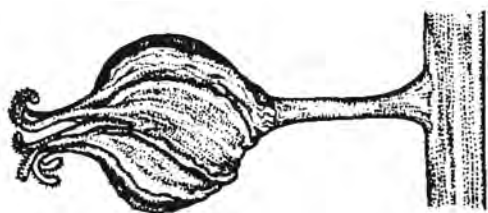
Most freshwater situations in water up to 2 m deep, including billabongs, soaks, flooded hollows, sluggish rivers, and fast-flowing mountain streams. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Collect late Jan-late May, seeds shed in 3-14 days. Fruit consists of 6 elongated chambers (5-10 mm) that separate and fall. Propagate from seed (germinates readily in shallow water in autumn) or transplants.

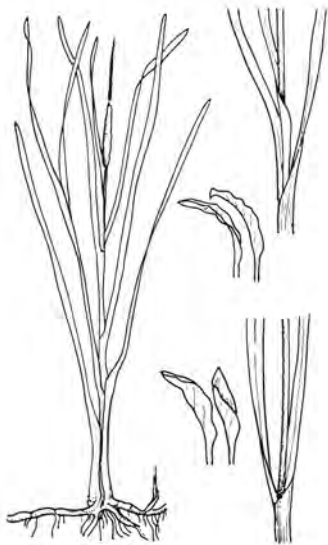
**VALUES & USES:**

Useful in dams, provides habitat for waterbirds and fish. Edible tubers roasted and pounded by First Nations People.



**REGIONAL SPECIES:** *T. domingensis*, *T. orientalis*

**OTHER NAMES:** Bulrush, Cat's Tail, Reed-mace, Wonga, Miranda, Narrow-leaf Cumbungi, Gumbung



**HABIT:**

Erect robust semi-aquatic perennial to 4 m high. Vigorous in summer.

**HABITAT & SITE PREFERENCE:**

Streams, swamps, lakes, and water-filled depressions in fresh or slightly brackish water up to 2 m deep. Salt tolerant. Prefer 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Seed dispersed by wind and water. Each spike contains ~200,000 seeds. Propagate from seed or by division.

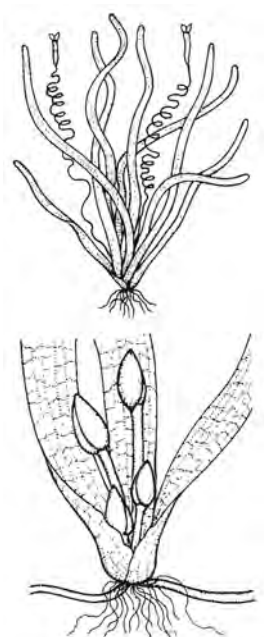
**VALUES & USES:**

Useful for extracting pollutants from water and reducing evaporation in swamps/lakes. Excellent habitat for waterfowl and frogs. Can become a weed in irrigation channels and shallow creeks. Control by cutting below waterline in autumn.

# *Vallisneria australis* - Ribbonweed

**REGIONAL SUBSPECIES:** *n/a*

**OTHER NAMES:** Eel-weed, Eelweed



**HABIT:**

Submerged tufted stoloniferous perennial aquatic with strap-like leaves and inconspicuous flowers during warmer months.

**HABITAT & SITE PREFERENCE:**

Stationary or flowing freshwater to about 4 m deep. Prefers 300 to 500 mm rainfall in the Riverina region.

**SEED COLLECTION & PROPAGATION:**

Propagate by division. Reproduces mainly from stolons.

**VALUES & USES:**

Wildlife value, as rhizomes are eaten by Black Swans. Can be a weed in irrigation channels.





