

Local Frogs & Suitable Habitat – a talk by David De Angelis (April 2016)

This talk was enhanced by the audio of the different frog calls. There are some real vocal wizards out there and it is worth doing all you can to have them in your garden. Their calls are species distinctive and it is only the males that call, mainly to attract females but they are also territorial warnings. It can be difficult to identify by appearance although key visual characteristics are present if you know where to look and remember to be polite.

David's background is in land management and vegetation so he has a keen interest in indigenous flora for creating & maintaining habitat species for different frogs. Some of the frogs he described, with attendant soundtrack were:

- **Common Froglet** (*Crinia signifera*) ((1) : one of the most abundant frogs, in the Melbourne area. A tiny frog, 2 -3 cms with a big noise relative to size. It is a fast breeder taking from 6 weeks to 3 months, depending on conditions, to hatch from eggs to frog. A distinctive visual characteristic is a granulated belly.



- **Victorian smooth froglet** (*Geocrinia victoriana*), a favourite call with two distinct components, one territorial, the other to attract a mate. This one is quite rare. It is a terrestrial breeder, one of two, with a long gestation that lays on land in grass tussocks or rushes in gullies. It has a pink-orange groin that is distinctive.

- **Southern Toadlet** (*Pseudophryne semimarmorata*): Froglet and Toadlet are, as the names suggest, just small forms of frog and toad respectively. Toad vs Frog: Toads are really warty frogs, the cane toad a typical species, dry skin, usually not so picturesque. Frogs have moister skin, smoother & are prettier overall in David's opinion. Studies on this species have shown that open ground is important for breeding success. More open ponds allow more sun to the water, increase the maturation rate and also encourage algal growth for food. Their long breeding season renders them vulnerable to changing climate and is one of the reasons why they are in decline. Water evaporates!



- **Pobblebonk or Banjo Frog** (*Limnodynastes dumerilii*) (2): a very familiar call. They are often found a distance from water and can withstand drying out to some extent provided there is shelter. They are a true marsh frog and require permanent water to breed.

- **Striped Marsh Frog** (*Limnodynastes peronii*) and **Spotted Marsh Frog** (*Limnodynastes tasmaniensis*) (3 & 4) : one has stripes, the other spots. The calls are similar but different in tone.

- **Brown Tree Frog** (*Litoria ewingii*): this one is also mobile and breeds in more permanent water than some others, but also not uncommonly in temporary waters. It has sticky pads on fingers and toes which allows it



to climb so they can breed in swimming pools and hide up downpipes.

- **Whistling tree frog** (*Litoria verreauxi*) is a close relative of the previous species. This frog and the previous can hybridize in areas where they overlap. A key characteristic to distinguish them – the Brown has dark speckling in the groin, while the other has much larger black splotches. You simply have to, politely, ask them to lift their leg and remember, say please!



- **Growling Grass Frog** (5) (*Litoria raniformis*) has become rarer. It is a big brute and will even eat brown tree frogs. While recorded all over the Melbourne area a

few decades ago it is now restricted to N and W of Melbourne, the basaltic areas, Merri & Koroit Creeks, Westernport. It likes to bask during the day on floating & some submerged vegetation, and this is where they deposit their eggs. Such habitat is really important for many frogs. This frog has a high tolerance for increased salinity and heavy metals which explains its success in less salubrious waterways. These conditions inhibit the growth of the Chytrid fungus, the scourge of frogs worldwide and considered largely responsible for the catastrophic decline in many populations. The *Growling Grass Frog* is one of the threatened species living in the Forest Gallery at the Melbourne Museum.

- **“Maniacal cackling”/ Peron’s Tree Frog (*Litoria peronii*):** Indigenous to the Murray River, and introduced to Melbourne (possibly in firewood, garden supplies, or intentionally released, first in the mid-80’s). It has big pads on fingers and toes and likes to hide under bark and hollows. It is distinguished, visually, by cross shaped pupils.

David then described in more detail the variety of habitat that supports frogs and gave some hints for ponds and gardens- see **Appendix A & below**. His overall message: have representative species across all these categories as well as structural features such as logs and rocks which offer shelter.

Just build it and they will come.

Useful hints for the frog pond and garden:

- Create a pond with different water levels, allowing tadpoles to escape environmental extremes and select their preferred temperature. At least part of the bank should be gently sloping.
- When planting out a pond, create a diversity of different microhabitats using plants of a variety of different life-forms and growth habits.
- Breeding (aquatic) habitat for most frogs generally improves with increasing floating and submerged vegetation cover.
- Generally avoid Duckweeds (*Lemnaceae*) and Azolla in smaller ponds and wetlands given their potential to cover the entire surface and block out light. Keep at least ½-⅓ of the water surface exposed.
- Aquatic and bog plants can be grown in slits in hessian sacks that have been filled with soil and stitched at the open end, or plant pots with pebbles on top to stop the potting mix from floating away. Generally avoid fertilisers.
- Ensure sunlight is able to get to the water year-round. Avoid planting taller, dense vegetation on the north side of the pond or wetland.
- Cumbungi (*Typha*) and Common Reed (*Phragmites*) provide ideal habitat for tree frogs but can take over if left unchecked or planted in smaller wetlands.
- Keep ponds secure from cats.
- Avoid introducing fish to ponds unless they are ‘frog-friendly’ and not likely to cause ecological problems if they spread into local waterways. Smaller indigenous species are best, particularly the Australian Smelt (*Retropinna semoni*).
- Avoid contaminating the pond with herbicides and other chemicals.
- Install a solar garden light around the pond to attract invertebrates (food).
- Avoid introducing adult frogs, eggs and tadpoles to your backyard. Encourage neighbours to improve habitat connectivity between properties and let frogs make their own way to your pond.

Relative sizes : 3, 6.5, 7.5, 4.5 & 10 cms (Growling Grass Frog)

*Report by M. Ford – April 2016, rev. Dec 2016 D. De Angelis
Images from Museum Victoria, and Birdlife Australia.*