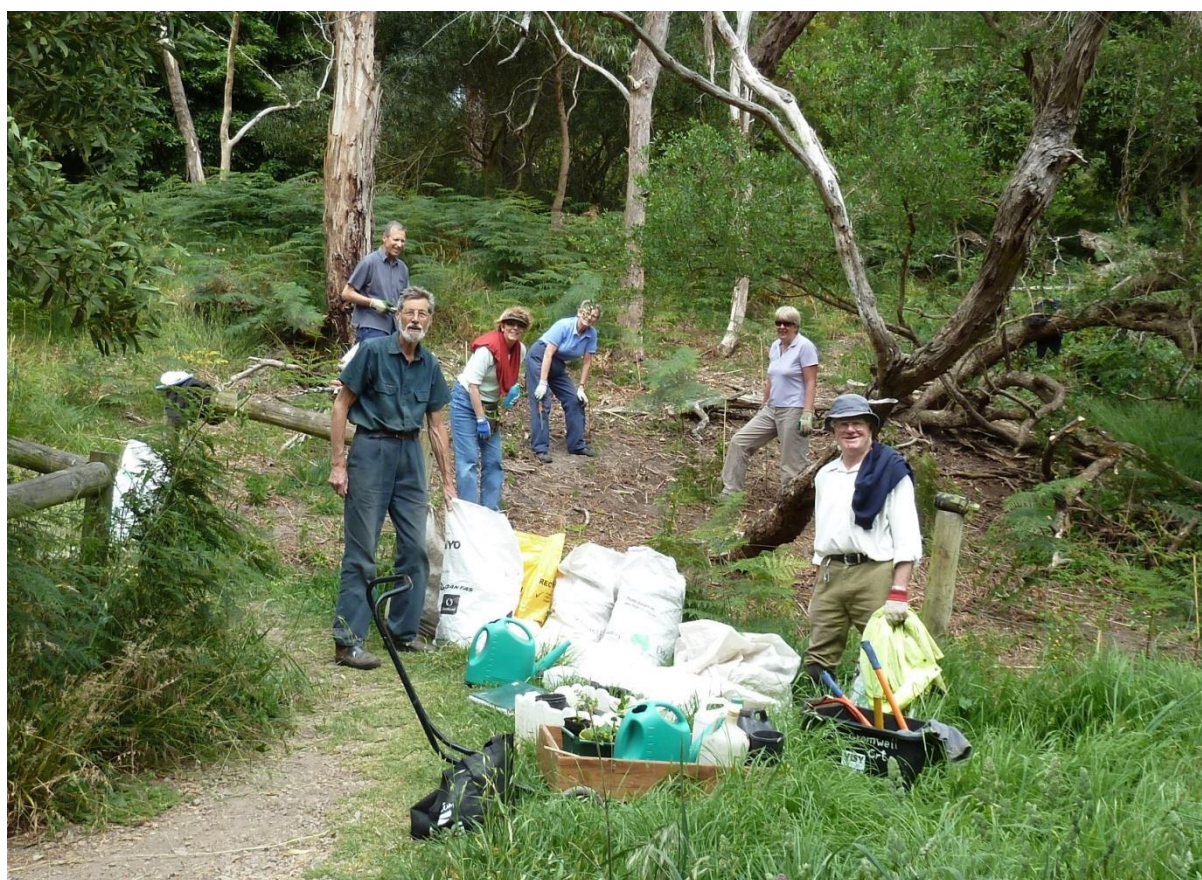


ACTION SWEETWATER CREEK INC.

VOLUNTEER MANUAL

Identification of Weeds and Indigenous Flora and Fauna



To encourage the community to sustain, develop and enjoy the natural beauty and ecology of Sweetwater Creek Nature Reserve.

Webpage: www.sweetwatercreek.org.au

Action Sweetwater Creek Inc.

Volunteer Manual

Contents

1	Things you need to know
2	List of Weeds
3	Recognition and treatment
18	List of indigenous plants
19	Plant recognition
39	List of indigenous birds
40	Bird recognition
55	List of indigenous animals
56	Animal recognition
61	Credits for Volunteer Manual and ASC Website.

First of all, thank you for joining our work group. We appreciate the time you have given to helping us preserve the beauty of Sweet Water Creek Nature Reserve and we hope you will enjoy working with us and learning about its flora and fauna.

Work record:

Please be sure to sign the Record of Work Attendance book each day. This is a requirement for insurance purposes and also helps us keep a tally of man-hours worked if we wish to apply for a grant from Frankston Council or other organizations.

Membership:

This is not mandatory but again, it is useful, as a healthy record of members assists with attaining grants. Money from memberships is used to buy tools, stationery and pay for various publications like our newsletter, which all members receive.

Frankston City Council Natural Reserves Rangers:

We enjoy an excellent relationship with the men and women who oversee the many Nature Reserves in the Frankston Shire. They visit us regularly and assist, either physically alongside us, or with advice about the various weeds and with plant identification.

Key people:

	Phone	Email
Work Coordinator - Sally Harding.	9770 1777	angsal6@bigpond.com
Assistant Work Coordinator - Angus Harding		
President – John Legg	9775 3445	
Secretary – Jenny Hattingh	9787 5731	sweetwater.action@gmail.com
Minute Secretary- Margaret Edmunds		
Wise owls – Warwick Exton, Muriel and Ole Petersen		

Type of work:

We work in Lower Sweetwater Creek Nature Reserve, a large area that requires a variety of work methods.

(a) The Bradley method: - This is a weeding method established by the Bradley sisters Joan and Eileen in Sydney bushland several years ago. The aim is to weed gradually from a 'good' area, i.e. one that has native plants with only a few weeds present, into worse infested areas, rather than ad hoc and intrusive weeding over a large area. This encourages the regrowth of dormant indigenous plants. At present we have dedicated Bradley sites in the reserve but we try to incorporate the method in our other areas.

(b) There are many rampant, invasive weeds that need regular monitoring and removal in a more vigorous manner. Where we have cleared an area of weeds we replant with indigenous plants.

Where necessary we prune overgrown plants and remove dead ones, but only where they are crushing others as they are habitat for animals and insects. We do not pull out well-established weed shrubs and trees as this destabilises the soil, but cut to the ground and paint the exposed trunks with poison if necessary. The poison we use is Roundup, a glyphosate herbicide in a sponge-tipped applicator. We use it as little as possible but sometimes there is no other effective method.

Our overall duty of care is to maintain the natural vegetation of the reserve and restore this where damaged or invaded by weeds. In doing so we hope to encourage and protect the many birds and animals that regard the reserve as their home.

Risk Management:

We take care to prevent injury to our volunteers, issuing protective gloves when using poison applicators and avoiding any work in the reserve beyond our capabilities. We always carry a First Aid kit, and some of our regular volunteers have completed a First Aid course. We carry mobile phones for emergency contact. We advise volunteers to wear sturdy footwear and clothing, sunscreen and insect repellent. Please bring a hat and/or raincoat as appropriate. We ask volunteers to advise us of any personal medical issues.

