

# CREATE FROG HABITAT

Attracting frogs

## WHY CREATE FROG HABITAT?

Since European settlement, many Australian waterbodies have experienced reduced ecological values, including a decline in the diversity and abundance of aquatic flora and fauna. This is largely the result of:

- 1) development e.g.
  - Draining waterbodies for land use.
  - Realigning the direction of water flow.
  - Altering natural water volumes.
  - Diverting runoff from developed areas into waterbodies.
  - Transforming waterbodies into concrete drains.
- 2) development related factors e.g.
  - Pollution.
  - Weed and pest animal invasion.
  - Increased salinity.
  - Unnatural sedimentation and turbidity.
  - Increased water temperatures.
  - Diminished overall water quality.



Consequently the creation of new and protected habitats, such as ponds, is essential for species conservation throughout Australia; particularly in regards to environmentally sensitive fauna e.g. frogs, mayflies, stoneflies, caddis flies etc. (Hangay & German 2000) and their prey.

This is where you come in!

## HOW DO I CREATE A FROG POND?

### 1. What's the best spot for a pond?

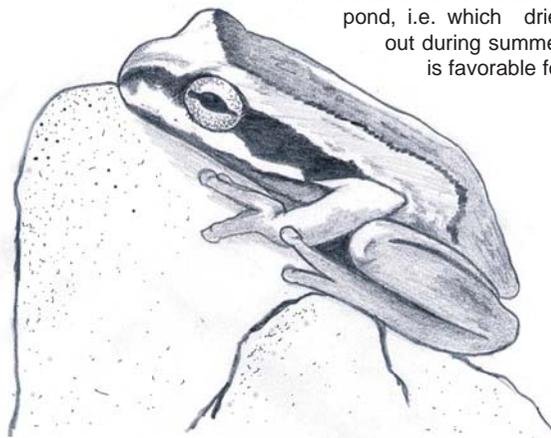
The pond should be situated so that it receives sunlight in the morning and shade during warmer times of the day (Anstis 2002). Deciduous shade trees should be avoided near the pond as excessive leaf shed will reduce oxygen levels in the water and cause an overall decline in water quality. Very few indigenous plants are deciduous. Some leaf litter is fine for habitat.

Care should be taken not to allow polluted runoff to enter the pond. For example, do not situate the pond downhill from a vegetable patch that will allow excessive nutrients to enter the pond when it rains.

### 2. \*How deep should I make it?

The depth of your pond is more of a safety question, than an ecological one. That is, unless you are creating a seasonal pond. As far as frogs are concerned, it is more important that the pond has an edge that tapers gradually from shallow to deep. This allows for the different temperature habitats that frogs require throughout each day and throughout the seasons. It also provides a refuge from predators i.e. the frogs/tadpoles can escape into deeper water when necessary.

The creation of a seasonal pond, i.e. which dries out during summer, is favorable for



the establishment of frogs as it helps to avoid introduced predators from establishing (e.g. mosquito fish). Because breeding takes place before summer, the tadpoles have a chance to metamorphose into frogs before the warmer weather dries up the water source. Frogs spend the majority of their time living on land once the transformation has taken place, although they do return for breeding.

A good depth for a seasonal pond might be approximately 2 ft, although many different factors may affect the accuracy of this guesstimate.

### 3. \*How wide should I make the pond?

The overall dimensions will depend mostly on whether or not you need a permit for a certain size pond. The width is otherwise up to you. A wide pond will give you more area to work with to allow a gradual tapering of the edges. Large ponds also support more species and/or individual animals.

### 4. Can I install a fountain?

A fountain, waterfall or similar feature would certainly assist in keeping the water oxygenated and avoid stagnation, however try to keep at least one section of the pond still, in the interests of frogs that prefer calm water.

### 5. Should I fence it?

Please contact the Council / Shire that governs your area in order to discuss your fencing obligations.

### 6. What about my dog/cat?

It is best to keep both cats and dogs as far away from the pond as possible, as it is in their nature to hunt. While some pets may not mean to harm wildlife, they often do so through play. The mere presence of cats and/or dogs can also cause severe stress to wildlife.

### 7. Can I put fish in the pond?

It is wise not to introduce fish into your pond, whether native or introduced, as they will consume the tadpoles and frog eggs/hatchlings.

### 8. Where do I get the frogs from?

By providing a breeding ground for frogs, e.g. a pond, frogs will naturally come to inhabit the area. Buying frogs from a pet shop for your home pond is not recommended. An alternative can be to become a legal 'tadpole custodian' through the Victorian Frog Group (see contact details below), which will also give you access to exciting field trips and other activities (Anstis 2002).

Victorian Frog Group:  
Postal Address: PO Box 959, Merlynston VIC 3058.  
Email: Frog\_Pond@bigpond.com.au  
Website: www.frogs.org.au

### 9. What about logs and rocks?

As with vegetation, logs and rocks are absolutely essential for habitat. Ideally there should be a mixture of both, on dry land around the pond as well as at various depths within the pond itself. These are used by frogs as shelter from predators and the elements, as well as to protect spawn (eggs and their jelly coating). Many other animals also use these for habitat.