# **PART FOUR**

## Glossary, References & Index



RIVERINA



# GLOSSARY OF TERMS

<b>Abiotic:</b>	Non-living factors that can harm plants, such as air pollution or salty soil.
<b>Acclimation:</b>	Helping plants adapt to a new environment, important in Australia's varied climates.
<b>Adaptation:</b>	Features that allow plants to grow in specific conditions.
<b>Agroforestry:</b>	A land management method that combines farming with growing trees.
<b>Anabranch:</b>	A section of a river or stream that diverts from the main channel and then rejoins it further downstream.
<b>Annual:</b>	A plant that completes its life cycle, from germination to seed production, within one year.
<b>Aquatic:</b>	Living in water.
<b>Arboreal:</b>	Of or living in trees.
<b>Biodiversity:</b>	The variety of living things in an area.
<b>Biomass:</b>	The total mass of living organisms in a given area or volume.
<b>Billabong:</b>	An Australian term for a backwater or oxbow lake, formed when a river changes course.
<b>Bog Method:</b>	A method of propagation where the seed tray is placed in a container of water, to keep the seed continually waterlogged or boggy. It is highly recommended for species with fine seed.
<b>Biosecurity:</b>	Procedures or measures designed to protect an environment from harmful biological agents, such as pests and diseases.
<b>Bipinnate:</b>	A leaf divided twice into leaflets.
<b>Boom and bust:</b>	A cycle of economic or ecological growth followed by a sudden decline.
<b>Brackish:</b>	Slightly salty water, as is often found in estuaries.
<b>Browsing:</b>	The act of feeding on leaves, shoots, and other vegetation by animals like deer, goats, and kangaroos.
<b>Canopy:</b>	The upper layer or crown of the trees in a forest, forming a more or less continuous layer of foliage.
<b>Capsule:</b>	A dry fruit that splits open to release seeds.
<b>Catchment:</b>	An area of land where water collects and drains off into a common outlet, such as a river, bay, or other body of water.



<b>Climate analogue:</b>	A region that experiences similar climatic conditions to another region, either in the present or projected future.
<b>Community:</b>	All the living things (normally including plants and animals) in a particular area.
<b>Compaction:</b>	The process by which soil becomes denser and less porous, often due to heavy machinery or livestock traffic.
<b>Contour:</b>	A line on a map joining points of equal height above or below sea-level.
<b>Coppice:</b>	New growth from tree stumps after the tree is cut down.
<b>Corm:</b>	A rounded underground storage organ present in plants such as crocuses and gladioli, consisting of a swollen stem base covered with scale leaves.
<b>Corridor:</b>	A strip of habitat that connects different areas.
<b>Crash grazing:</b>	A method of intensive grazing for a short duration, often used to manage vegetation or control weeds.
<b>Cubic metre (m<sup>3</sup>):</b>	The unit of measurement used for wood volume ( 1m X 1 m X 1 m)
<b>Cultivation:</b>	The preparation of land for growing crops; tillage.
<b>Dioecious:</b>	Male and female flowers on different plants.
<b>Discharge zone:</b>	An area where groundwater emerges at the surface, often associated with salinity issues.
<b>Drip zone:</b>	The area beneath the outermost circumference of a tree's canopy, where water drips from the leaves to the ground.
<b>Drupe:</b>	A fleshy fruit with a hard stone inside, like a peach.
<b>Dryland salinity:</b>	An increase in salt concentration in the soil in non-irrigated areas, often caused by rising groundwater.
<b>Ecosystem:</b>	The complex relationship between living things and their environment.
<b>Edge effect:</b>	The changes in population or community structures that occur at the boundary of two habitats.
<b>Embryo:</b>	The developing plant inside a seed.
<b>Emergent:</b>	A plant that grows in water but pierces the surface so that it is partially in air.
<b>Environmental weed:</b>	A plant that is not native to a particular area and has the potential to cause harm to the environment, economy, or human health.

