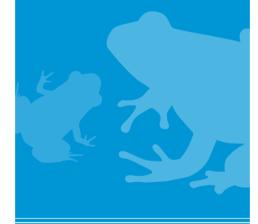
#### A BEGINNERS GUIDE TO

# Frog Identification





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#### About the guide

Melbourne Water is owned by the Victorian Government.

We are the caretakers of 8,400 kilometres of rivers and creeks across the greater Melbourne region. Our waterways support a huge community of plant and animal species such as native waterbugs, frogs, fish, birds, reptiles and mammals like platypus and rakali. Some of Melbourne's wetlands are recognised as being of international significance due to the diversity of life they support.

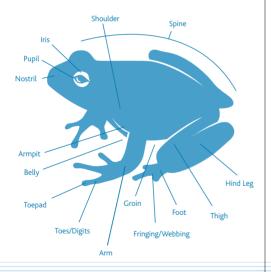
We encourage the community to get involved with monitoring projects such as Healthy Waterways Waterwatch and the Macroinvertebrate Monitoring Program. These programs enable us to gauge the health of our waterways by keeping an eye on the animal populations that live there.

This guide is intended as a way of identifying some of the more common freshwater animals to aid in surveys and observational data collecting.



#### **All about Frogs**

Frogs are classified as amphibians. Amphibians are ectothermic ('cold-blooded') animals that typically lay soft eggs in water. These eggs hatch into water-breathing tadpoles and develop into air-breathing adults. There are three types of amphibians—salamanders and newts; the strange worm-like caecilians; and frogs and toads. Of these groups, only frogs are found naturally in Australia.



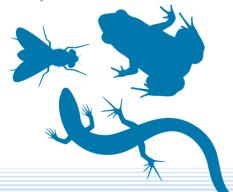
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#### Diet

#### What do frogs eat?

All frogs found in the Melbourne area are carnivores. Different species of frogs prey on different types of animals, but in general they will eat anything living that fits in their mouth. Smaller species live on small insects like flies and other invertebrates, while larger species eat large insects, small lizards and other frogs.

Frogs have excellent vision and hearing. They don't have external fleshy ears like we do, but a large eardrum just behind the eye. As well as using their eyes to see, frogs use their big, bulgy eyes as part of the feeding process. A frog's tongue is used for catching prey rather than eating, so when a frog catches something they close their eyes tight and push the food down their throat with their eyeballs.



#### **Habitats**

#### Where to find frogs

Frogs are typically found in and around aquatic environments such as swamps, lakes, dams, creeks, streams, rivers and occasionally even backyard swimming pools. They are more likely to be found in areas with different types of native plants, particularly those that grow into the water like reeds, grasses and sedges. They are also often found in bodies of water with shallow sections which the frogs use to call from and lay their eggs.

If you want to attract frogs to your garden, remember that different species require different habitats. Investigate which species are found in your area and then think about how you can make them feel at home.

"crick, crick, crik, crik, crick"



#### **Calls**

#### What does a frog sound like?

Frogs have a wide range of calls - some of which sound like 'typical' frog calls and others which are often confused with insect or bird calls. This guide provides descriptions of each frog species' call. You can also listen to audio samples of real frog calls at frogs.melbournewater.com.au.

Only male frogs call. They call to find a mate and to warn away other competing males. Frogs make calls by passing air through the voice box and using their puffed out throat pouches to amplify the sound. You may notice that the calls of closely related species are sometimes similar. For example, the three *Limnodynastes* species in Melbourne all have variations on a sharp, percussive one-note call.

If you are interested in recording the frog populations in your area, you can get involved with the Melbourne Water Frog Census. See page 24 for more information.



"Reee bip bip ree bip bip bip"

#### How to identify a Frog

Frogs can be very hard to find. They are usually highly camouflaged and blend into their environment. So it is most likely that you will hear a frog before you see one.

