



# Wildlife Notes



DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

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Information Notes for the Land for Wildlife Scheme in Western Australia

## Creepline Revegetation for Wildlife

**Keywords:** habitat, revegetation, wetland

**Location:** southern Swan Coastal Plain

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*Are you considering revegetating a creek or wetland on the Coastal Plain from Perth to Busselton? For the highest survival rate and the greatest wildlife value, it is important to choose the right species.*

### PLANTS FOR REVEGETATION

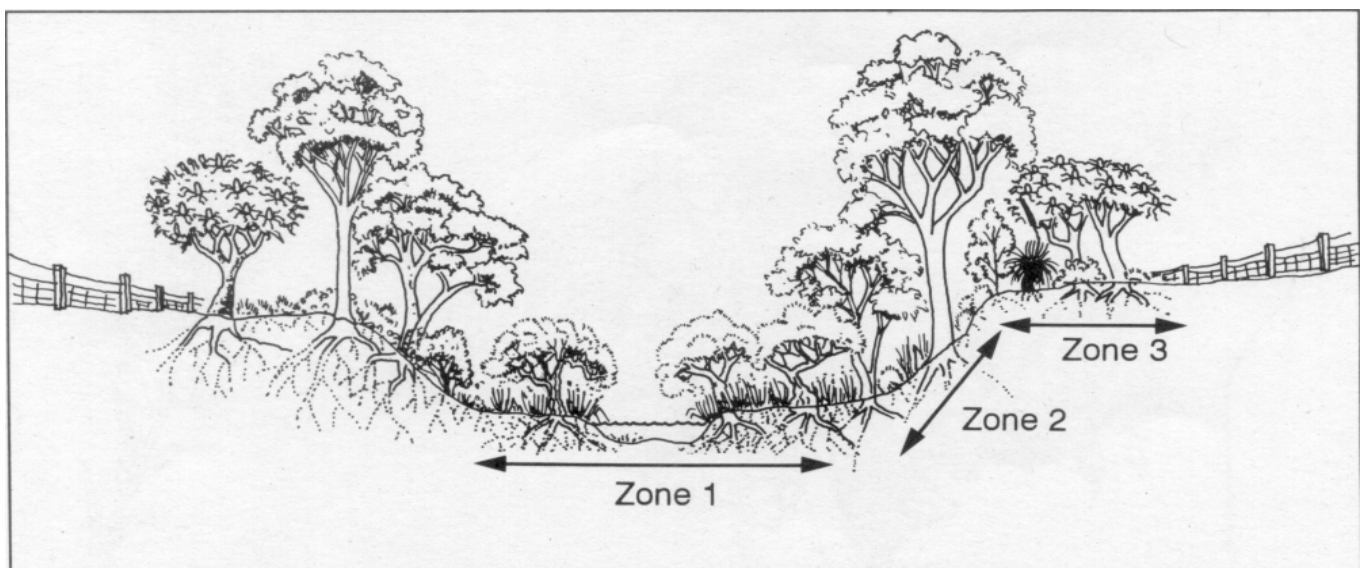
Replanting the banks of a creepline has many advantages for the health of the stream and the river or estuary it runs into. If done thoughtfully, the revegetation can not only protect water quality, but can provide useful products such as cut flowers or firewood as well as shade and shelter for stock, and also help create a wildlife corridor.

To return the stream and the streamside vegetation to a healthy state, it is best to try to recreate something similar to the original ecosystem. Distinct assemblages of plants are adapted to grow at different distances from the

stream edge and height above flood level. Each plays an interlinked role in protecting the bank and providing fauna habitat.

To create the most useful wildlife corridor, the vegetation should be as diverse as possible. Dense shrubs and hollow trees provide nesting sites; a shrubby or tussocky ground layer gives shelter and nesting sites; and something in flower all year round will provide food for nectar and insect eaters. Vegetation remaining along creeplines can provide a basis from which to start. Alternatively, look at the existing topography and waterlogging situation, and select appropriate plants to fit the sites available.

