

R Nature Notes

Junior Ranger



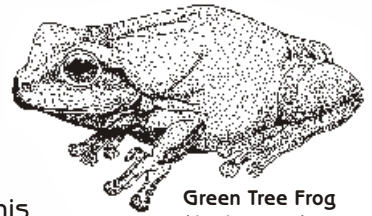
Spencer's Burrowing Frog, *Limnodynastes spenceri*

FROGS IN PERIL!

Rainfall wouldn't be the same without the sound of frogs. These strange, ancient little creatures have a very important job to do and our wetlands simply wouldn't be the same without them. Incredibly though, across Australia, frogs are now disappearing! We may be witnessing a frog disaster!! Read on to find out just what is going wrong.

ECO-SHOCK

In the 1990s, four species of frog simply vanished in Australia. Most were well known and in healthy numbers before they suddenly disappeared. Amazingly, other frogs around the world became extinct at around the same time. Scientists knew that frog numbers had been declining for some time worldwide, mainly due to the loss of their wetland homes and the effects of pollution. But this was something new! What had gone wrong? Eventually, through frog forensics (looking carefully at frogs that had died to see what killed them), the culprit was identified as a major outbreak of a frog disease. The disease was the 'Chytridiomycosis fungus', pronounced (kit-RID-ee-oh-my-KO-sus) *Batrachochytrium dendrobatidis*, shortened to chytrid. Even today we still know very little about it.



Green Tree Frog
Litoria caerulea

FLEEING FROG FACTS

Camouflage

To avoid detection some frogs rely on camouflage. Burrowing frogs such as the Ornate Burrowing Frog *Limnodynastes ornatus* are ground dwelling frogs and so have patterns and colours similar to the earth colours they live on.

Within the frog group (Genus) *Litoria*, quite a few species live in trees (arboreal). Most of these frog species are either green to blend in with the tree leaves, or they are a more mottled grey in colour allowing them to blend in with the tree bark.

Quick get away

To avoid being eaten most frogs can jump. They have powerful muscled rear legs. Some species are so good at this they are named after their ability. The 'Rocket Frog' *Litoria nasuta* is one such species. In a single bound it can cover 2 metres, so it is very good at getting away.

All frogs can swim, some better than others. If threatened many species will dive to the bottom and can stay there for a few minutes.



WHAT DO WE KNOW?

The chytrid fungus was first recorded in Australia in the 1980s, but it wasn't causing mass die-offs at the time. It affects frogs by living on keratin (pigment cells) found in their skin. However the disease affects the skin in different ways and in some cases it isn't obvious at all. In its advanced stage frogs behave strangely. They sit out in the sun, poking their tongues out and arching their backs. Signs of the disease are damage and redness of the skin surface. When they die their limbs are outstretched in awkward positions. Because frogs breathe and absorb water through their skins, sadly they die a horrible death. Frog tadpoles are not affected as they lack keratin. Infected habitat areas stay that way forever because the chytrid fungus spores are left behind.

LOOK BUT DON'T TOUCH

The palms of your hands are loaded with salts and acids which can burn a frogs skin. Too much damage to a frogs skin will kill it. If you want to touch a frog wash your hands thoroughly in fresh water first - DON'T USE SOAP!

THE GOOD NEWS

Fortunately there are no reports of the chytrid fungus in the Northern Territory, making us the only disease-free area in Australia. Some infected frog species in southern states are slowly making a recovery from the affects of chytrid fungus. Scientists have been working hard to find a cure. They have found that the chytrid fungus prefers temperatures constantly below 27°C. This occurs mostly in areas of high altitudes, such as mountain ranges like the Atherton Tablelands in Queensland and the Great Dividing Range along the east coast of Australia. Affected frogs taken from this environment recover better in warmer climates.

WHAT CAN WE DO?

A real fear is that this disease can easily be transported anywhere. People accidentally carry it from infected areas on their footwear, clothing, vehicles and hitch-hiking infected frogs to wetland areas that are not affected. It can spread just like the Cane Toad has, so lets be careful! Caring for our wetlands is important for the future survival of frogs.

FROGS ARE IMPORTANT BECAUSE...

... they are very sensitive to environmental change. They need to live in a healthy habitat. Because of this we can use them as indicators of the health of a wetland. If they start dying there is a good chance that their home is sick too. Chemical pollution such as oil, detergents, soaps, plant and insect poisons may be poisoning the water. Because frogs drink through their skins they cannot help it if they absorb pollution from their water.

... their eggs and tadpoles are an important food source for many native animals, such as Water Rats, fish, snakes, goannas, young crocodiles and quolls. They are also eaten by carnivorous birds such as Black-necked Storks (Jabirus), Kookaburras, Frogmouths, Coucals, egrets, kites, hawks, butcherbirds and owls.

... they feed on the vast amount of insects that breed in the wet helping to control these plagues.

PUZZLE TIME

Use a small pebble or stick to mark your spot and a dice to get you going. Roll the dice and move the designated number of spaces. Follow the clues and answers to the puzzle here. This is a game for two people or more. Have Fun!



Marble Frog
Limnodynastes convexiusculus

Start

- Frogs are a type of a _ _ _ i _ _ _ n.
- You touch a frog that doesn't look well and has flaking skin, and you do not was 'everything' that you took to the site, plus yourself. RETURN TO START
- What is the name of a deadly frog disease in Australia?
- True or False. The chytrid fungus is only affecting frogs in some types of habitats?
- Is the chytrid fungus only found in Australia?
- Why are people concerned about the chytrid fungus?
- You informed other friends about the chytrid fungus. Go to 9.
- Return to start
- You informed the Parks & Wildlife Service about a sick frog you found. Roll the dice again.
- Frogs can suffocate or dehydrate if their _ k _ _ is badly damaged.
- The chytrid fungus has been found in all states in Australia - except the _ _ .
- What are the ways that the chytrid fungus is spread?

Congratulations First to finish wins!

Want to learn more about Frogs?

Check out the Frogwatch website: www.frogwatch.org.au