<b>Epicormic shoots:</b>	New shoots growing from a tree trunk after damage.
<b>Epiphyte:</b>	A plant that grows on another plant but is not parasitic, such as many orchids and ferns.
<b>Exotic:</b>	A plant that is not native to a particular area.
<b>Forb:</b>	A herbaceous flowering plant that is not a grass, sedge, or rush.
<b>Funicle:</b>	The stalk that attaches a seed to the fruit.
<b>Genus:</b>	A group of closely related plant or animal species.
<b>Glaucous:</b>	Covered with a bluish-white, waxy coating.
<b>Greenfield site:</b>	An area of land that has never been developed or built on before.
<b>Groundcover:</b>	Low-growing plants that cover the soil surface, helping to prevent erosion and suppress weeds.
<b>Groundlayer:</b>	The layer of vegetation closest to the ground, consisting of grasses, herbs, and low-growing plants.
<b>Gully erosion:</b>	A type of soil erosion that occurs when water flows in narrow channels, cutting deep ditches or gullies into the land.
<b>Habit:</b>	The general appearance of a plant.
<b>Habitat:</b>	The environment where a plant or animal lives.
<b>Harden off:</b>	To gradually acclimate plants to harsher conditions, such as lower temperatures or less water, before transplanting them outdoors.
<b>Headcut:</b>	A steep, eroded section at the upstream end of a gully, where water flows over a vertical drop.
<b>Herbaceous:</b>	A plant that has leaves and stems that die down at the end of the growing season to the soil level.
<b>Hinge joint:</b>	A type of fence joint that allows for flexibility and movement, often used in areas prone to flooding or animal impact.
<b>Hollow-bearing tree:</b>	A tree with cavities or hollows, providing important habitat for various wildlife species.
<b>Hybrid:</b>	The offspring of two different species.
<b>Hydrology:</b>	The branch of science concerned with the properties of the earth's water, especially its movement in relation to land.
<b>Indigenous:</b>	Native to a particular area.

<b>Invasive:</b>	Tending to spread prolifically and undesirably or harmfully.
<b>Juvenile:</b>	Young plant or leaf, especially when different from mature forms.
<b>Laneway:</b>	A narrow path or road, often used for moving livestock or accessing different parts of a farm.
<b>Legume:</b>	A plant in the pea family, often with seed pods.
<b>Levee bank:</b>	An embankment built to prevent the overflow of a river.
<b>Lignotuber:</b>	A woody swelling at the base of some plants that helps them survive damage.
<b>Longstem planting:</b>	A planting technique where seedlings with long stems are planted deeply to encourage root growth from stem nodes.
<b>Midstorey:</b>	The middle layer of vegetation in a forest or woodland, consisting of shrubs and small trees.
<b>Monoculture:</b>	The cultivation of a single crop in a given area.
<b>Mordant:</b>	A substance that fixes colour (in dyeing).
<b>Mounding:</b>	A technique used in revegetation where soil is piled up into mounds to improve drainage and create a raised planting area.
<b>Mulch:</b>	A layer of material (such as straw, compost, or wood chips) spread over the surface of the soil to retain moisture, suppress weeds, and improve soil conditions.
<b>Natural regeneration:</b>	The process by which plants regrow naturally from existing seeds or roots, without human intervention.
<b>Naturalised:</b>	An introduced plant that has become established in the wild.
<b>Node:</b>	A point on a stem where leaves or branches grow.
<b>Operculum:</b>	A lid or cap, like the one that covers eucalypt flower buds.
<b>Overstorey:</b>	The uppermost layer of vegetation in a forest or woodland, consisting of the tallest trees.
<b>Perennial:</b>	Plants that live for more than two years.
<b>Phyllode:</b>	A flattened leaf stalk that functions like a leaf.
<b>Pioneer:</b>	Plants that are the first to grow in a new or disturbed area.
<b>Pricking out:</b>	The method of transplanting seedlings from trays to individual containers.
<b>Provenance:</b>	The place where a plant originally comes from.