### 10. What plants should I put in?

Providing indigenous (locally native) vegetation throughout the pond environment, both on dry land and at various depths within the pond itself, is extremely important for the local fauna that have naturally evolved to rely on these plants for food and shelter. Some frogs use vegetation within the water on which to anchor spawn, or to make the spawn less visible to predators.

The use of introduced (non-local) plants can be problematic and often encourages pest animals to inhabit the area e.g. Blackbirds.

A 3-4cm layer of sand and/or gravel on the pond floor will assist your chosen plants to establish within the water (Anstis 2002).

The following entails a list of plants that are suitable for the creation of a frog pond in the general Dandenong Ranges area. Please contact the Southern Dandenongs Community nursery to determine availability of these species at the time of your order.

For those of you who do not live in this area, please consult with your nearest 'indigenous' (as opposed to merely 'native') plant nursery for advice on suitable species.

Scientific Name	Common Name	Position
<i>Alisma plantago-aquatica</i>	Water Plantain	L
<i>Allocasuarina paludosa</i>	Swamp Sheoak	L
<i>Almaleea subumbellata</i>	Wiry Bush-pea	L
<i>Austrodanthonia bipartita</i>	Wallaby-grass	L
<i>Austrofestuca hookeriana</i>	Hooker's Fescue	L
<i>Austrostipa rudis</i> subsp. <i>rudis</i>	Veined Spear-grass	L
<i>Brachyscome cardiocarpa</i>	Swamp Daisy	L
<i>Calystegia marginata</i>	Forest Bindweed	L
<i>Carex appressa</i>	Tall Sedge	L
<i>Carex breviculmis</i>	Short-stem Sedge	L
<i>Carex fascicularis</i>	Tassel Sedge	E
<i>Centella cordifolia</i>	Swamp Pennywort	L
<i>Coprosma quadrifida</i>	Prickly Currant-bush	L
<i>Cotula australis</i>	Common Cotula	L
<i>Cyperus lucidus</i>	Leafy Flat-sedge	E
<i>Eleocharis acuta</i>	Common Spike-rush	E
<i>Eleocharis sphacelata</i>	Tail Spike-rush	E
<i>Eragrostis brownii</i>	Common Love-grass	L
<i>Euchiton involucratus</i>	Creeping Cudweed	L
<i>Gahnia sieberiana</i>	Red-fruited Saw-sedge	L

Scientific Name	Common Name	Position
<i>Geranium potentilloides</i>	Crane's Bill	L
<i>Gonocarpus humilis</i>	Raspwort	L
<i>Gonocarpus micranthus</i>	Creeping Raspwort	L
<i>Goodenia elongata</i>	Lanky Goodenia	L
<i>Goodenia humilis</i>	Swamp Goodenia	L
<i>Goodenia ovata</i>	Hop Goodenia	L
<i>Gratiola peruviana</i>	Austral Brooklime	E
<i>Hakea nodosa</i>	Yellow Hakea	L
<i>Hydrocotyle laxiflora</i>	Stinking Pennywort	L
<i>Hypericum gramineum</i>	Small St John's Wort	L
<i>Imperata cylindrica</i>	Blady Grass	L
<i>Isolepis inundata</i>	Swamp Club-rush	E
<i>Juncus amabilis</i>	Rush	E
<i>Juncus holoschoenus</i>	Joint-leaved Rush	L
<i>Juncus planifolius</i>	Broad-leaf Rush	L
<i>Juncus sarophorus</i>	Rush	E
<i>Juncus subsecundus</i>	Finger Rush	L
<i>Lachnagrostis filiformis</i> var. 1	Common Blown Grass	L
<i>Lemna disperma</i>	Duckweed	W
<i>Leptorhynchos tenuifolius</i>	Wiry Buttons	L
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	L
<i>Lobelia anceps</i>	Angled Lobelia	L
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	L
<i>Lythrum hyssopifolia</i>	Lesser Loosestrife	L
<i>Melaleuca ericifolia</i>	Swamp Paperbark	L
<i>Melaleuca squarrosa</i>	Scented Paperbark	L
<i>Microlaena stipoides</i>	Weeping Grass	L
<i>Myriophyllum crispatum</i>	Water-milfoil	L
<i>Notodanthonia semiannularis</i>	Tasmanian Wallaby-grass	L
<i>Olearia asterotricha</i>	Rough Daisy-bush	L
<i>Olearia lirata</i>	Snowy Daisy-bush	L
<i>Ottelia ovalifolia</i>	Swamp Lily	W
<i>Patersonia fragilis</i>	Short Purple Flag	L
<i>Persicaria decipiens</i>	Slender Knotweed	L
<i>Poa ensiformis</i>	Purple-sheath Tussock-grass	L
<i>Potamogeton</i> sp.	Pondweed	W
<i>Ranunculus lappaceus</i>	Common Buttercup	L
<i>Sigesbeckia orientalis</i>	Indian Weed	L
<i>Stylidium armeria</i>	Grass Trigger-plant	L
<i>Stylidium graminifolium</i>	Grass Trigger-plant	L
<i>Tetraria capillaris</i>	Bristle Twig-rush	L
<i>Thelionema caespitosum</i>	Blue Grass-lily	L
<i>Themeda triandra</i>	Kangaroo Grass	L
<i>Triglochin procera</i>	Water-ribbon	W
<i>Triglochin striata</i>	Streaked Arrowgrass	E
<i>Veronica calycina</i>	Cup Speedwell	L
<i>Veronica gracilis</i>	Slender Speedwell	L
<i>Villarsia reniformis</i>	Running Marsh Flower	L
<i>Viola hederacea</i>	Native Violet	L
<i>Wahlenbergia gracilis</i>	Sprawling Bluebell	L