All the plants listed here may be obtained from specialist nurseries. Alternatively, seed may be collected and direct seeded on site - remember that a license will be needed for seed collection from Crown land. Site preparation (especially good weed control) is vital (see references).



**In the area of Coastal Plain between Mandurah and Busselton, creeks and rivers have three ecological zones:**

### **Zone 1 - stream bank and flood plain**

**Soil:** wet, may be waterlogged or seasonally inundated.

**Needed:** fringe of reedy plants to hold stream edge and provide shelter for fauna such as frogs, bandicoots, native water rats, long-necked tortoise and water birds. Taller shrubs to hold soil and provide nesting / foraging sites for birds.

**Problem:** fertile, high nutrient areas, very suitable for dense weed growth. Erosion prone.

### **Zone 2 - sides of bank**

**Soil:** usually fertile loam, subject to seasonal floods

**Needed:** strong root mat of trees, shrubs and ground covers to hold soil. Provides habitat for many different types of fauna, especially those that like nesting in banks.

**Problem:** erosion prone

### **Zone 3 - top of bank**

**Soil:** may be gravelly, sandy or loamy, depending on site

**Needed:** as wide a buffer before pasture/crop land as can be managed, 5 m minimum, 10 - 20 m better. Trees, shrubs and ground layer appropriate to soil type to provide foraging and nesting sites for a wide range of fauna including bandicoots, bush rats, possums, goannas and small birds.

**Problem:** weed invasion, fire management, feral animal control.



## **When revegetating, try to replace all Zones**

If this is not done, the creekline ceases to be a corridor for the animals which use the zone that has been lost. In addition, there could be insufficient vegetation to buffer the creekline and protect it, especially after flood events.

## **Other wetlands**

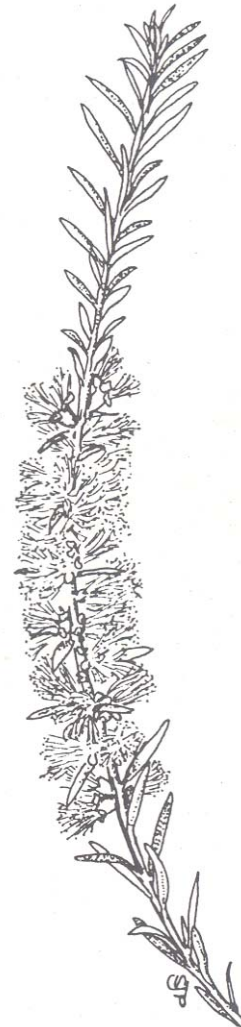
The plants listed can also be used for revegetation around lakes and swamps on the Coastal Plain, since the same Zones apply to wetlands.

## **References**

"A Guide to Wetland Management on the Swan Coastal Plain" 1992. N. Godfrey, P. Jennings & O. Nicholls. Wetlands Conservation Society, Perth.

"Growing Locals: Gardening with local plants in Perth" 1996. R. Powell & J. Emberson. Western Australian Naturalists' Club, Perth.

"Small Block Manual: Land management on small rural blocks in the Shire of Serpentine-Jarrahdale" 1994. W. Mortlock. Shire of Serpentine-Jarrahdale.