<b>Recharge:</b>	When surface water soaks into the ground to become groundwater.
<b>Recharge zone:</b>	An area where water infiltrates the soil and replenishes groundwater.
<b>Remnant vegetation:</b>	Native vegetation that has survived in an area despite clearing or disturbance.
<b>Restoration:</b>	The process of returning a degraded or damaged ecosystem to a close approximation of its natural condition.
<b>Revegetation:</b>	The process of replanting an area with vegetation, often after it has been cleared or disturbed.
<b>Rill erosion:</b>	A type of soil erosion that occurs when water flows in small channels, creating shallow rills or grooves in the land.
<b>Ringlock:</b>	A type of fence with vertical wires held in place by rings, allowing for some flexibility and movement.
<b>Riparian zone:</b>	The interface between land and a river or stream.
<b>Ripping:</b>	A technique used in site preparation where a tractor-drawn implement with deep shanks is used to break up compacted soil.
<b>Saline:</b>	Containing or impregnated with salt.
<b>Saltbush:</b>	A type of shrub that is tolerant of salty conditions, often used in revegetation projects in saline areas.
<b>Scalping:</b>	A technique used in site preparation where the top layer of soil is removed to reduce weed competition and nutrient levels.
<b>Sclerophyll:</b>	A type of vegetation with hard, leathery leaves, adapted to dry conditions.
<b>Seed bank:</b>	The natural storage of seeds in the soil.
<b>Sheet erosion:</b>	The removal of a thin layer of topsoil over a wide area by the action of water.
<b>Shelterbelt:</b>	A line of trees or shrubs planted to protect an area from wind and erosion.
<b>Silviculture:</b>	The growing and cultivation of trees.
<b>Soak:</b>	A natural depression in the ground where water collects and seeps into the soil.
<b>Species:</b>	A group of similar organisms that can reproduce together.
<b>Strainer post:</b>	A strong post used to anchor the ends and corners of a fence.
<b>Subspecies:</b>	A group within a species with slightly different traits.

<b>Succession:</b>	The gradual change in plant communities in an area.
<b>Suckering:</b>	The production of new shoots from the roots or base of a plant.
<b>Supplementary watering:</b>	The provision of additional water to plants, beyond what they receive from natural rainfall.
<b>Tilth:</b>	The condition of tilled soil, especially in respect to its suitability for sowing seeds.
<b>Transpiration:</b>	The process by which moisture is carried through plants from roots to small pores on the underside of leaves, where it changes to vapor and is released to the atmosphere.
<b>Turbidity:</b>	The cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye.
<b>Understorey:</b>	The layer of plants growing beneath the taller trees in a forest.
<b>Viability (of seed):</b>	The ability of a seed to germinate.
<b>Windrow:</b>	A long line of cut vegetation pushed or raked up for clearing.
<b>Xerophyte:</b>	A plant adapted to living in dry conditions.
<b>Xylem:</b>	Tissue that carries water and minerals from roots to leaves.
<b>Zooplankton:</b>	Tiny animals that live in water.
<b>Zoospore:</b>	A type of spore that can move.



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**Australian Forest Products Association (AFPA) - <https://www.forestry.org.au/>**

**Australian National Botanic Garden - <https://www.anbg.gov.au>**

**Biodiversity Conservation Trust (NSW Government) - *Restoring Native Vegetation Guidelines*:**

<https://www.bct.nsw.gov.au/sites/default/files/2019-08/Restoring%20Native%20Vegetation%20Guidelines.pdf>

**Botanic Gardens of South Australia - <https://plantselector.botanicgardens.sa.gov.au/Plants>**

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**FloraBank - *Seed Collection Guidelines for Native Seed Production Areas*: <https://www.florabank.org.au/static/18e9b98b1d7a06156feb1012a1f10237/0e4a6b86494126f62f184807e13fca2f.pdf>, <https://www.florabank.org.au/guidelines/>**

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**Greening Australia - Climate plots:** <https://www.greeningaustralia.org.au/projects/wopr/>, [https://www.greeningaustralia.org.au/wp-content/uploads/2020/02/GA0012\\_Climate-Plots-Documents\\_SMALLER-SIN-GLE.pdf](https://www.greeningaustralia.org.au/wp-content/uploads/2020/02/GA0012_Climate-Plots-Documents_SMALLER-SIN-GLE.pdf)