Grasses

1. Kikuyu
2. Annual Veldt Grass
3. Panic Veldt Grass
4. Large Quaking Grass

Bulbs and Tubers

5. Angled Onion
6. Freesia
7. Watsonia
8. Rambling Dock
9. Asparagus
10. Bridal Creeper
11. Agapanthus
12. Arum Lily

Creeper and Scramblers

13. Tradescantia
14. Vetch
15. Fumitory
16. Cleavers
17. Blue Periwinkle
18. Cape Ivy
19. English Ivy
20. Morning Glory
21. Dolichos
22. Blackberry

23. Boneseed
24. Black-berry Nightshade
25. Wild Tobacco
26. Polygala

Trees

27. Cotoneaster
28. Sweet Pittosporum
29. Sallow Wattle
30. Coastal Teatree

Safe Work Practice:

1. Work with others, at least two volunteers together.
2. Watch out for ants' nests and mosquitoes. Report bites, scratches immediately as we have a First Aid kit.
3. Practise caution on slopes as the reserve has many along the banks of the creek.
4. Do not lift or pull out anything heavy or resistant ie an entrenched plant or a log. Ask for help or leave it in place for the right tool or help.
5. Always wear sturdy well-fitting gloves, sensible tough clothes and shoes, a hat and sun block on sunny days and use insect repellent.
6. Environmental awareness: Leave old logs in place for habitat. Watch where you tread – tiny plants are easily crushed. Check what you are about to pull out is not an indigenous plant instead of a weed – ask if in doubt.
7. Wear disposable gloves and long sleeves when using Roundup.

1. Kikuyu (*Pennisetum clandestinum*) origin East Africa.

Description: Prostrate, matted with lengthy runners.



Habit: Very invasive, especially in open areas.

Treatment: As it tends to cover large areas we clear around indigenous grasses, cutting and painting with Round-up if necessary. The best discouragement is to shade it out with revegetation from shrubs and trees.

2. Annual Veldt Grass (*Ehrharta longiflora*) origin South Africa.

Description: A tufted annual grass growing to approx. 90cm. The stalk rises from a basal tuft, with a broader lanceolate leaf half-way, red at the base where it joins the stem. The seeds hang along the top of the stem and are red and green.



Habit: Spreads to form a carpet, taking over native grasses

Treatment: Ease out at base with weeding tool and bag, especially if seeds are evident. The easiness of removal helps distinguish it from native grasses which tend to be more securely anchored in the soil.

3. Panic Veldt Grass (*Ehrharta erecta*) origin South Africa.

Description: A perennial grass growing to 80cm. Much finer leaved than Annual Veldt Grass with leaves occurring up the stem. Compact narrow heads of small seeds.



Habit: Invasive and harder to remove because not as recognisable as Annual Veldt Grass. Believed to be spread from bird seed initially, then by seed dispersal from birds and wind, and indiscriminate dumping of garden waste.

Treatment: Where possible, cut off the seed heads and bag before digging out rhizomes, gently using weeding tool or a sharp knife. Treat small areas at a time, around indigenous grasses and shrubs, so as not to destabilize the soil.

4. Large Quaking-Grass (*Briza maxima*) origin Mediterranean.

Description: Annual grass with erect flower stems to 80cm, large shell-like seed-heads. When first emerging in spring, the base of the stem is reddish and the blade itself is bright green making it easier to distinguish from other grasses.



Habit: Briza quickly covers large areas of grassland to the detriment of indigenous grasses.

Treatment: Easily pulled out in spring before the seed heads have appeared. At this stage can be left to dry out on the ground. Once the seed heads are evident they must be bagged.

5. Angled Onion or Onion Weed (*Allium triquetrum*) origin Mediterranean.

Description: A bulbous perennial 30-50cm high with an onion/garlic odour, fleshy triangular grass-like leaves and a pretty white 'snowdrop' like flower in spring. Has a bulb like that of a spring onion and is edible. We encourage this as a means of eradication!



Habit: Covers vast areas, mainly in disturbed damp ground and is difficult to eradicate owing to the closely packed bulbs.

Treatment: Treatment with herbicides is not recommended as indigenous plants, especially orchid bulbs, may be killed in the process. Remove by gently digging out the bulbs and bagging. Cutting off the flowers in spring helps to halt the spread.

6. Freesia (*Freesia alba*) origin South Africa.

Description: A perennial herb, 40cm tall, flowers in spring, white with yellow markings, narrow strappy foliage, a sweet smell.



Habit: An invasive plant in open areas which survives probably because its attractive appearance and lovely fragrance deters weeding.

Treatment: Careful use of the weeding tool to remove its little bulbs and take the flowers home!

7. **Watsonia** (*Watsonia meriana*) origin South Africa.

Description: From a base clump of tapering green leaves rises a stem from 1-2 metres, with single orange flowers rising along it. It has bulbils on the stem and a mass of bulbs underground. We have isolated clumps in the Reserve.



Habit: It spreads and multiplies from both the bulbils and the bulbs. Disturbance encourages more bulbs to grow. It seems to prefer damp areas.

Treatment: Dig out plants and bulbs carefully. Bag all. Return regularly to area for follow-up weeding. May need to resort to chemical controls.

8. **Rambling Dock** (*Acetosa sagittata*) origin South Africa.

Description: Arrow-shaped leaves, papery pinkish flowers in autumn, turnip-like tubers underground.



Habit: Covers vast areas both above, by climbing over plants, and below by spreading tubers. Its flowers appear spring to summer and shed seeds which rapidly become tubers.

Treatment: Young plants are easiest to remove as the tubers are smaller and can be gently lifted, but all connecting tubers must be removed as well. Older larger plants should have the surface of the tuber scraped to expose the flesh and painted with Roundup and left in the ground. Where possible, cut off the flowers before they start dropping seed. Bag every part removed.

9. Asparagus Fern (*Asparagus scandens*) origin South Africa.

Description: A many-branched perennial with a dense covering of fine pine-like foliage, tiny white or pink bell-shaped flowers in spring followed by red berries in summer. It has a dense mat of tuberous roots underground.



Habit: Climbs and twines around bushes and the lower branches of trees, covering wide areas; spreads via berries (birds) and tubers.

Treatment: Each plant rises from a crown just below the surface. Sever this with a serrated knife and the rest of the tubers can be left in the ground. Bag all including any berries.

10. Bridal Creeper (*Myrsiphyllum asparagoides*) origin South Africa.

Description: A perennial with small narrow glossy pointed leaves, white flowers, green berries maturing to red.



Habit: Climbs over and entwines bushes, forming a thick mat. Spreads by seeds and by its pointy rhizomes beneath the soil.

