

Frogs in the Garden

Fact Sheet



Frog eggs. Image: QM, Jeff Wright.



Adult Frog, *Litoria gracilentum*. Image: QM, Jeff Wright.

Introduction

Brisbane is a haven for frogs. About forty-three different species have made their homes among the lush, subtropical habitats of the greater Brisbane area.

Many people are concerned about declines in frog populations. Frequently, they reminisce about the 'old days' when the outhouse was home to big smiling Green Tree Frogs and raucous croaking could be heard from the downpipes on a rainy summer afternoon. Invariably, such reminiscence is followed by ... 'but we don't see them any more'. Often Cane Toads are blamed for local frog extinctions. However, although Cane Toads may have some impact on native frogs, undoubtedly, the main factor in frog declines within the suburbs, is a loss of suitable habitat. Frogs' most favoured breeding sites – bodies of still water – have been drained for mosquito control or to make way for housing.

In recent years naturalists and scientists have also detected a disturbing decrease in both the numbers and kinds of frogs worldwide. Observers have found that some frogs have apparently disappeared in the wild or become very rare. Two frogs from the rainforests of south-eastern Queensland near Brisbane are now feared extinct. These are the Southern Platypus Frog (*Rheobatrachus silus*) and the Southern Day Frog (*Taudactylus diurnus*). Recent research suggests a virulent pathogen, a chytrid fungus, may be responsible.

Although there is good reason to be concerned about the future of local frog populations, there is much that can be done to assist their recovery in disturbed areas. Adopting a 'frog-friendly' approach to gardening can create habitats in which native frogs live and breed. We can help re-establish local frogs in our gardens by providing a pond and appropriate landscaping.

Creating a frog-friendly garden

Frogs require environments in which the adults can breed, the tadpoles can develop and the young can mature. By creating suitable habitats in your garden you can encourage thriving populations of frogs and other wildlife.

1. The most important factor in making a garden frog-friendly is creating a complex bush-like setting. This will have a variety of local native ground covers, grasses,

shrubs and small to large trees, offering protection from wind and sun, and providing food for insects, which in turn feed the frogs.

2. With very few exceptions, frogs must visit water to breed. Try to establish a pond in your garden that the adults can access. A permanent pond, with well-vegetated landscaped banks, can be both visually appealing and attractive to frogs. A potential mosquito problem can be avoided by stocking with blue-eyes, small native fish that thrive on mosquito larvae. Contact a local aquarium regarding these fish.

3. An alternative to a permanent pond, and one which is often more appealing to the frogs, is a temporary water body. Following heavy rain it is common to see frogs largely ignoring creeks and ponds, in favour of water-filled ditches and depressions. A low-lying part of the garden, lined with an impermeable layer of plastic or clay and covered with soil and vegetation, can be a haven for breeding frogs when it fills during the summer rainy season. Such a depression would need to hold water for about 6 weeks. If the level drops too sharply before the tadpoles have developed it can be topped up with a little hose water.

4. Tadpoles feed on algae and other organic matter in the water. A typical outdoor pond environment will normally offer all the nourishment they need, so adding extra food is usually unnecessary and may foul the water.

5. Provide perches so the newly metamorphosed frogs can leave the water. Floating waterlily leaves and protruding branches are ideal, as they also offer shade. Tree frogs can climb smooth vertical surfaces, but ground dwelling frogs need a rough slope when their time comes to leave.

6. The time taken to develop from tadpole to frog depends on such factors as species, temperature, population density, surface area of the water, and day length. It usually takes 2–12 weeks, but during winter metamorphosis may be suspended or prolonged. Tadpoles born towards the end of summer may undergo little or no development until the following spring. For this reason, a lengthy or suspended metamorphosis should be no cause for alarm.

7. Once they leave the pond the young frogs have other requirements. They now eat small insects and they need the shelter of rocks, logs, leaf litter and thick vegetation. A good compost heap, lush foliage and plenty of ground cover will encourage them to reside in your area.

8. Discourage toads. Eliminating them from your garden will do the frogs and other wildlife, a favour. Densely vegetated pond edges will discourage Cane Toads from laying eggs. Remember, not all frogs are green so contact the Queensland Museum for further information on toad identification and eradication procedures.

9. Try to impart your 'froggy' enthusiasm to neighbours. With more households improving their gardens, there is a greater chance of creating broad, suitable habitats across Brisbane rather than widely separated islands in suburbia.

Rearing tadpoles

Metamorphosis from tadpole to frog is one of the natural wonders we can all appreciate and watching the process can help us understand our wildlife and the need to protect it.

1. If you wish to rear tadpoles under close observation you must care for them properly and, most importantly, obtain and release them locally.

2. You must start with a suitable container such as an aquarium, plastic garbage bin or paddling pool. If outdoors, keep it in three quarters shade.

3. Fresh water is essential. Try to take local water from an unpolluted pond or stream. If using tap water let it stand in an open, wide-mouthed container for 5 – 7 days. This will remove the chlorine which, in pure tap water, is at toxic levels for tadpoles. It is a good idea to keep spare de-chlorinated tap water on hand.

4. Tadpoles will eat lettuce boiled for 5–10 minutes, and will also take flaked fish food. Too much of either will foul the water; not enough and they will turn on each other. Try a little of both, and if the water becomes polluted replace it with spare stock and reduce the quantity of food. A small amount every 2–3 days is usually sufficient.

5. As with the outdoor pond, provide perches so the young frogs can leave the water.

6. It must be remembered that all Queensland frogs are protected by law under the Nature Conservation Act and Regulations. Before attempting to keep frogs, tadpoles or their eggs you should contact the Queensland National Parks and Wildlife Service.

Important things to avoid

1. Do not move frogs or tadpoles from one area to another, whether between suburbs, or even between adjacent ponds or creeks. The chytrid fungus, which may be responsible for frog declines and extinctions, is easily spread in water and affects the outer layer of skin. In some populations, mortality may be 100 per cent. Unnecessary transportation of amphibians can speed the spread of this fungus and other pathogens to the detriment of our frogs.

2. For the same reason fish, such as blue-eyes used to control mosquito larvae, should never be released into local waterways. Fish supplied by a pet shop are unlikely to originate from your area.

3. Avoid using pesticides in and around the house as these may poison local frogs and their food.

4. However tempting it may be, we do not recommend you stock your frog pond or garden. When the environment is wrong, nothing you can do will keep the frogs in, but if the conditions are right nothing will keep them out. If you create a frog-friendly yard there is every reason to expect that, within a year or so, you will awake one wet night to hear something going 'toc' or 'plonk' at the bottom of your garden.

5. Avoid raising Cane Toads. Toad tadpoles are small and uniformly black or very dark grey in colour. The common Striped Marsh Frog can have very dark tadpoles, but these metamorphose at a larger size than Cane Toads. Some other native frogs have small, dark tadpoles, but these rarely breed in backyard ponds. If there is any doubt, the dark belly of the Cane Toad tadpole is diagnostic. The native species have pale or translucent bellies.

Further Information

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