### KEY

L - Plant on land around the pond.

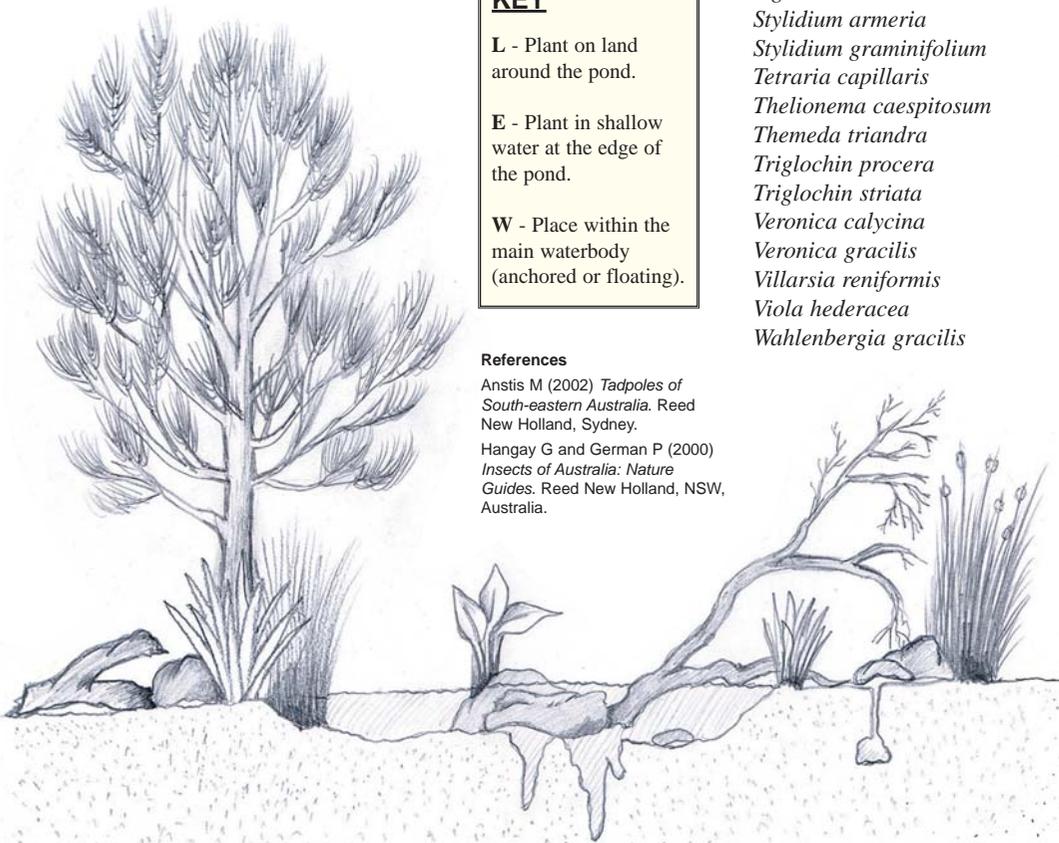
E - Plant in shallow water at the edge of the pond.

W - Place within the main waterbody (anchored or floating).

### References

Anstis M (2002) *Tadpoles of South-eastern Australia*. Reed New Holland, Sydney.

Hangay G and German P (2000) *Insects of Australia: Nature Guides*. Reed New Holland, NSW, Australia.



### \*IMPORTANT:

Seek advice from your local Shire/Council to determine if a permit is required, or if any restrictions apply to the development of a pond in your area.

Disclaimer: This document is intended only as a guide. It is the responsibility of readers to meet all necessary legal requirements and to ensure that safety precautions are considered first and foremost.

Universal Ecology Services

V I C T O R I A

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ABN: 11 535 074 086 © UES 2005

## Southern Dandenongs Community Nursery Inc.

-- Open Tuesday & Sunday Mornings --

Birdsland Reserve, 271 Mt Morton Rd, Belgrave Heights (Melway Ref. 84 C2)

Postal Address: P.O. Box 544 Belgrave, Victoria 3160