Treatment: Carefully dig below the base of the plant and ease out the clump of multiple pointed heads. Be sure to remove all pieces and bag.

11. Agapanthus (*Agapanthus praecox*) origin South Africa.

Description: Tall, strappy-leaved clumps with striking blue or white flowers to 1 metre in summer.



Habit: It spreads (from gardens) by wind / water-born seeds as well as its tuberous roots once established.

Treatment: It is hard to remove, needing much digging and levering. Removing the seed heads after flowering helps.

12. Arum Lily (*Zantedeschia aethiopica*) origin South Africa.

Description: A tall clump-forming plant with fleshy leaves and shapely white flowers to 1 metre with a single yellow stamen.



Habit: It spreads from garden waste and is found in the damper areas – along the creek banks and in the wetlands gully. It flowers nearly all year so is easily distinguishable.

Treatment: Almost impossible to eradicate. Removal by digging up and or applying Round-up. Must be followed up regularly for reappearance.

13. Tradescantia/ Wandering Jew (*Tradescantia fluminensis*) origin South Africa.

Description: A fleshy creeper with small dark green pointed leaves and tiny white three-petalled flowers.



Habit: Forms a carpet, smothering indigenous groundcovers. It breaks easily and produces roots from pieces so is a frustrating weed, especially as it covers vast areas.

Treatment: Gently pull out plants, including roots, disturbing the soil as little as possible. Bag every bit! Concentrate on small areas around indigenous plants rather than attempt large unmanageable areas. We may trial weed-matting in future.

14. Vetch (*Vicia sativa*) origin Southern Europe.

Description: Downy annual herb to 80cm, often twining or climbing and forming a tangled mass, to 80cm high. Finely fringed leaves and purple flowers, similar to native pea flowers or Glycine but smaller. Spring flowering.



Habit: Vetch scrambles over other plants, forming a difficult to extricate mass. The seeds are dispersed from pods which mature over summer. Encountered throughout the reserve.

Treatment: Gently tease out from plants beneath, dig out roots and bag all.

15. Fumitory (*Fumaria bastardii*) origin Mediterranean.

Description: A scrambling herb, parsley-like in appearance with fine dissected leaves and narrow pink and purple flowers. It appears in spring, from August to November.



Habit: Fumitory smothers other plants, scrambling over them and rapidly covering large areas.

Treatment: It can be pulled out easily. Bag it as the mass of creeper tends to compact and rot if left lying on the ground.

16. Cleavers (*Galium aparine*) origin Eurasia.

Description: A sticky clambering weed to a metre high, with fine pointed leaves radiating from an angular stem. Small white flowers in spring are followed by burr-like seed heads, making it easy to confuse with Bidgee Widgee.



Habit: Cleavers, which we nick-name 'velchro,' cover low-growing plants and grasses, blocking light.

Treatment: As always, try to find the roots and ease out with the rest of the plant; bag.

17. Blue Periwinkle (*Vinca major*) origin western and central Mediterranean.

Description: A creeper with pretty blue flowers in spring.



Habit: With trailing stems that put down roots wherever they come in contact with the soil, Periwinkle rapidly carpets large areas of bush, smothering indigenous ground covers.

Treatment: Pull out all above ground growth in autumn and dig out the roots. Bag all parts.

18. Cape Ivy (*Delairea odorata*) origin South Africa

Description: A large scrambler or climber with ivy-shaped leaves and yellow flowers in winter followed by cylindrical seed heads.



Habit: Climbs trees and shrubs rapidly and uses them as a bridge to others, cutting out light for the host plant. Constant observation is necessary for new plants at ground level.

Treatment: Where possible, gently dig out roots; sever creepers from higher canopy to avoid damaging the host plant by dragging them, they will die once severed. Cut and paint thicker stems with Roundup immediately but only if they cannot be removed with weeders.

19. English Ivy (*Hedera helix*) origin Europe.

Description: Green palmate leaves edged with five points. A vigorous climber with woody stems, frequently encases tree trunks or covers large areas of ground. Ivy flowers when it reaches light, from February to August, a cluster of greenish-yellow flowers followed by blue-black fleshy berries.



Habit: Climbs up trees and over ground, aided by the fine roots along the stem. Also spreads by seed dispersal by birds.

Treatment: Cut stems which are climbing trees, carefully pull roots and stems from soil. Start from the outside of an infested area and weed towards the centre. Bag every scrap and where difficult to dig out, dab cut surfaces of roots with Roundup within 30 seconds of cutting.

20. Morning Glory (*Ipomoea indica*) origin South America.

Description: A vigorous perennial vine with tri-lobed leaves and bluish-purple trumpet-shaped flowers from spring to autumn. Numerous trailing stems that set root when in contact with the soil.



Habit: Climbs up trees and shrubs rapidly and uses them as a bridge to others, cutting out light for the host plant. Massive infestation along the Liddesdale Ave track from gardens above.

Treatment: Where possible, gently dig out roots; sever creepers from higher canopy rather than drag and damage the host plant, they will die once severed. Thicker stems could be cut at ground level and painted with Roundup (as with Ivy).

21. Dolichos (*Dipogon lignosis*) origin South Africa.

Description: Vigorous creeper with small jagged arrow-shaped leaves and bright purple flowers in spring and summer, followed by small pea-like pods.



Habit: Dolichos seeds readily and will rapidly climb and smother trees. There are vast areas of it in Sweetwater Creek Nature Reserve, particularly below the Notice Board at Fleetwood entrance

Treatment: Gently pull or cut from trees and bag. Remove roots if possible or paint with Roundup.

22. Blackberry (*Ruby fruticosus*) origin Europe.

Description: An erect shrub forming impenetrable thickets to several metres high with terminal bunches of pinkish-white flowers followed by the well-known berries.



Habit: Spreads by dispersal of seeds by birds and whenever the canes make contact with the soil and take root. Nothing can grow under a blackberry mound so revegetation is usually required.

Treatment: Wearing thick gloves cut back canes to a 6cm stump for grubbing. Cut up debris into easier to handle pieces and bag. If you cannot dig out the roots without disturbing the soil immensely, immediately paint the cut surface of the stump with Roundup. Constant checking is required to prevent further growth.

23. Boneseed (*Chrysanthemoides monilifera*) origin South Africa.

Description: An erect shrub to 3 m with grey-green jagged -edged leaves, a yellow daisy-like flower in late winter to spring, followed by round green fruit, later brown seeds.



Habit: Colonises large areas of bushland. Boneseed is common in the reserve and can hybridise with Bitou Bush, a similar and equally invasive plant with smoother edged leaves, so we must check for its presence although currently not seen.

Treatment: It must be removed - roots, flowers, seeds – and bagged, but we must notify the DSE if Bitou Bush is discovered and they will remove it for us.