When you hear a frog, listen very carefully to the call. Are you sure it's a frog? What does the call sound like? See if you can imitate the call or think of something to compare it to. Use the table below to see if any of the call descriptions sound like the frog call you hear.

| Call   | When        | Frog                     | Pg. |
|--|-------------|--------------------------|-----|
| Crick, crick, crik, crick                          | All year    | Common Froglet           | 9   |
| To-to-to-to-tik-tik-tik—<br>tik—tik                | All year    | Common<br>Spadefoot Toad | 10  |
| Bonkbonkpobble-bonk                                | All year    | Eastern Banjo Frog       | 11  |
| Reee bip bip, ree bip bip bip                      | All year    | Eastern Dwarf Tree Frog  | 12  |
| Nyeeahnyeeahaank-nyeaah                            | All year    | Eastern Sign-bearing     | 13  |
| Grrruh-uh-urk. Grrruh-uh-<br>uh-urk. Grrruuuurk.   | Aug – Apr   | Growling Grass Frog      | 14  |
| Nyuh-gruh-gruh-                                    | Aug – May   | Leseur's Frog            | 15  |
| Grah-a-a-a-ah-ah-ah-ah-aah-<br>aah-aah-aaaah-aaaah | Sept – Jan  | Peron's Tree Frog        | 16  |
| Gr-ankGr-ank                                       | All year    | Red-groined Froglet      | 17  |
| Cree-cree-cree-cree                                | All year    | Southern Brown Tree Frog | 18  |
| UhkahkUhkahk                                       | Autumn      | Southern Toadlet         | 19  |
| ClickClickClick                                    | All year    | Spotted Marsh Frog       | 20  |
| Bokbokbok  | All year    | Striped Marsh Frog       | 21  |
| Grrraaawk pip pip pip pip pip                      | Sept – June | Victorian Smooth Froglet | 22  |
| Weep-weep-weep-weep                                | All year    | Whistling Tree Frog      | 23  |
|  |             |                          |     |

#### Icons used in the guide

The following icons are used throughout the guide to provide additional information about the habitat, call, diet and location of each species of frog.



Habitat – This icon means the frog is mainly found on land, such as grassland or bushland.



Habitat – This icon means the frog is mainly found near a body of water, such as a river or creek.



Call – This icon shows the time of year that the frog is likely to call.



Conservation status - This icon indicates the risk of extinction or serious population decline to each species.



Map – The area of the map highlighted in blue shows where the frog is generally found in Victoria.

| Notes |  |  |  |
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#### **Taxonomy**

Two families of native frogs are found in Australia – tree frogs (Hylidae) and ground frogs (Myobatrachidae).

Tree frogs are typically agile frogs that spend some of their time in trees or other vegetation, and use their sticky toe pads to climb. However, there are some species of tree frog that spend most or all of their time on the ground – like the Growling Grass Frog (*Litoria raniformis*).

The ground frog family includes a large number of frog species with many different lifestyles and adaptations. Ground frogs have the ability to burrow, which helps them survive in Australia's hot and dry conditions. Even ground frogs living in Melbourne's cooler climate like to burrow – with some occasionally dug up in backyards.



#### Family

A family is a broad group of closely related animals.

#### Genus

A genus is a defined 'type' of animal with distinct populations.

#### **Species**

Within a genus there are different species. There are six species of *Litoria* in Melbourne. They are all tree frogs, but all distinct from each other.

#### **Common Froglet**



The Common Froglet is a frog that you are likely to hear or see in Melbourne. A small frog with highly variable colouration and patterns in shades of brown, the Common Froglet's belly is patterned in black and white. Usually found in habitats near water, the males call from the water's edge and can be heard year round – at any time of day. The frog's call is a low-pitched, ratchet-like croak. Like their relative the Eastern Sign-bearing Froglet, the Common Froglet has fringing on the toes, rather than webbing.

Call: A little like a percussion instrument or the chirping of crickets. "crick, crick, crik, crik, crick"

#### **Common Froglet**

Family Myobatrachidae Genus Crinia

Species signifera



#### Size 20mm– 30mm

#### Key identifying features

Small, ground-dwelling frog. Brown colours with variable patterns. Ratchet-like call.



Location









#### **Common Spadefoot Toad**



With its colour ranging from grey, green or yellow to a reddish-brown, the Common Spadefoot Toad is a small, burrowing frog with big, bulging eyes. Featuring a special spade-like structure on its foot to assist with burrowing, this species can be distinguished from other burrowing frogs, such as the Eastern Banjo Frog, by its vertical pupils and fully webbed toes. During the breeding seasons (autumn and spring), the males call while floating in still water. Despite being referred to as a 'toad' in its common name, the Common Spadefoot Toad is really a frog. The only true toad found in Australia is the introduced Cane Toad.

