
A guide to keeping Marsh Frogs

Limnodynastes tasmaniensis - Spotted Marsh Frog

Limnodynastes peroni - Striped Marsh Frog

These two frogs are very similar in all but their coloration. The olive-grey spotted with green markings of the Spotted Marsh Frog could hardly be confused with the two-tone brown-striped Striped Marsh Frog. They inhabit the south eastern coastal areas of Australia. Spotted Marsh Frogs reach an adult size of 40-50mm and live in excess of 5 years, while Striped Marsh Frogs may reach 70mm and over 8 years. Both are regularly bred in captivity and represent two of the most readily and commonly kept species. The following information should help facilitate a long and happy experience with your frog.

Enclosures

A variety of different containers may be used to house marsh frogs. They must be water proof and non-toxic. Glass and plastics are the best materials but for visibility, longevity and aesthetic appeal a glass aquarium is best. Any enclosure must be secure and escape proof. A tight fitting wooden or aluminium frame covered with fly-mesh provides the necessary ventilation and security. Use only fibreglass fly-mesh as steel or aluminium flyscreens provide abrasive surfaces on which the frogs may injure themselves. A standard 3ft (90cm) aquarium would adequately house four to six Spotted Marsh Frogs or three to four Striped Marsh Frogs

Temperature / Heating

The marsh frogs live in a wide variety of temperate habitats including those significantly altered by human practices. They are most common in low lying areas and will breed anywhere there is water available. They should be kept indoors to avoid exposure to extremes of temperature, but may be kept without supplementary heating or cooling if the area they are to be kept in is located in a well insulated part of the house. It is preferable not to let the temperatures drop below 8°C or rise above 25°C. It is advisable not to expose very young frogs to low temperatures and maximum growth will be encouraged by temperatures between 15°C and 20°C.

Lighting

The marsh frogs are nocturnal but in captivity they can be active while cage lights are on. They do not seem to need exposure to ultra violet (U.V.) light which is used by many animals in the production of vitamin D3 which helps them metabolise calcium. The provision of simple white fluorescent light to indicate day should suffice. If you wish to grow plants in your enclosure it is best to use a light designed for growing plants (e.g. GroLux or BioLux). Lights should be placed on a timer for at least 6-8 hours a day. If you wish to breed your frogs you may need to alter your day length with the seasons.

Water

The marsh frogs are largely aquatic and prefer to have lots of water with shallow fringes and thick vegetation. Fortunately Melbourne's water supply is suitable for marsh frogs and only requires the removal of chlorine before it can be used. This can be done in two ways. Either leave the water in a bucket in the sun for a day or two (the chlorine will evaporate away) or use one of the chlorine-neutralising chemicals available from most major aquariums. If you are outside Melbourne consult a reputable aquarium dealer as to local water supply conditions. They may not be knowledgeable about frogs but will be able to advise you on making your water safe for aquarium fish, and this will be suitable for your frogs. Water should be changed regularly whenever it is dirty and the frequency of changes will be dictated by the amount of water, the number and size of the frogs the presence/absence of aquatic plants and the presence/absence or type of filtration provided. Leave your fresh water in a bucket next to the tank overnight. This will both allow the chlorine to evaporate and the temperature to equilibrate. Conditioning salts from your local aquarium may be added at half the directed rate to the water, this will provide better growing conditions for your aquatic plants and help prevent fungal infections in tadpoles. A healthy growth of plants in any large water body will help keep the water healthy and water changes will be needed less regularly. Filtration may be provided and this too will reduce the frequency of water changes. Most types of filtration may be used but it is important to ensure that the water is not too turbulent as this will trap tadpoles and possibly drown young frogs. It is important to provide numerous escapes from the water especially in the corners. This will ensure that your frogs don't swim into a corner and get stuck where they may exhaust themselves and drown. Any glass ramps should be covered with silicon which then has gravel pressed into it. When dry this provides a safe footing for frogs which may otherwise be unable to navigate wet glass ramps.