24. Black-berry Nightshade (*Solanum nigrum*) origin Europe.

Description: An erect herb or short lived bushy shrub to 1 metre. It has ovate shaped leaves, small star shaped white flowers with prominent yellow anthers, and berries 6-8 mm which ripen from green to black.



Habit: Grows in the understory of wooded areas. It is a colonising plant in disturbed areas and tracks.

Treatment: Remove the plant by grasping the stem close to the ground near the base and pull from the ground, or if too big cut and paint with Roundup. Bag the plant especially if the berries are ripe.

25. Wild Tobacco Tree (*Solanum mauritianum*) origin South America.

Description: A woolly shrub to 4 metres in height, with large felty grey leaves and pink or blue flowers June to November, followed by clusters of dull yellow round fruit. It has a strong tobacco smell when handled.



Habit: Invasive, seeds spread by birds. Can be seen throughout the reserve in more open areas.

Treatment: Hand pull small plants, cut and paint stumps of larger immediately with Roundup. Bag all parts.

26. Polygala or Myrtle-Leaf Milkwort (*Polygala myrtifolia*) origin South Africa.

Description: A medium shrub to 3 metres, small ovate, acacia-like bright green leaves and bright purple flowers in winter and spring.



Habit: Spreads by seeds from pods, aided by wind, birds and humans (sold as a garden plant). It is invasive in sandy soils; present in the reserve but not as prevalent as other invasive plants.

Treatment: Hand pull seedlings and cut and paint stumps of larger plants immediately with Roundup. Bag all parts with flowers.

27. Cotoneaster (*Cotoneaster spp*) origin East Asia.

Description: A medium-sized ornamental garden tree to 2 metres with small green pointed leaves and clusters of bright red berries in spring and summer.



Habit: It spreads through seed dispersal by bird droppings and can be seen throughout Sweetwater Creek Nature Reserve.

Treatment: Hand pull small plants. Cut and paint stumps of larger trees immediately with Roundup. Bag all plants bearing berries.

28. Sweet Pittosporum (*Pittosporum undulatum*) origin Gippsland.

Description: Densely canopied tree to 15 metres with shiny dark green wavy-edged ovate leaves and creamy sweet-smelling flowers in spring, followed by clusters of orange berries.



Habit: Its dense canopy shades out and ultimately eliminates indigenous shrubs and flowers. Birds spread the seeds and thickets of tiny plants spring up as a result. Although a native Australian plant it has spread beyond its indigenous East Gippsland habitat.

Treatment: Hand-pull small plants - some quite tiny but distinctive - and cut and paint larger plants immediately with Roundup. Bag any plants with seeds attached.

29. Sallow Wattle (*Acacia longifolia*) origin South Australia, Eastern Australia.

Description: An attractive plant in the wrong place – to 3 or more metres, similar mature leaves to Blackwood. Flowers winter/spring the same time as the Blackwood, but has yellower, longer flowers (see Plants entry).



Habit: Extremely invasive of disturbed areas and seen everywhere in the reserve.

Treatment: Hand pull smallest plants, cut larger but no need to paint with Roundup.

30. Coastal Tea-Tree (*Lepotspermum laevigatum*)

Description: A small tree to 5 metres high with rough fibrous bark, small leathery leaves and a pretty white 5 petalled flower in spring. Although indigenous to the coast nearby, it is not indigenous to the reserve.



Habit: Coastal Tea tree tends to invade cleared areas of woodland and is the aftermath of heavy timber-felling in the reserve in the 19th Century. It establishes a monoculture that excludes other plant growth.

Treatment: As it provides habitat for the reserve's fauna we don't remove fully grown trees other than in a regenerative burn. We just pull out small seedlings as we come across them.

Groundcovers and Creepers

1. Kidney Weed
2. Running Postman
3. Bower Spinach (*Tetragonia*)
4. Bidgee Widgee
5. Native Raspberry
6. Love Creeper
7. Common Appleberry
8. Clematis (*microphylla* and *aristata*)

Grasses, Sedges & Tussocks

9. Weeping Grass (*Microlaena*)
10. Tussock Grass (*Poa*)
11. Wallaby Grass
12. Kangaroo Grass
13. Knobby Club Rush
14. Saw Sedge (*Gahnia*)
15. Lomandra
16. Sand-hill Sword-sedge (*Lepidosperma*)
17. Black-anther Flax Lily
18. Pale Flax Lily

Shrubs and Trees

19. Green Correa
20. White Correa (*Correa Alba*)
21. Common Heath
22. Hop Goodenia
23. Silky Teatree
24. Prickly Teatree
25. Black Wattle
26. Sweet Wattle
27. Prickly Moses
28. Hedge Wattle
29. Blackwood
30. Sallow Wattle (for comparison)
31. Coast Banksia
32. Silver Banksia
33. Coast Manna Gum
34. Narrow-leaf Peppermint Gum
35. Swamp Gum
36. Swamp Paperbark (*Melaleuca*)

Wildflowers

37. Some commonly seen wildflowers
38. Pea Plants

1. Kidney-Weed (*Dichondra repens*)



Prostrate groundcover growing in partial to complete shade. Liddesdale track, Hoadley entrance.

2. Running Postman (*Kennedia prostrata*)



Prostrate groundcover, loves a sunny bank but can tolerate some shade. Some in Hoadley entrance bed and along Liddesdale track. Short-lived.

3. Bower Spinach (*Tetragonia implexicoma*)



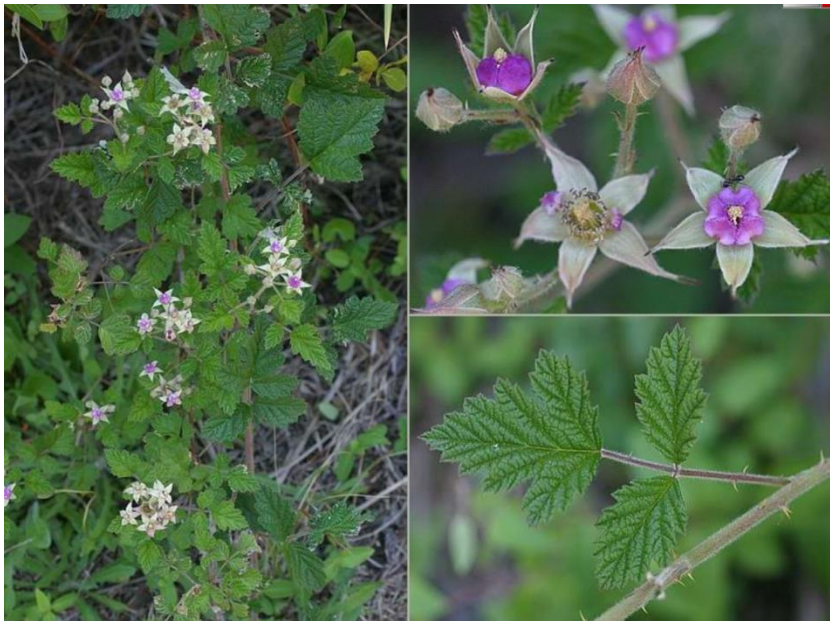
Prostrate scrambler over other plants but is an excellent stabiliser for banks. Very tolerant of salt spray and winds, sun and sandy soil. Liddesdale entrance.