Call: Purring, clicking sound that rises in pitch.
To-to-to-to-tik-tik-tik—tick—tick

#### **Common Spadefoot Toad**

Family Myobatrachidae Genus Neobatrachus Species sudelli



Size Up to 30mm

#### Key identifying features

Small, burrowing frog. Bulging eyes with vertical pupils.













#### **Eastern Banjo Frog**



The Eastern Banjo Frog is a large burrowing frog quite common in the Melbourne area. Its scientific name — Limnodynastes — means 'lord of the swamp'. It can be identified by its large size (up to 70mm), a prominent oval-shaped gland on the top of the hind legs and a white or mottled belly. The frog's colouration is highly variable – ranging from light greys to greens, browns or black. It has a light, raised line running from below the eye to above the shoulder and a distinctive call. When a large group of males is calling it really does sound like the frog's common name...'Pobblebonk'.

Call: Distinctive single-note 'bonk' call sounds a bit like plucking a slack-stringed banjo. "Bonk... bonk... pobble-bonk"

#### **Eastern Banjo Frog**

Family Genus Species Myobatrachidae Limnodynastes dumerilii



#### Size

Up to 70mm

#### Key identifying features

Large burrowing frog.
Oval-shaped gland on upper hind legs.
Pale, raised stripe under eye.













#### **Eastern Dwarf Tree Frog**



Originally a native of Queensland and New South Wales, the Eastern Dwarf Tree Frog has been unintentionally introduced to Victoria by stowing away in banana boxes. Despite being used to warmer climates, breeding pairs have established themselves in the Melbourne area. This is a small frog, green and brown in colour, with a white stripe that begins under its eye and joins the pale belly. Its toes are almost fully webbed with distinct toe pads for climbing. If you identify an Eastern Dwarf Tree Frog, please report it to the Melbourne Water Frog Census.

Call: Insect like series of drawn out, then repeated buzzing tones. "Reee bip bip, ree bip bip"

#### **Eastern Dwarf Tree Frog**

Family Hylidae Genus Litoria Species fallax



Size 25mm

### **Key identifying features**Very small, green tree frog

Very small, green tree frog. White stripe from under the eye to belly.













#### **Eastern Sign-bearing Froglet**



The Eastern Sign-bearing Froglet is a small, ground dwelling species. Like its relative the Common Froglet, this frog has highly variable colouration and patterns — generally in tones of brown — with a grey belly and sometimes dark speckles. Both species of *Crinia* found in Melbourne have fringing on their toes, rather than webbing. Unlike the Common Froglet, the Eastern Sign-bearing Froglet is rarely reported in the Melbourne area. The only way to distinguish these two species is by listening to and comparing their calls. Males call all year round from the water's edge rather than from in the water itself

Call: High pitched squawk-like call. "Nyeeah... nyeeah... aank-nyeaah"

#### **Eastern Sign-bearing Froglet**

Family Myobatrachidae Genus Crinia

Species parinsignifera



#### Size

Up to 25mm

#### Key identifying features

Small, ground-dwelling frog. Brown colours with variable patterns.



Location





Squawk-like call.





#### **Growling Grass Frog**

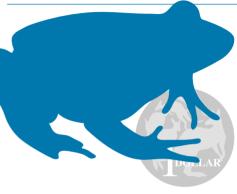


A large, handsome frog that varies in colour from a dark moss-green to a bright lime-green, the Growling Grass Frog population has declined significantly in the past decade and is classified as endangered in Victoria. Despite being a member of the tree frog family, the Growling Grass Frog is a ground dweller that feeds on small prey including other frogs and can be distinguished by its large size and warty back. Males call from August to April.

Call: Deep, stuttering, guttural growl like an engine not quite starting. "Grrruh-uh-uh-urk. Grrruh-uh-uh-urk. Grrruuuurk"

#### **Growling Grass Frog**

Family Hylidae Genus Litoria Species raniformis



#### Size

Up to 100mm

#### Key identifying features

Large, ground-dwelling tree frog.