## List of plants suitable for creekline revegetation in the southern part of the Swan Coastal Plain

### Trees

Name	Zone	Description	Establishment*	Ecological habitat	Comments
<i>Agonis flexuosa</i> (WA Peppermint)	2,3	tree to 10m, weeping branches, white flowers In spring	seed or seedlings	coastal sand over limestone	fauna habitat, especially possums, attracts Insects
<i>Banksia grandis</i> (Bull Banksia)	3	Open tree to 8m, fast growing, yellow flowers in spring and early summer	seed or seedlings	grows in woodland	nectar producer
<i>Banksia littoralis</i> (Swamp Banksia)	1,2	Stout, spreading tree to 10m, yellow flowers in winter	seed or seedlings	common In swampy wetlands	very important nectar producer as It flowers in winter
<i>Casuarina obesa</i> (Salt Sheoak)		upright tree to 10m	seed or seedling - will regenerate naturally onto bare ground	common around saline rivers, swamps and estuaries	tolerates saline soil
<i>Eucalyptus calophylla</i> (Marri)	3	large tree to 30m, cream flowers in summer/autumn	seed or transplant	sandy woodland, loamy soils on lower valley slopes	flowers vital for nectar eating fauna In summer, mature trees have hollows for nesting
<i>Eucalyptus gomphocephala</i> (Tuart)	3	large, stately tree to 30m, cream flowers In spring	seed or transplant, germinates on ashbeds after fire	on coastal limestone or sand	mature trees have hollows vital for fauna, nectar producer
<i>Eucalyptus rudis</i> (Flooded Gum)	1,2	Tall, fast growing tree to 25m	seed or seedling - will regenerate naturally onto bare ground	common along rivers and creeks, and around wetlands	Important nectar producer, old trees have hollows for fauna habitat
<i>Melaleuca cuticularis</i> (Saltwater Paperbark)	1	Slow-growing upright tree to 10m	seed or seedling - will regenerate naturally onto bare ground	common around saline creeks and estuaries	tolerates saline water and soils, forms important waterbird nesting habitat
<i>Melaleuca preissiana</i> (Modong)	1	Slow-growing stately tree to 15m, white flowers in early summer	seed or seedlings	found in seasonal wetlands	Important nectar producer and nesting habitat
<i>Melaleuca raphiophylla</i> (Freshwater Paperbark)	1	Slow-growing dense tree to 10m, white flowers in spring	seed or seedlings	common along rivers and wetlands	most Important tree for waterbird nesting sites
<i>Xylomelum occidentale</i> (Forest Woody Pear)	3	slow-growing gnarled small tree, masses of cream flowers in summer	seed or seedlings	In sandy woodlands	Important nectar producer, fruits harvested as cut flowers

### Ground layer

Name	Zone	Description	Establishment*	Ecological habitat	Comments
<i>Arthropodium capillipes</i> (Chocolate Lily)	3	tuberous perennial, pale mauve hanging flowers on 1 m tall stalk In summer	seed	grows in sandy woodlands	can cope with grass weed competition. Flowers important for native Insects
<i>Kennedia prostrata</i> (Red Runner)	2,3	prostrate creeper, scarlet flowers in spring	seed or seedlings	common in sandy woodland	nitrogen fixer. Good ground cover, can cope with disturbance

### Climbers

Name	Zone	Description	Establishment*	Ecological habitat	Comments
<i>Billardiera candida</i> (Wedding Creeper)	2	twiner, white flowers in early summer	seed	grows on loamy riverbanks	very attractive
<i>Billardiera coeruleo-punctata</i>	3	twiner, blue flowers In early summer	seed	in woodland	Important for native insects
<i>Hardenbergia comptoniana</i> (Native Wisteria)	2,3	climber with twining stems, purple-blue flowers in late winter	seed or seedlings	common In woodland, especially after fire	nitrogen fixer. Nectar and seeds Important foods