4. Bidgee Widgee (*Acaena novae-zelandiae*)



Prostrate, spreading to 1 m. A useful stabiliser on banks but can cover other plants. Its attractive but sticky seed heads cling to socks! Liddesdale bank.

5. Native Raspberry (*Rubus parvifolius*)



A low, scrambling prickly plant, resembling Blackberry but with softer more arrow-shaped leaves and pink flowers. The fruit in late summer is said to be tangy and sweet but you will need to beat the birds to it. It grows near the creek along the Creek track. Always check first to avoid pulling it out as Blackberry!

6. Love Creeper (*Comosperma volubile*)



A delicate twining creeper that threads its way through low-growing plants. Its tiny blue flowers can be seen in spring and early summer throughout the grassy woodlands.

7. Common Appleberry (*Billardiera scandens*)



Light climber to 3 metres. Twines its way up and around small shrubs and along fences. Flowers September to December. A common sight in the reserve.

8. Clematis (*microphylla* and *aristata*)



We have both these Clematis in the reserve. *Microphylla* (left) forms a mantle over shrubs and trees and *aristata* twines its way up the trunks and branches. *Microphylla* flowers first from July to October; *aristata* from October to November. With both the flowers are followed by fluffy seed heads earning them the name of 'Old Man's Beard'.

9. Weeping Grass (*Microlaena stipoides*)



Microlaena rises from a basal clump in slender weeping stalks to 80 cm with a very fine seed head. It occurs throughout the reserve in areas away from traffic. We discovered it on the Beattie track slopes after we cleared them and it also comes up after regenerating burns. We try to clear around it to encourage its spread wherever we find it.

10. Tussock Grass (*Poa labillardieri*)



A fine clump-forming grass to 1 metre with profuse seed heads. Good in part shade and as a stabiliser on slopes. See Liddesdale entrance and throughout the heathlands.

11. Wallaby Grass (*Austrodanthonia caepitosa*)

A tufted perennial grass, 30-80cm. Its fluffy pale cream seed head makes it easy to distinguish. It can be seen along the paths and in the heathland areas. Not to be confused with the introduced Hare's-tail Grass on right; this has similar but smoother cream tufts.

12. Kangaroo Grass (*Themeda triandra*)

Taller, 40-90cm, with a larger, darker seed head than Wallaby Grass.

13. Knobby Club Rush/Sedge (*Ficinia nodosa*)

A common sedge to 1 metre throughout the reserve, one we tend to plant whenever we have cleared an area as it is a good soil stabiliser. It has leathery rounded stems topped with its 'knobby' seed head. Can be seen at the Liddesdale entrance, Beatty track cleared site, near the Granites and in the Triangle.

14. Saw Sedge (*Gahnia sieberiana*)

Gahnia is the tallest sedge, reaching 3 metres, and can be seen in the Bradley sites along the Fire track and in woodland areas. It has very long tough strappy leaves and as its common name suggests it cuts your fingers if you don't wear gloves. It has yellowy brown flowers from October to January, followed by dark red seeds. It is the host plant for the Sword Grass Brown butterflies.

15. Lomandra (*Lomandra longifolia*)

One of the most common sedges in the reserve, 90cm-1.2m. It has long strappy foliage and spikes of yellow flowers that occur from September to December, followed by seed heads.

16. Sand-hill Sword-sedge (*Lepidosperma concavum*)

Another common sedge, shorter and in fan-shaped clumps, 60cm-1m. It is seen in all the woodland and heathland areas and spreads easily but cannot be transplanted.

17. Pale Flax Lily (*Dianella longifolia*)

Seen throughout the reserve, a tussock of strappy leaves with a central groove, 30-80cm with delicate blue and yellow flowers August-January. The flowers develop into bright blue bead-like seeds.

18. Black-anther Flax Lily (*Dianella revoluta*)

Similar to *longifolia* - 50-90cm, but with its flowers on shorter stems nestled amongst the foliage. Flowers September-December, same blue seeds.

19. Green Correa (*Correa reflexa*)

Upright shrub, 1 to 3 metres. Oval, crinkly leaves and lime-green flowers March to September or later. Seen amongst trees in all the woodland areas.

20. White Correa (*Correa alba*)

Dense spreading shrub, can grow to 2 metres. Green-grey oval leaves and white star-shaped flowers November to May. Unlike the Green Correa, White Correa prefers a coastal position and can be seen on the Liddesdale Ave Entrance banks.

21. Common Heath (*Epacris impressa*)

Upright shrub to 1.5 metres with small prickly leaves. White or pink trumpet-shaped flowers massed along the stems March to November. It can be seen mainly in the heathland areas near the Fleetwood Crescent Entrance Noticeboard. The Epacris is Victoria's State emblem.

22. Hop Goodenia (*Goodenia ovate*)

Shrub, 1-2m and also a prostrate variety, seen everywhere in sun and shade. It flowers from May to November when its bright yellow flowers light up the reserve.

23. Silky or Heath Teatree (*Leptospermum myrsinoides*)

Small tea-tree, to 2.5 metres with white or pale pink flowers from August to November.

24. Prickly Teatree (*Leptospermum continentale*)

Taller than the Silky Tea-tree, to 4 metres and as its name indicates, with prickly leaves. This makes it excellent protective habitat for small birds and we plant it throughout the reserve. It has white flowers later than the Silky, from October to March.

25. Black Wattle (*Acacia mearnsii*)

6-10 metres. Short-lived; tends to grow thickly after fires – see the ‘burn’ area at the Parkside Ave end of the Fire track -and out-competes weeds. Cream flowers September to December.

26. Sweet Wattle (*Acacia suaveolens*)

A smaller tree, 1-2 metres. More delicate foliage than the other wattles. Scattered throughout the reserve. The large seed pods are a feature after flowering. Flowers April to August.

27. Prickly Moses (*Acacia verticillata*)

A small tree – 2-4 metres. Note the different, elongated, flower heads. Excellent habitat for small birds because of its protective prickles. Can be seen throughout the reserve. Flowers July to October.

28. Hedge Wattle (*Acacia paradoxa*)

Another prickly refuge for birds. 2-4 metres. A major tree in the reserve, its round golden flowers make a bright display from August to November.

29. Blackwood (*Acacia melanoxylon*)

A shapely, densely foliated tree 5-10 metres, with soft lemon blossoms from July to October. It can be seen throughout the reserve. Do not confuse with the Sallow Wattle.