Plants and substrates

Any substrate must be friable, resistant to compacting and have good moisture retention properties. Any land area MUST be well drained. Soil in aquariums tends to get waterlogged, and will both drown your plants and provide an ideal breeding ground for bacteria that produce wastes that can be harmful to your frogs. It is best to get a hole drilled in any land areas of your tank, cover them over with mesh or an under gravel filter plate then crushed rock or gravel followed by substrate as you would in a pot-plant. Place a bucket under the hole to collect any water that drains through the substrate. The substrate of choice is palm peat and is available in dry compressed bricks from the gardening section at many supermarkets. It is clean, cheap relatively sterile and requires only the addition of water to expand into a moist friable substrate. Palm peat drains well and if you pour good quantities of water through your substrate about 2-3 times a week you will be washing out most of the wastes, keeping the substrate clean and encouraging your frogs to become more active. Above the palm peat should be a fine layer of fine gravel or logs, rocks and leaf litter. This will stop your frogs contacting the palm peat which may be accidentally ingested and cause gut complications. The best plants for your enclosure are those which will survive humid, low-light conditions. These are usually understorey plants from rainforests. Species of *Ficus*, *Spathophyllum*, mondo grass, some orchids and bromeliads will do well as will most indoor plants, mosses and ground covers like baby tears. If you wash the soil off the roots of mondo grass and *Spathophyllum* species they will actually grow in the water.

Feeding

In nature most frogs are almost totally insectivorous. The most common dietary problems seen in frogs are related to lack of calcium or too much protein in the diet. Some species utilise U.V. light to help metabolise calcium; but as marsh frogs are unlikely to be exposed to U.V. it is likely that they require a diet high in calcium. As a consequence it is recommended that all feed insects be dusted with calcium/multivitamin powder. Calcium powders are available at many pet stores and should be mixed in equal quantities with a multivitamin powder then dusted on food before feeding. Place your insects in a plastic bag with a pinch of calcium/multivitamin powder and shake it till the food is well coated. By doing this each time you feed your frogs, calcium deficiency should be avoided. Do not mix large quantities of this mixture at a time. It does not store well after mixing as the calcium can denature the vitamins (refrigeration will slow this process). Most frogs have not evolved to cope with a diet high in protein and the tendency to feed them strips of meat on tweezers often puts extra strain on the frogs' organs, particularly the kidneys. If these foods are used regularly they can lead to gout, irreversible kidney damage and ultimately death in some frog species. Marsh frogs that have been raised at the ARC on a variety of insects and invertebrates all dusted with calcium have not displayed any signs of calcium deficiency. Juveniles will happily eat fruit flies, grass fly and hatchling crickets and house flies and should have food available to them AT ALL TIMES. If young frogs are kept warm and offered plentiful food they will reach breeding size in about 3-4 months for Spotted Marsh Frogs and 4-5 months for Striped Marsh Frogs. Adults will eat almost anything that moves and fits in their mouth: house flies, blowflies, crickets, cockroaches and anything else of a similar size. They should be offered about 10-20% of their own body size in food over 2-3 feeds each week. Remove drowned insects so as not to foul the water, or feed your frogs individually by holding the insects on tweezers.

Licensing and legal matters

Almost all of Australia's frogs are currently, or are soon to be, protected. In Victoria it is an offence to remove from the wild, or interfere with, any frog, tadpole or spawn (frogs' eggs). It is also necessary to have a licence to keep most frogs and it is a condition of the licence that such frogs must be obtained from a legal source (usually captive breeding). No licence is required if you wish to keep Spotted Marsh Frogs. To keep Striped Marsh Frogs requires a Private Wildlife Basic Licence. The licence application forms are available from the Department of Sustainability and Environment. The forms are available online - you can find links from the Licensing section of the ARC website. [<http://frogs.org.au/arc/>]. It is necessary to purchase your licence before obtaining your frogs.