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**Local Land Services (NSW Government) - Murray Regional Strategic Weed Management Plan 2023-2027:** [https://www.lls.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0004/722632/Murray-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf](https://www.lls.nsw.gov.au/__data/assets/pdf_file/0004/722632/Murray-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf)

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**Murray Region Forestry Hub -** <https://murrayregionforestryhub.com.au/>

**Murraylands and Riverland Landscape Board (South Australia) - Shrub Decision Tree:** <https://msfp.org.au/shrub-decision-tree/>

**Nestbox Tales -** [www.nestboxtales.com](http://www.nestboxtales.com)

**NSW Department of Primary Industries - Saving our Soil:** [https://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0008/270881/saving-soil-complete.pdf](https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/270881/saving-soil-complete.pdf)

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**NSW Department of Primary Industries - Old Man Saltbush:** <https://www.dpi.nsw.gov.au/agriculture/pastures-and-rangelands/species-varieties/pf/factsheets/old-man-saltbush#:~:text=Seedlings%20planted%20at%20the%20higher,it%20is%20considered%20very%20risky.&text=Can%20be%20planted%20in%20the,when%20adequate%20moisture%20is%20available>

**NSW Department of Primary Industries -** <https://weeds.dpi.nsw.gov.au/>



**NSW Department of Primary Industries - *NSW Weedwise (App)***: <https://www.dpi.nsw.gov.au/biosecurity/weeds/nsw-weedwise-app>

**NSW Environment Protection Authority - *Healthy Catchment Guide (Murray)***: <https://www.environment.nsw.gov.au/resources/salinity/healthycatchmentguidemurray.pdf>

**NSW Government - *SEED (Sharing and Enabling Environmental Data) - Hydrogeological Landscapes NSW***: <https://datasets.seed.nsw.gov.au/dataset/hydrogeological-landscapes-nsw-act>

**NSW Niche Finder** - <https://www.nswnichefinder.net/>

**Society for Ecological Restoration Australasia (SERA) - *Seed Production***: <https://www.seraustralia.com/standards/egseedproduction.html>

**Soils For Life** - <https://soilsforlife.org.au/rangelands-living-skin/>

**Sustainable Farms - *On the Farm***: <https://www.sustainablefarms.org.au/on-the-farm/>

**Sustainable Farms - *Resources***: <https://www.sustainablefarms.org.au/resources/>

**Terrain NRM - *Murray Basin Climate-ready Restoration***: <https://www.terrainova.org.au/repository/murray-basin-nrm-collection/murray-basin-nrm-climate-ready-practical-restoration-guidelines-powerpoint-presentation/murray-basin-nrm-climate-ready-restoration.pdf>

**TreeNet - *A Toolkit for Climate-ready Revegetation***: <https://treenet.org/resource/a-tool-kit-for-climate-ready-revegetation/>

**Victorian Department of Environment, Land, Water and Planning - *Revegetation: Plant Provenance Information Sheet***: [https://www.environment.vic.gov.au/data/assets/pdf\\_file/0036/489159/Revegetation-plant-provenance-information-sheet\\_final.pdf](https://www.environment.vic.gov.au/data/assets/pdf_file/0036/489159/Revegetation-plant-provenance-information-sheet_final.pdf)

**WWF Australia - *Climate Ready Restoration***: <https://wwf.org.au/what-we-do/climate-ready-restoration/>

**Yan Yean Landcare Network - *Climate Ready Reveg Summary***: [https://yan.org.au/images/PDFs/YAN\\_ClimateReadyReveg\\_Summary\\_20210531.pdf](https://yan.org.au/images/PDFs/YAN_ClimateReadyReveg_Summary_20210531.pdf)

**Yan Yean Landcare Network - *Climate Ready Revegetation Project Update, Feb 2023***: <https://yan.org.au/yan-blog/156-climate-ready-revegetation-project-update-feb-2023>

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