## Shrubs

Name	Zone	Description	Establishment"	Ecological habitat	Comments
<i>Acacia pulchella</i> (Prickly Moses)	2,3	branched shrub to 1.5m, yellow flowers in winter and spring	seed or seedlings	common In woodland, especially after fire	short-lived, nitrogen fixer, seeds Important foods
<i>Acacia dentifera</i>	2	dense shrub to 3m, yellow flowers in spring	seed or seedlings	grows on loam/clay riverbanks and woodland	nitrogen fixer, attracts insects, nest site, seeds nutritious
<i>Acacia saligna</i> (Orange Wreath Wattle)	2,3	Large dense shrub, relatively short-lived	seed or seedlings	common In around wetlands, especially after fire	nitrogen fixer. Seeds Important foods
<i>Agonis linearifolia</i> (Swamp Peppermint)	1,2	upright spreading shrub to 3m, white flowers in spring	seed or seedling	common in swamps, seasonal wetlands and creek banks	excellent erosion control, withstands flooding, attracts Insects
<i>Astartea fascicularis</i>	1,2	upright, open, weeping shrub to 2m, white flowers In summer	seed or seedling	common under paperbark	bank stabiliser, valuable as little else in flower then
<i>Boronla heterophylla</i> (Pink Boronla)	1,2	Tall upright shrub to 2m, pink flowers in spring	seed or seedling	In sandy swampy flats	nectar producer, harvested commercially as cut flower
<i>Callystachys lanceolatum</i> (Greenbush)	1,2	tall erect shrub to 4m, orange/yellow pea flowers in early summer	seed or seedlings	grows on creek banks and around seasonal swamps. Not common.	nitrogen producer, highly nutritious foliage, nectar producer
<i>Calothamnus laterals</i> (Swamp One-sided Bottlebrush)	1	erect shrub to 1.5m, red flowers In spring	seed or seedling	seasonally waterlogged swampy areas	nectar producer
<i>Calothamnus quadrifidus</i> (One-sided Bottlebrush)	2,3	dense shrub to 2m, red flowers in early summer	seed or seedlings	on all soils, good drainage	nectar producer
<i>Dryandra sessilis</i> (Parrot Bush)	3	tall, upright, prickly shrub, yellow flowers in spring	seed or seedlings	in sandy or lateritic woodland	nectar producer, seeds relished by parrots
<i>Grevillea diversifolia</i> (Valley Grevillea)	1,2	open shrub or small tree to 10m, greenish-black flowers In winter, spring and summer	seed or seedlings	on loamy banks and floodplain soils, usually under Flooded Gum. Can withstand occasional Inundation, but not prolonged waterlogging. Appears in thickets after fire.	fast growing but relatively short-lived. Flowers attractive to insects. Dense thickets good small bird habitat.
<i>Grevillea vestita</i>	3	dense prickly, greyish shrub to 2m, white flowers in late winter/spring	seed or seedlings	forms thickets on sandy soil after fire	superb small bird habitat, nectar, seeds and nesting sites
<i>Hakea prostrata</i> (Harsh Hakea)	2,3	open shrub or small gnarled tree to 3m, cream flowers in spring	seed or seedlings, will regenerate naturally Into bare soil	found in sandy woodland	nectar producer
<i>Kunzea ericifolia</i> (Spearwood)	3	Dense upright shrub, yellow flowers In spring	seed or seedlings	common on sandy soil	nectar producer, bird nesting sites
<i>Kunzea recurva</i>	3	erect, open shrub to 1.5m, pink flowers In spring	seed or seedlings	found in sandy woodland	nectar producer
<i>Labichea lanceolata</i> (Tall Labichea)	2	dense, prickly shrub to 3m, yellow flowers in spring	seed or seedlings, regenerates after fire	in moist gullies and loamy river banks. Appears In dense thickets after fire.	nitrogen fixer, nectar producer, seeds important for seed-eating fauna
<i>Melaleuca incana</i> (Grey Honey myrtle)	1,2	large shrub or small tree to 4m, cream bottlebrush flowers in late winter	seed or seedlings, regenerates after fire	on winter-wet depressions or swamps, not salt-tolerant.	nectar producer. Good windbreak
<i>Melaleuca lateriflora</i> (Gorada)	1	large shrub to 3m, globular clusters of white flowers in summer.	seed or seedlings	on clay flats subject to seasonal waterlogging, but drying out in summer. Not salt tolerant.	nectar producer
<i>Melaleuca laterita</i> (Robin Redbreast Bush)	1	upright shrub to 1.5m, spectacular red flowers In early summer	seed or seedlings	seasonally waterlogged swampy areas	excellent nectar producer