30. Sallow Wattle (*Acacia longifolia*)

Is not indigenous to Sweetwater Creek. It has a similar leaf to the Blackwood but quite different flowers, also July to October just to confuse you. The Blackwood has ferny juvenile leaves and rough bark, which help to distinguish it. We treat the Sallow Wattle as a weed where necessary as it competes with the indigenous wattles.

31. Coast Banksia (*Banksia Integrifolia*)

As its name denotes, this is a coastal tree but there are many in the reserve. It grows to 20 metres. Its lime green flowers appear from February to September, and become the woody 'banksia men' of Snugglypot and Cuddleppe fame. Important nectar provider for birds.

32. Silver Banksia (*Banksia marginata*)

More truly indigenous to the reserve than the Coast Banksia; a graceful tree to 5 metres with finer silver-backed leaves. There is a large specimen near the 'turn-around' on the Fire track, and others scattered through the reserve. Flowers September to April.

33. Coast Manna Gum (*Eucalyptus viminalis*)

There are Manna Gums throughout the reserve, one of our larger trees - 8-16m. So called because the Kulin people ate the 'manna' secreted by insects as a sweet treat. It has creamy-white flowers January to April.

34. Narrow-leaf Peppermint (*Eucalyptus radiata*)

A spreading shade tree with a fibrous bark, 10-15m. Peppermint-scented leaves from which oil is distilled. It too has creamy flowers October to January.

35. Swamp Gum (*Eucalyptus ovata*)



This one prefers moist soil so we have planted many in the Wetlands area. 8-30m. It has bark peeling away to a smoother trunk than the Manna or Peppermint. It has white flowers from autumn to mid-winter. Koalas like the leaves!

36. Swamp Paperbark (*Melaleuca ericifolia*)



Both the **Swamp Paperbark** 2-9m, and the smaller **Scented Paperbark** (*Melaleuca squarrosa*) like moist soil so these also have been planted thickly in the Wetlands, but can be seen throughout the reserve. A lovely sight when in flower, the former in October-November, the latter from September to February.

Chocolate Lily - seen along the Fire track, from September to December.



Milkmaids - fire track and heathland areas from September to October.



Yellow Rush Lily - seen along the Fire track from September to December.



Hibbertia sericea – a low spreading shrub seen along the Fire, Creek and Grange tracks from September to December.



Hibbertia prostrata – despite its name it is taller than *sericea* and can be seen in the same areas.



Early Nancy (Harbingers of Spring) – fire track and Heathlands, July-September.



Rosy Hyacinth Orchid – dotted along the Fire track, December to March.



Scented Sundew - lies close to the ground and catches insects on its spoon-shaped sticky pads. Can be found throughout the reserve in shady places, August to November.



Pelargonium australe – soft perennial clump, flowers October to February in shade and sun.



Nodding Greenhood – fire track near the Turning Circle, late winter, early spring. (Honeypots foliage in the background.)



Tall Sundew – its insect traps are on stalks. Like the Scented Sundew it is seen throughout the reserve in shady places. August to November.



Common Aotus (*Aotus ericoides*)



Grey parrot-pea (*Dilwynnia cinerascens*)



Common Flat-pea (*Platylobium obtusangulum*)



Heath or Smooth parrot-pea (*Dillwynia glaberrima*)



Showy Bossiaea (*Bossiaea cineria*)



Hop Bitter- pea (*Daviesia latifolia*)



Creeping Bossiaea (*Bossiaea prostrata*)



- | | |
|----------------------------|-------------------------------|
| 1. Grey Fantail | 16. Little Wattlebird |
| 2. Thornbills | 17. Black-faced Cuckoo Shrike |
| 3. Eastern Yellow Robin | 18. Common Bronzewing |
| 4. Kookaburra | 19. Spotted Pardalote |
| 5 Eastern Rosella | 20. Red-browed Finch |
| 6. Rainbow Lorikeet | 21. New Holland Honeyeater |
| 7. Grey Shrike Thrush | 22. White-plumed Honeyeater |
| 8. Noisy Miner | 23. White-naped Honeyeater |
| 9. White-browed Scrub Wren | 24. Yellow-faced Honeyeater |
| 10. Australian Magpie | 25. Cuckoos |
| 11. Magpie –Lark | 26. Superb Fairy Wren |
| 12. Grey Butcher Bird | 27. Silvereye |
| 13. Eastern Spinebill | 28. Tawny Frogmouth |
| 14. Golden Whistler | 29. Willie Wagtail |
| 15. Red Wattlebird | 30. Little Raven |

Above are listed the indigenous birds most commonly seen in Sweetwater Creek Nature Reserve, in order of the frequency of sightings as we work there each week. This will no doubt be arguable and rightly so as we will all have different bird-spotting experiences.

The Honeyeaters are heard but rarely seen as they dart about the reserve and are less common than they used to be. The Cuckoos only visit in spring. The Tawny Frogmouth is a master of disguise, more visible when nesting in spring.

It has been asked if any of the birds are seasonal and we have come to the conclusion that perhaps with the exception of the cuckoos they are with us throughout the year. Spring brings a flurry of activity and increased sightings as they begin breeding and nesting but their songs seem to be with us always.

Volunteers might like to make their own records of sightings, especially of ones not listed, and add notes and photos to this manual

1. Grey Fantail: 16 cm. Small acrobatic fly-catcher, grey with white 'eye brows.' It spreads its fan while swooping from tree to tree.

Voice: A busy scissory chatter and a short sharp 'jeck'.



2. Brown and Striated Thornbills: Both 10 cm. Almost the tiniest and most common birds in the reserve. They both have lovely markings and variations of colour as you can see here. They are busy little birds, always foraging for insects in the trees.

Voice: Brown a soft churring or a short, sharp 'tsip tsip'; **Striated** a sharper 'tizz,tizz'.



3. Eastern Yellow Robin: 15 cm. A sociable visitor when we are weeding, hoping for worms or insects to surface. Its bright yellow breast makes it easy to spot amongst the trees.

Voice: A running, piping call.



4. Laughing Kookaburra: 46 cm. These also love to watch while we work, hoping for some worms. They often gather in families along a tree branch.

Voice: Of course we all know its laughing cackle which can be heard right across the reserve.



5. Eastern Rosella: 30 cm. White-cheeked rosella with red head and breast, yellow underparts, black and yellow mottled back, blue shoulders. Like the Rainbow Lorikeet, it nests in tree hollows. It eats fruit, nuts and seeds, often seen on lawns eating grass seed.
Voice: A bell-like 'pink, pink' and soft chattering.



6. Rainbow Lorikeet: 25-30 cm. Large blue-headed lorikeet with orange or red breast. Often seen at the entrance to a hole high in a tree trunk, where it makes its nest. They feed on eucalypt and Banksia blossoms often in noisy flocks.
Voice: A noisy screech while in flight, noisy chatter while feeding.



