

Frog friendly gardens

Factsheet | July 2023

Frogs play a key role in the ecosystem. Creating a pond or frog bog is a wonderful way to attract frogs and to increase and support Adelaide's biodiversity. Adelaide's native frog populations have suffered as a result of land clearance, pollution, development and other human activities.

With the right conditions, frogs will visit, reside, and possibly even breed in your backyard. Listening to the calls of frogs is a glorious activity to do in an evening.

Adelaide's frog species

Seven species of frogs live around Adelaide and the Mount Lofty Ranges. These include the locally native:

- common froglet (*Crinia signifera*)
- spotted marsh frog (*Limnodynastes tasmaniensis*)
- eastern banjo frog aka pobblebonk (*Limnodynastes dumerilii*)
- brown tree frog (*Litoria ewingi*)
- painted frog (*Neobatrachus pictus*)
- Bibron's toadlet (*Pseudophryne bibronii*).

Peron's tree frog (*Litoria peronii*), introduced from other areas of Australia, has established in parts of the region.

Water

Frogs have a semi-permeable skin that allows water, oxygen and carbon dioxide to pass into and out of the body. This exchange is a critical part of their breathing process, but it means they need to live in a moist environment that allows them to avoid drying out.

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.

Threats

Frog populations are in decline world-wide. A disease caused by chytrid fungus is thought to have contributed to the extinction of many species and is impacting more. Human activities can also have significant impacts. These



The presence of frogs is often regarded as a good indicator of a healthy environment (Photo: Steve Walker).

include pesticide use, loss of habitat through drainage of wetlands, introduced predators and climate change.

The sensitivity and permeability of their skin makes frogs susceptible to chemicals and pollutants that often spread through the environment via waterways.

Bibron's toadlet is now classed as threatened and is a protected species in South Australia. Unlike most frogs, this species breeds in autumn or early winter and lays its eggs on the ground in leaf litter or grassy areas likely to be flooded following rain in winter or spring. Unfortunately, many of the suitable sites in its former range have been drained.

Over collection of tadpoles and frogs or moving them between areas can negatively impact on local frog populations and potentially transfer harmful diseases.

Creating your frog pond

It is important to consider the location and design of your frog pond or frog bog.

- Position away from bedroom windows (frogs can be noisy, especially at night).
- Protect from pets and other predators.
- Aim for $\frac{2}{3}$ of the pond to be shaded at all times.
- Locate near a source of insects by planting local native plants and having mulched areas nearby.
- ensure your pond does not exit to a waterway directly or indirectly.
- Ensure no run-off containing potential pollutants will enter (such as from compost bins or roads).
- Gently slope edges to help frogs move in and out of the water easily.

Think of the animals

Different species have different needs, so it is important to research the needs of the animals you want to attract, then design your garden with those species in mind.

For example, Bibron's toadlet prefers short soaks, with plenty of leaf litter and debris, which dry out over summer and fill following the autumn rains, so it is unlikely to move into a garden pond.

Others, such as brown tree frogs, happily use ponds that are permanently or more regularly filled with water and will become a welcome resident.

You can discover which species have been recorded in your area on the FrogWatch SA website.

Plant selection

Select local native plant species. These will provide habitat for local frogs, tend to be more water efficient and lower maintenance than exotics, and will attract the native insects which frogs love to eat.

Frogs normally spend only a small amount of their time in the water, and the rest looking for food or sheltering in gardens. Establishing a large variety of plants both in and around the pond can help.

Position the taller species towards the back of the pond and include 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 such as creeping boobialla (*Myoporum parvifolium*) and small-fruited fan flower (*Scaevola albida*) 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.

If you build it, they will come

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

Why create a wildlife friendly garden?

Gardening is a popular pastime and what we do in our home gardens has the potential to benefit or harm the environment.

By developing and maintaining a garden that follows the 5 basic wildlife friendly gardens 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.



A frog pond with a range of aquatic and emergent plants (Photo: Steve Walker).

Top 5 tips

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

Together we can create a cooler, greener, wilder Adelaide.

FrogWatch SA

Once you've been delighted by the ambience of our local frog choruses, record the calls and submit them to FrogWatch SA. This citizen science program will identify which species have become established in your garden and enable us to track how our frogs are faring.

Visit frogwatchsa.com.au to find out more.

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