Groin and thighs are

#### Location







bright blue.





#### Lesueur's Frog



Also known as the Rocky River Frog, Lesueur's Frog has adapted to living in the rocky river and stream habitats North-west of Melbourne. Usually shades of brown in colour, during breeding season the males turn a bright yellow to impress potential mates. Its groin and thighs have yellow and black patterning which distinguishes this species from other similar tree frogs. The tadpoles of this species have mouthparts that act like a suction cup to prevent them from getting washed away in the rivers and streams they inhabit. Males have been heard calling from August until May.

#### Lesueur's Frog

Family Hylidae Genus Litoria Species lesueuri



# Size Up to 30mm

#### Key identifying features

Small, brown tree frog.
Yellow and black blotches
on groin.
Toe pads wider than digits.



Location









#### **Peron's Tree Frog**



Peron's Tree Frog is mostly found to the North-east of Melbourne but is occasionally spotted in unexpected locations. Varying from greys and browns to almost white in colour, the frog is able to change its colour based on temperature, mood and time of day. Its armpits, groin and thighs are coloured with a yellow and black marbled pattern, and its distinctive cross shaped pupils are unique amongst Melbourne's frogs. This frog is a very nimble climber and can be found long distances away from water. Males call from September to January.

Call: Chattering, descending cackle.
"Grah-a-a-a-ah-ah-ah-ah-aah-aah-aaaah-aaaah"

#### **Peron's Tree Frog**

Family Hylidae Genus Litoria Species peronii



Size 45mm

#### Key identifying features

Medium sized, light coloured tree frog.













#### **Red-groined Froglet**



A fine, pale stripe down their back and red thighs, arms and groin distinguishes the Red-groined Froglet from other species - hence their common name. Typically a shade of brown and growing to 30cm in length, the Red-groined Froglet can be found hiding under rocks in wooded areas such as scrubby forest, swamp and heathland. Not often found in Melbourne, the Red-groined Froglet is most commonly found in coastal habitats in South-eastern Victoria.

Call: Single, high 'honk' note that sounds a bit like a duck quacking in the distance. "Gr-ank.... Gr-ank... Gr-ank"

#### **Red-groined Froglet**

Family Myobatrachidae Genus Paracrinia Species haswelli



Size
Up to
30mm

#### Key identifying features

Small, brown ground-dwelling frog. Bright red patches on groin.













#### **Southern Brown Tree Frog**



One of Melbourne's most common frog species, the Southern Brown Tree Frog is a great climber and jumper. This small frog is typically a shade of brown, although there are some rare green individuals. Featuring a dark line on their face from the nostril, through the eye to the shoulder, this frog has toe pads a little wider than its digits and partially webbed toes. They are at home in suburban areas and are often responsible for tadpoles found in swimming pools. Its call can be heard all year round, particularly after it has rained.

Call: Low-pitched, gravelly repeated whistling. "Cree-cree-cree-cree-cree-cree"

#### **Southern Brown Tree Frog**

Family Hylidae Genus Litoria Species ewingii



#### Size 30mm –

#### Key identifying features

Small, brown tree frog.

Dark line from snout to shoulder. Toe pads a little wider than digits.













#### Southern Toadlet



The Southern Toadlet is a frog that would rather walk than hop. This little ground-dwelling frog looks very plain at first glimpse, but hidden on their belly is a striking marble pattern in bright orange, black and white. The Southern Toadlet is quite toxic and able to produce its own toxin as well as accumulate toxic compounds from its diet. Males begin calling in autumn with low, repeated creaking noises. In decline in Victoria, the Southern Toadlet is classified as vulnerable.

Call: Low repeated creaking noise. "Uhk... ahk... Uhk... ahk..."

#### **Southern Toadlet**

Family Genus Species Myobatrachidae Pseudophryne semimarmorata



#### Size

Up to 30mm

#### Key identifying features

Small, brown ground-dwelling frog. Bright and black marbled patterns on belly.