**7. Grey Shrike-Thrush:** 22.5 cm

An ordinary looking bird with an extraordinary song, very melodious; you will soon recognise its 'pip pip pip pip hoo-ee'. We often hear it while we are working, especially along the Creek track.

**8. Noisy Miner:** 25-28 cm.

Although an indigenous bird the Noisy Miner is regarded with disapproval for its aggressive behaviour towards other birds. It often gathers in flocks and drives away any competition.

Voice: A loud 'zwit' and a series of 'weet, weet, weet' as it flies. It can be quite melodic too.

**9. White-browed Scrub Wren:**

11-13 cm.

Distinctive white eyebrows and throat. A busy hunter in the undergrowth.

Voice: A scissory, sneezy 'tseer, 'tseer' or 'sit-you, sit-you'.

**10. Australian Magpie:** 38-44 cm.

One of the most familiar Australian birds. In spring they aggressively protect their nest sites by dive-bombing passers-by. Their raucous young constantly demand to be fed even as they reach the same size as their parents, and have mottled grey and white feathers which become the sharp black and white of the parents.

Voice: A beautiful flute-like carolling, especially at dawn.

**11. Magpie-Lark:** 26-30 cm.

Also known as Mud-Lark as it builds its nest of mud. An elegant little bird as it struts confidently around, often with its mate. The male has a white eyebrow and a broader white patch below the eye than the female.

Voice: A strident 'pee wee' (it's other name) as well as a more melodic call.

**12. Grey Butcher Bird:** 24-30 cm

Smaller than a magpie but similar in appearance, with a dark grey head, dull grey back, white throat and greyish underparts. Named for its skewering of prey on a sharp thorn or twig to keep for later.

Voice: Beautiful, vigorous flute-like melodic piping, more varied than the Magpie's.

13. Eastern Spinebill: 13-16 cm. An exquisite tiny bird with black and chestnut colouring that loves to probe correas and other tubular flowers for nectar.

Voice: A running 'pip pip pip'.



14. Golden Whistler: 17 cm. Golden breasted with a white throat and black 'hood', olive back with yellow edges to wing feathers.

Voice: This is the Luciano Pavarotti of the woodland, with a lovely melodic whistle ending in a brisk upward 'Whit!'



15. Red Wattlebird: 31-39 cm. Large honeyeater wattlebird with yellow abdomen, small pendant red wattles below the ear; white tips on tail feathers. Swift flight, catching insects in mid-air.

Voice: Noisy, 'chock a lock', like maniacal laughter!



16. Little Wattlebird: 27-33 cm. Smaller than the above, no red wattles.

Voice: Similar call - more 'kwock' - and flight. Both birds love Banksias and Eucalypt flowers, and insects.



17. Black-Faced Cuckoo Shrike: 26-28 cm. Striking black face and throat, pale grey body with darker grey wing tips. Most recognisable by its swift direct flight with closed wings.

Voice: Musical, churring or a sharp 'skair!' in aggression.



18. Common Bronzewing: 32-36 cm. Large pigeons, usually seen in pairs on the ground, feeding on seeds. They depart with a clatter of wings. Named for the bronze sheen on their wings.

Voice: They can be heard more often than seen, a low booming call, repeated at three minute intervals.



19. Spotted Pardalote: 8-9.5 cm. A little bird, crown black with white spots, yellow throat and under tail with a splash of red. It digs a hole in an earth bank for a nest. We see them near the Granites and the Fleetwood track lookout.

Voice: A loud call for such a little bird – a high clear ‘sleep, peep’ rising to ‘deedee’.



20. Red-browed Firetail Finch: 11-12 cm. Olive-backed with red ‘eyebrow’, grey underparts, red feathers at top of tail, then black. Commonly seen in a flock, often near water.

Voice: High-pitched ‘pseet’ as they swoop past.



21. New Holland Honeyeater: 16-19 cm. Yellow and black wings and boldly-striped black and white breast, yellow and black tail feathers; slender curved black beak.

Voice: Loud 'tchlik', whistling 'pseet', shrill harsh chattering.



22. White-Plumed Honeyeater: 15-19 cm. Greenish yellow with a white plume below its cheek. More likely to be seen near water.

Voice: 'che-uck-oo-whee' and a loud 'ti-ti-ti' in alarm.



23. White-Naped Honeyeater: 13-15 cm. Small black-headed honeyeater with a white nape not meeting the eye, orange wattle over the eye, dull olive-green back, white chest. May move to Queensland in autumn.

Voice: Soft 'sherp, sherp' or 'tew, tew'.



24. Yellow-Faced Honeyeater: 15-18 cm. A black mask split by a yellow stripe below the eye. Also migrates in autumn, returns July-October

Voice: Loud cheery 'chick-up' and 'pirrup, pirrup'.



Fan-tailed Cuckoo



Pallid Cuckoo



Shining Bronze Cuckoo



Horsfield's Bronze Cuckoo



25. Above are the four cuckoos likely to be heard rather than seen in the reserve. The Fan-tailed and the Pallid are the larger birds at 24-28 cm and 30-33 cm respectively, the Shining Bronze and Horsfield's both about 17 cm. As their name denotes the latter two have a bronze sheen to their feathers.

Voice: Just to confuse you, both the Fantail and the Horsfield's have a mournful downward inflected whistle and the Shining Bronze and the Pallid have a more cheerful upward whistle, as if summoning you.

We tend to hear the cuckoos only in spring so listen carefully! They are breeding and preparing to lay their eggs in the nests of other birds' with similar eggs. They like to eat hairy caterpillars.

26. Superb Fairy Wren: 14 cm Female and juvenile male both greyish with blue tails. Adult male has all the colour but moults to grey after breeding season. Not commonly seen, prefer low vegetation, last sighted on Liddesdale track.
Voice: Short sharp 'trrrt'.



27. Silvereye: 12 cm Tiny olive green bird with grey chest and a distinct 'silver' ring around its eyes. They feed on insects, nectar and fruit and usually move rapidly in flocks.
Voice: A loud 'tsee'.



28. Tawny Frogmouth: 32-46 cm. A master of camouflage by day, it is hard to see him against the grey bark of a tree branch where the flimsy nest will be in spring*. A nocturnal bird with a powerful frog-like beak, huge yellow eyes with a disconcerting stare if you should come face-to-face. We have some families in the reserve, but tree removal is a constant threat.

Voice: A soft but penetrating 'oom, oom', usually heard in the early hours of the morning.



***Baby Tawny Frogmouth**



29. Willie Wagtail: 19-22 cm. With its wagging fantail, cheeky white eyebrows and sharply defined black and white colouring the Willie Wagtail is a well-loved bird.

