



FROG FRIENDLY HABITAT

By Laura Kelly



If you step outside on a warm evening after rain, you are likely to experience a unique nocturnal chorus. This chorus is the combined calls of breeding male frogs intent on attracting a female, and is a sound familiar to all Australians. Imagine if this were to disappear.....

Australia has a rich and diverse frog fauna, which is unusual considering how much of the country is dry. There are over 220 known species of frogs in Australia. There are over 20 species under threat in NSW, of which eight used to be found in Western NSW. The surveys conducted by the Darling Riverine Plains Project have recorded 18 different species of frogs in the bioregion.

FROG HABITAT

Frogs are found in many different environments and climates throughout Australia, ranging from rainforests to deserts. One third of Australia's frogs burrow to escape dry conditions. During the Darling Riverine Plains biodiversity surveys frogs were found in a variety of microhabitats including soil cracks, in tree hollows, on, in and under logs, under bark, on roads and in waterholes.

Frogs are specially adapted to the habitat they live in, and their appearance will commonly provide clues to their lifestyle. For example:

- Burrowing frogs have short, powerful legs and hard lumps called tubercles on the base of their feet used for digging.
- Tree-dwelling frogs are more slender, with suction cap-like toe pads used for clinging to smooth surfaces.

The amount of webbing between frogs toes indicates how much of its life is spent in aquatic environments. An essential element for frog habitat is a source of water, as few frogs can survive without moisture.

NOT YOUR TYPICAL LIFESTYLE

An interesting frog found in the Darling Riverine Plains bioregion is the Waterholding Frog (*Cyclorana platycephala*). *Cyclorana* means "round-frogs". They are squat-bodied burrowers, and can spend long dry periods underground. These large frogs inhabit the driest regions of Australia.

How do they survive? By using three special adaptations:

- the ability to burrow underground away from the desert heat;
- becoming inactive during summer in a cocoon (made up of several layers of dead skin) which holds in moisture, throughout the dry season; and
- the ability to store large quantities of water in the form of diluted urine.

At the beginning of the wet season, a combination of warm temperatures and rain stimulate the emergence of these frogs, for a frenzy of breeding and feeding.

Fact Sheet

DECLINING FROGS

Frogs across the globe are in decline (Robinson, 1995), and Australia's frogs are no exception. Habitat loss and modification, introduced predators and disease are thought to be the key causes of this decline (Gaskett, 1999).

Although you may see or hear numerous frogs, it is not so much the numbers but the diversity of species that is in decline. Have a look the next time you see frogs around your porch or damp areas, how many different coloured or types of frogs can you note?

European settlement in Australia has greatly modified the natural environment. Essential frog habitat has been altered or destroyed.

By providing frog refuge, the chances of survival may be increased, while enhancing the biodiversity and aesthetic value of land.



ATTRACTING FROGS

Frogs are considered indicators of healthy environments. Because of their permeable skin they have a high sensitivity to environmental change. They are also natural predators of many insect pest species.

Frogs are extremely sensitive to changes in the environment.

To attract a diverse range of frog species, it is best to provide as great a variety of wetland areas or microhabitats as you can, because of the varied habitat and breeding requirements of different frog species (Voight, 1992).

You can improve existing dams and wetland areas, or create a backyard pond.

Remember to provide:

▶ **Places to hide:**

- protection from predators such as birds, cats and snakes can be provided for frogs and tadpoles. Establish a border of native vegetation, including trees and aquatic vegetation;

- tree hollows and partly submerged logs and rocks also provide protection;
- provide damp shady regions for burrowing species;
- provision of fresh, unpolluted water is an essential ingredient for the development of frog habitat.

▶ **Places to feed:**

- if the right conditions are provided food will become available for adult frogs;
- native plant material will provide sufficient food for tadpoles;

▶ **Places to breed:**

- most common frog species require access to water for breeding;
- emerging froglets need gradually sloping, damp margins;
- grassy regions are important for hiding, developing eggs and tadpoles.

Belly-drinking.

Frogs obtain nearly all their water by taking in liquid through the skin on their undersides. The water passes into spaces called lymph sacs, then into the bloodstream.

An established frog refuge will bring many benefits, including increased biodiversity and natural pest control.

Once you have experienced the frogs distinctive love song chorus at night, your efforts in creating the refuge will have paid off.



REFERENCES

- Gaskett, A. 1999. *Creating frog-friendly farm*. Australian Landcare.
- Robinson, M. 1995. *Field Guide to Frogs of Australia*. Australian Museum/Reed publication.
- Voight, M. 1992. *Frog Facts No.3 Establishing Frog Habitat on Your Property*.

Australian National Botanic Gardens (images from ANBG website). www.anbg.gov.au/projects/frogs.