#### **Spotted Marsh Frog**



Widespread throughout South-eastern Australia, the Spotted Marsh Frog shelters during the day under debris such as rocks and wood. It can be found in grasslands, bushland and towns or suburban areas. This frog is characterised by irregular spots and blotches, with its eye a golden colour. At 45mm in length, the Spotted Marsh Frog is smaller than its relatives the Banjo Frog and Striped Marsh Frog. Males conceal themselves in the vegetation at the edge of ponds and lakes and can be heard calling almost all year round.

Call: Single note click like two stones being banged together. Some can have a rapid-fire call of around five clicks in quick succession. "Click... Click... Click... Click..."

#### **Spotted Marsh Frog**

Family Genus Species Myobatrachidae Limnodynastes tasmaniensis



Size 45mm **Key identifying features**Blotchy spotted patterns.
Clicking call.













#### **Striped Marsh Frog**



The Striped Marsh Frog is similar in shape to its cousin, the Spotted Marsh Frog, but has distinctive stripy patterning in dark shades of brown (rather than spots) and is larger – growing up to 65mm. Some frogs feature a thin, pale stripe running down their spine. The top half of their eye is gold, while the bottom half is brown. The Striped Marsh Frog will inhabit any body of water from roadside ditches to flooded grasslands. Males can be heard calling almost all year round.

Call: Sharp, one note 'bok' similar to the call of a chicken or a tennis ball being hit with a racket. "Bok... bok... bok..."

#### **Striped Marsh Frog**

Family Genus Species Myobatrachidae Limnodynastes peronii



Size Up to 65mm

# **Key identifying features**Striped patterns. Sharp 'bok'-like call.

Location











#### **Victorian Smooth Froglet**



The Victorian Smooth Froglet is a brown, ground-dwelling frog found in a variety of habitats including woodlands, grasslands and farms. Distinguished by patches of pink colouration on the upper legs and a lack of fringing or webbing on the toes, it is a small frog – growing not much bigger than 35mm. The Victorian Smooth Froglet is generally very secretive and usually only detected by its distinctive call. Males call almost all year round, apart from the coldest winter months – July and August.

Call: Distinctive call that starts with a squawk followed by repeated 'pipping' sounds.
"Grraaawk pip pip pip pip pip"

#### **Victorian Smooth Froglet**

Family Myobatrachidae Genus Geocrinia Species victoriana



## Size Up to

#### Key identifying features

Small, ground-dwelling frog. Call is a squawk followed by pipping sounds.













#### **Whistling Tree Frog**



This brown tree frog is very similar to its relative the Southern Brown Tree Frog, but smaller – growing no larger than 30mm. Conspicuous dark blotches on the groin and toe pads the same width as its digits can also distinguish the Whistling Tree Frog from the Southern Brown Tree Frog. Males call from the edge of bodies of water – either hiding in vegetation or floating in the water. In areas with mild weather, males will call all year round. The frog's call is similar to the Southern Brown Tree Frog, but higher pitched.

Call: High pitched repeated whistle that sounds like a bird. "Weeep-weep-weep-weep-weep"

#### **Whistling Tree Frog**

Family Hylidae Genus Litoria

Species verreauxii verreauxii



Size
Up to

#### Key identifying features

Small, brown tree frog.

Dark blotches on groin.

Toe pads same width as digits.













#### **Get involved in the Frog Census**

If you are interested in recording frog populations in your area, you can get involved with the Melbourne Water Frog Census.

The best way to collect data about frogs is by recording their calls. From these recordings, experienced scientists can estimate the number of frogs calling and identify the species. All you need is a notebook and a recording device - most people use the voice recorder in their mobile phone. You don't need to be an expert in frog call identification. Simply record the call and email it to us. We'll identify the species of frog recorded, send you a brief report and add the data to the map on our website.

Find all the information you need to get started as a Frog Census monitor at frogs.melbournewater.com.au

#### **Further information**

Melbourne Water Frog Census http://frogs.melbournewater.com.au

The Amphibian Research Centre http://frogs.org.au

Frogs Australia Network http://frogsaustralia.net.au

Field Guide to the Frogs of Australia 2009. Michael J. Taylor & Frank Knight. CSIRO Publishing

A field guide to the frogs of Australia: from Port Augusta to Fraser Island including Tasmania 1998. Martyn Robinson. Reed Books

Tadpoles of South-Eastern Australia: a guide with keys 2002. Marion Anstis. Reed New Holland



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