## Shrubs ctd.

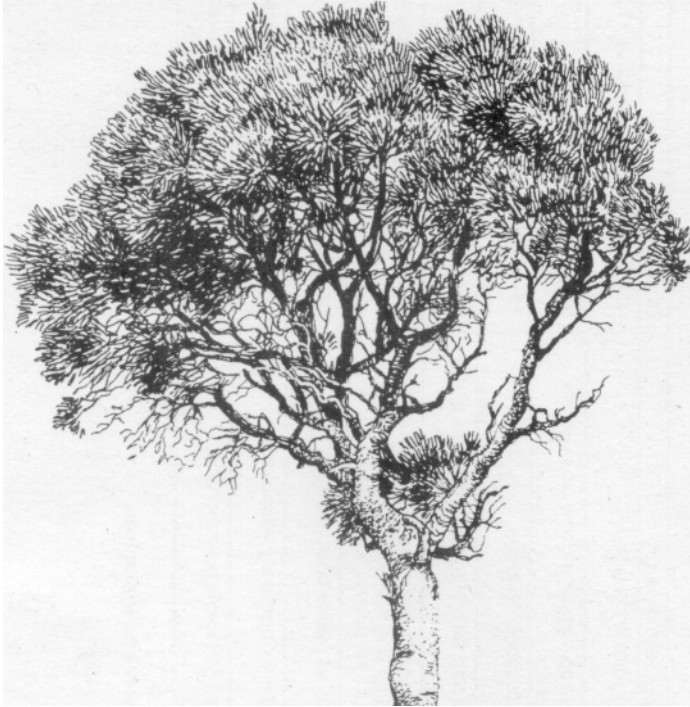
Name	Zone	Description	Establishment*	Ecological habitat	Comments
<i>Melaleuca teretifolia</i> (Banbar)	1,2	spreading shrub to 3m, cream flowers in spring	seed or seedlings	forms dense thickets in lakes and swamps	tolerates long periods of waterlogging, nectar producer
<i>Melaleuca uncinata</i> (Broombush)		upright shrub to 4m, yellow flowers in globular heads in spring and early summer.	seed or seedlings	forms thickets in winter-wet swamps. Wheatbelt plants salt-tolerant.	nectar producer. Cut commercially for brush fencing.
<i>Melaleuca viminea</i> (Mohan)	1,2	rounded shrub to 3m, white flowers in terminal clusters in spring	seed or seedlings	forms thickets around clay-based wetlands (rare around swamps on sandy soils) and alongside estuaries.	abundant nectar producer. Important as shelter and nest sites for aquatic birds.
<i>Myoporum caprarioides</i> (Slender Myoporum)	1,2	Open shrub to 2m, white flowers in spring	seed or seedlings	grows along saline creek banks	will tolerate salinity, nectar producer
<i>Oxylobium lineare</i> (River Pea)	1,2	tall, erect shrub to 3m, red/ yellow pea flowers in summer	seed or seedlings	grows along creeks in the Hills	nitrogen producer, highly nutritious foliage, nectar producer
<i>Regelia inops</i> (Mouse Bush)	2,3	Dense tangled shrub to 1.5m, mauve flowers in spring	seed or seedlings, will regenerate naturally into bare soil	found on sandy soil, around swampy depressions	nectar producer, good bandicoot habitat
<i>Viminaria juncea</i> (Swishbush)	1,2	fast-growing but short-lived erect shrub with weeping branches and sprays of gold flowers in summer	seed or seedlings	common around swamps and wetlands, especially after fire	nitrogen fixer, nectar producer, attractive