Voice: A 'sweet pretty creature' or a warning 'rikka-tikka-tik'



30. Little Raven: 48-50 cm. Often called 'crow' but is an Australian bird. Its cry is not as loud or long as the bigger Australian Raven. Also more insectivore than scavenger than the latter. They roost communally and often fly in noisy groups.

Voice: Harsh, short, rapid 'car car car'.



Possums

1. Common Brushtail Possum
2. Common Ringtail Possum
3. Sugar Glider

Water Rat and Swamp Rat

4. Water Rat
5. Swamp Rat

Microbats

6. Little Forest Bat
7. Lesser Long-eared Bat
8. Chocolate Wattled Bat
9. Gould's Wattled Bat

Echidna and Antechinus

10. Short-nosed Echidna
11. Agile Antechinus

Frogs

12. Southern Brown Bullfrog
13. Southern Brown Tree Frog
14. Southern Toadlet
15. Common or Eastern Froglet

These three nocturnal arboreal marsupials all rely on hollows for their nests, although the Ringtail also builds a twiggy nest (a 'dray') high in the tree canopy. Which can be seen throughout the reserve. All carry their babies in pouches.



1. Sugar Glider:

The Sugar Glider is the smallest with a 16-21 cm body and a tail the same length. It is named for its love of the sugar exuding from wattles which it accesses by chewing or scratching grooves in the bark and of course for its gliding method of moving from tree to tree. Its babies are born in June-January. It has a soft dog-like yapping call.



2. Common Ring tail Possum:

The Ringtail is next in size – 30-35 cm plus the same length, prehensile, tail. Its call is a high-pitched ticking. Babies born April-December.



3. Common Brushtail Possum:

The Brushtail is the biggest possum – 35-55 cm with a 25-40 cm tail and weighs 1.2-4.5 kg. It is the noisiest with its screams, hisses and growls. Babies born March –May, so all possums have young from autumn onwards into summer.

4. Water Rat: Large aquatic nocturnal rodent. Body 25-35 cm, tail 24-32 cm. Dark grey-brown back, orange to white belly. Tail has white tip. Hind feet large and partially webbed. Lives along rivers, streams and estuaries, coastal waterways. Diet of fish, invertebrates. Breeds September to March, four or five young. Has been seen near the suspension bridge.



5. Swamp Rat: A medium-sized, stocky nocturnal rodent, 12-20 cm. Dark grey-brown with paler belly. Short tail – 5-15 cm hairless with prominent rings. Females give birth to up to five young in September to February. It eats corms (Oxalis) and the bases of sedges (Lomandra) as well as insects, fungi and seeds. We have seen its burrows in the heathland areas and at the Fleetwood end of Beattie track.



6. Little Forest Bat



7. Lesser Long-eared Bat



Micro bats are exactly that, the **Little Forest Bat** being the smallest at 35-48 mm body length with a 35-50 mm tail and a wing span of 33-41 mm. Weight 3.5-6 gms. **The Lesser Long-eared** is next at 40-50 mm body length, tail 35-50 mm, wing 33-41 mm. Weight 7-12 gms.

8. Chocolate Wattled Bat



9. Gould's Wattled Bat



The **Chocolate Wattled Bat** and the **Gould's Wattled Bat** are a similar size – 65-75 mm length, tail 40-50 mm, wing 40-50 mm.

Weight 10-18 gms.

All feed on insects on the wing and need tree hollows to nest in. All breed in spring to early summer.

10. Short-nosed Echidna: The echidna is a monotreme – an egg-laying mammal; the only other monotreme in Australia is the platypus. It has a long sticky tongue for inserting in ants' nests. Its powerful claws enable it to bury itself quickly when danger threatens. It hibernates in winter, emerging to mate as the weather warms. Otherwise it is a solitary animal, the male having nothing to do afterwards with the female or offspring.



11. Agile Antechinus: a small sharp-snouted nocturnal marsupial, 7-11 cm with a tail the same length. Weight 20-40 gms. It has grey-brown fur. It breeds in July to September after which the exhausted males all die! It eats insects and small vertebrates and is an excellent climber.



*We have to say that we only have anecdotal evidence that these two creatures inhabit the reserve but we do have suitable habitat.

**11. Southern Brown Bullfrog:**

70 mm. Large, thickset burrowing frog. Brown to grey brown with mottling on the back. Broad dark brown band behind the eyes to the flanks, raised pale brown stripe from beneath the eyes to the shoulders, underparts pale. Lays eggs August-January in pools and slow streams.

Voice: Often called the 'Pobblebonk' because of its plucking resonant call.

**12. Southern Brown Tree Frog:**

40 mm. Medium-sized brown frog. Broad darker stripe from behind the eyes to the hind legs. Front feet unwebbed. Breeding most of the year, with eggs laid in water. Excellent climber and may be found some distance from water.

Voice: 'cree cree cree' repeated 5-17 times.

**13. Southern Toadlet:**

30 mm. Colourful spotted toadlet. Lays eggs March-June under leaf litter or in shallow burrows which are later flooded. Tadpoles later hatch after eggs are inundated with water.

Likes damp sites in open forests, woodlands and heathlands, often near the coast where it shelters under leaf litter, not necessarily near water.

Voice: Short harsh call 'cre-ek'.

**14. Common or Eastern Froglet:**

30 mm. Small brown frog, sometimes with a central stripe on the back. Belly white or off-white with black mottling. Breeds all year, laying its eggs in water.

Voice: a cricket-like chirruping – 'crick crick crick'.

The information in the Volunteer Manual was sourced from:

<i>Field Guide to the Birds of Australia.</i>	Graham Pizzey Angus & Robertson 1997
<i>Flora of Melbourne: A Guide to the Indigenous Plants of the Greater Melbourne Area.</i>	Australian Plants Society Maroondah Inc. Marilyn Bull Hyland House 2014
<i>Indigenous Plants of the Sandbelt.</i>	Rob Scott et al Earthcare St Kilda 2002
<i>Mornington Peninsula: A Field Guide To the Flora and Fauna and Walking Tracks.</i>	Steffanie Rennick et al Southern Peninsula Tree Preservation Society.
<i>Mornington Peninsula Local Plants.</i>	Frankston City Council & Mornington Peninsula Shire Council
<i>Mornington Peninsula Pest Plants.</i>	Mornington Peninsula Shire Council
<i>Slater Field Guide to Australian Birds.</i>	Peter, Pat & Raoul Slater New Holland Publishers 2009
<i>The Weed Book.</i>	Mark A. Wolff New Holland Publishers 2011
<i>Weeds of the South East.</i>	F.J Richardson et al R.G and F.J Richardson
<i>Wild Things of Greater Melbourne.</i>	Viridans Biological Databases 2010

Plus information gathered from the experience of the volunteers of Action Sweetwater Creek Inc. with special reference to Muriel and Ole Petersen and Warwick Exton, and the continuing support of the staff of Frankston City Council's Natural Reserves.