

Frog friendly gardens



Adelaide once hosted numerous watercourses that meandered their way across the Plains, often ending in wetlands. Frogs would have thrived along the watercourses and in wetland areas. They are a key part of our ecosystems, playing important roles in the food web and nutrient cycling.

Encouraging frogs is a wonderful way to bring back Adelaide's lost biodiversity and a worthwhile addition to any garden. Creating a pond or bog garden may encourage native frogs to visit and provides a place for them to reside and breed if the conditions are right. Hearing the call of frogs in an evening is a glorious sound.

Adelaide's frog species

There are seven species of frogs that currently live in the Adelaide and the Mount Lofty Ranges: Common Froglet (*Crinia signifera*), Spotted Marsh Frog aka Spotted Grass Frog (*Limnodynastes tasmaniensis*), Eastern Banjo Frog aka Pobblebonk or Bullfrog (*Limnodynastes dumerilii*), Ewing's Tree Frog aka Brown Tree Frog (*Litoria ewingi*), Painted Frog (*Neobatrachus pictus*), and Bibron's Toadlet (*Pseudophyrne bibronii*). The native Southern Bell Frog (*Litoria raniformis*) was believed to be introduced into the region in the 1960s, but it has not been seen since the 1980s. Introduced populations of the native Peron's Tree Frog (*Litoria peronii*) have established in some parts of the region.

Probably the least known local amphibian, Bibron's Toadlet is Threatened in South Australia. Unlike most frogs in the region, this species calls and breeds in autumn or early winter and lays its eggs on the ground in leaf litter or grassy areas that are likely to be inundated following winter rains.

Threats

Amphibian populations are in decline world-wide. A disease caused by chytrid fungus is thought to have caused the extinction of many species and is negatively impacting more. Human activities, including: insecticide use in agricultural and horticultural areas; loss of habitat through drainage of wetlands; the introduction of predators such as Plague Minnow aka Mosquitofish (*Gambusia holbrooki*), which consumes tadpoles and frog eggs; and climate change can significantly impact upon susceptible amphibian species.

The sensitivity and permeability of amphibian skin makes them susceptible to chemicals and pollutants that often make their way into the environment from waterways. Over collection of tadpoles and frogs for pets and moving frogs and tadpoles between areas (which also potentially transfers harmful diseases) can negatively impact on local frog populations.



The presence of amphibians is commonly regarded as a great indicator of healthy wetland environments

Water

Frogs have a semi-permeable skin that allows moisture and oxygen to be absorbed. So they need an environment that allows them to avoid dehydration or desiccation by staying moist or wet.

Water also plays an important role in the lifecycle of frogs; it is where most species breed and spend the early stages of their life as eggs and then tadpoles.

Creating your frog pond

It is important to consider the location and design of your frog pond. The area should ideally:

- not disturb you or your neighbours (frogs can be vocal, especially at night)
- be protected from predators, including cats and dogs
- receive part sun and part shade (two-thirds of the pond should be shaded at all times)
- be located near a source of insects (e.g. local native plants, mulched area or standing water)
- not enter a waterway directly or indirectly
- ensure no run-off that contains potential pollutants will enter your pond (such as from a compost bin).
- have gently sloped edges to help terrestrial frogs move in and out of the water easily be designed with your local frog species in mind.

For example Bibron's Toadlet prefer ephemeral soaks, with plenty of leaf litter and debris, which dry out over summer and fill following the autumn rains.

Other species will utilise ponds that are permanently filled with water.



Plant selection

Select local native plant species that will provide habitat for local frogs. They will also attract insects which frogs love to eat.

Put the taller species at the back of the pond and ensure a large variety of plants is incorporated in and around the pond. Put in grasses, reeds, dense matting groundcovers, small shrubs, ferns and sedges. Depending on the pond depth, provide emergent, submerged and floating plants as well. Creating a damp depression of native tussock grasses, groundcovers (e.g. native hibbertias and violets) and clumping plants such as mat-rush and flax-lily will provide excellent habitat.

Avoid using noxious weeds that create havoc in our waterways such as Water Hyacinth (*Eichhornia crassipes*), Water Lettuce (*Pistia stratiotes*) and Salvinia (*Salvinia molesta*). Also avoid planting introduced deciduous trees near ponds, as they increase nutrient loads when leaves drop and choke the pond's ecosystem. Some pines and oleanders may also have toxins in the leaves that can poison the water.

I have my pond, now what about the frogs?

Once your pond or soak has been built, resist the temptation to translocate frogs or tadpoles from another area or pet store. Movement of frogs and tadpoles can transfer disease and impact your local populations. Frogs are remarkably adept at discovering new habitat and it won't take long for your local frog species to move in to their new home.

Why a backyard for wildlife?

In Australia, gardening has been recognised as one of our favourite pastimes. What we do in our home gardens has the potential to benefit or harm the natural environment.

By developing and maintaining a garden that follows the five basic Backyards 4 Wildlife principles you will contribute to a better local environment, help conserve our local flora and fauna, create important habitat, reduce your maintenance costs, and reduce the threat of invasive environmental weeds.

Top 5 tips

1. Use plants native to your suburb.
2. Plant species that are a range of heights.
3. Use mix of local native plants that flower throughout the year.
4. Manage your pets responsibly.
5. Minimise chemical use.

Please consider applying some of these principles to your own backyard, so that together we can help grow a great living environment for Adelaide.



Example of a bog garden from afar with grasses, sedges and rushes surrounding a pond at Barossa Bush Gardens

More information

Visit the urban biodiversity page of our website to access more Backyards 4 Wildlife information and contact details for specialist native plant nurseries.

www.naturalresources.sa.gov.au/adelaide/mtloftyranges

Or contact your nearest Natural Resources Centre

Black Hill

115 Maryvale Road, Athelstone, SA 5076
P (08) 8336 0901

Eastwood

205 Greenhill Road, Eastwood, SA 5063
P (08) 8273 9100

Gawler

8 Adelaide Road, Gawler South, SA 5118
P (08) 8523 7700

Willunga

5 Aldinga Road, Willunga, SA 5172
P (08) 8550 3400

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