## Reed-like tussocks

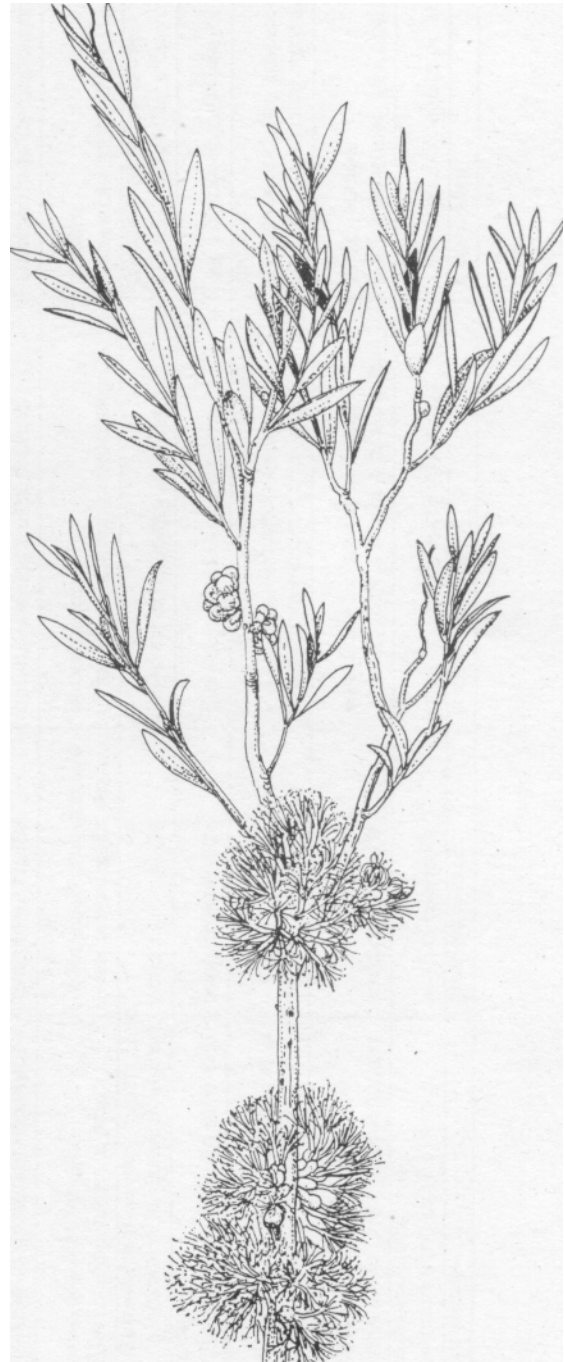
Name	Zone	Description	Establishment*	Ecological habitat	Comments
<i>Agrostocrinum scabrum</i> (Blue-eyed Reed)	3	tufted clump, bright blue flowers in spring	seed or transplant clumps	in woodland on loam	flowers important for native insects
<i>Baumea articulata</i> (Jointed Rush)	1	tall tufted clumps	transplant clumps	common rush of shallow freshwater wetlands	good dense habitat
<i>Dianella revoluta</i> (Dianella)	2,3	tufted clump, pale blue flowers in early summer	transplant clumps	in woodland on loam	flowers important for native insects
<i>Juncus kraussii</i> (Sea Rush)	1	tufted clumps	transplant clumps	common rush of freshwater and saline wetlands	excellent for stream edging
<i>Lepidosperma gladiatum</i> (coast) + <i>L. effusum</i> (Inland) (Sword sedge)	2,3	tufted rush	transplant clumps	common in woodland	important bird nesting sites, good bandicoot habitat
<i>Leptocarpus coangustatus</i> (Twine Rush)	1	tufted rush	transplant clumps	seasonal freshwater swamps	good groundcover habitat
<i>Orthrosanthos laxus</i> (Morning Iris)	3	tufted plant, pale blue flowers in spring	seed or transplant clumps	in loamy or gravelly woodland	flowers important for native insects
<i>Patersonia occidentalis</i> (Western Iris)	3	tufted clumps, large mauve flowers in spring	seed and transplant clumps	common in sandy woodland	attractive groundcover, flowers important for native insects

Note: If done with care, many perennial tussock plants can be transplanted by being lifted, broken into segments and replanted. Care is needed however. Consult a specialist Plant Nursery for advice.

\*Note: Most plants can be established either by direct seeding or by planting seedlings.



*Banksia littoralis*



*Melaleuca lateriflora*

Drawings by Margaret Pieroni from '*Leaf and Branch: Trees and Tall Shrubs of Perth*' by Robert Powell. CALM.

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