



Keeping frogs in vivaria

Introduction

This care sheet will cover keeping frogs in vivaria. This care sheet is applicable for the most commonly kept frogs in Australia (*tree frog species*). If you have a different type of frog you may need to ask your veterinarian about their specific husbandry.

Size

The size of a vivarium will vary depending on the size of the frog housed within it. It is preferable to house small frogs in small vivaria and increase the size of it as they grow. Thermoregulation and hunting prey can be difficult for a small frog in a very large enclosure.

Substrate

There are many options available for substrate on the floor of a frog enclosure. Quite commonly gravel, coco peat, sand or moist paper towel are used. The substrate chosen should depend on species, personal preference and ease of cleaning. It is vitally important that frogs are unable to ingest the substrate provided, as this can result in serious health issues. It is therefore recommended that the substrate be either too large to ingest or small enough to pass through the gastrointestinal tract without issue.

Possible options:

- Gravel: if chosen it should be in natural colours to allow camouflaging and reduce stress
- Sphagnum moss: needs to be changed regularly, can get stuck to amphibians and dragged into water and cause water fouling.
- Leaf litter from the backyard: must weigh up the benefits of using this substrate with the risk of introducing disease and undesirable insects into the enclosure. Must be changed regularly if used, pathogens can multiply readily in this substrate

Water heater/s

If the frog is housed in an aquatic or semi-aquatic vivarium, water heating will likely be required. The water temperature needs to remain at 25°C. The water should be heated 24 hours a day, 7 days a week and 365 days a year.

Thermometers

You will need at least one thermometer to monitor the temperature of the water and another to monitor the air temperature within the vivarium. Water heaters have an inbuilt thermostat but this does not confirm that the water temperature is actually getting warm enough. We also recommend using a thermostat for the heat light provided to your frog, but a separate thermometer is always required to confirm the temperature is adequate.

Radiant heat source

We recommend a radiant heat source be provided for your frog, such as an infrared or ceramic heat globe. These heating devices should be attached to a thermostat to ensure they maintain the vivarium's temperature, and don't allow it to get too cold or too hot. A temperature gradient should be provided within the vivarium so that your frog can choose to regulate its own body temperature. A green tree frog's preferred temperature is 25°C. The 'hot' end of the enclosure should be slightly warmer than this (e.g. 28°C) and the cooler end slightly cooler (e.g. 22°C). Having a thermostat will ensure the vivarium stays within this temperature zone. Be aware that thermostats do not REDUCE heat, so frogs may still overheat if the ambient temperature outside the enclosure is too high.

Filter

If an aquatic or semi-aquatic vivarium is provided, the water should be filtered. Filtration is important to remove large organic debris and a filter houses the important bacteria required for the nitrogen cycle. A filter should circulate the water volume of the tank 3 – 4 times per hour. Use the formula below to calculate the volume of your tank. Measure the height of the water level, not the height of the entire tank.

Length x width x height (all in meters) = Volume (Litres)

The internal components of the filter should be cleaned in a bucket of water from the tank, NEVER with tap water. This is to preserve all the good bacteria in the filter that assist with the nitrogen cycle.

Ultraviolet (UV) Lighting

A UV light is essential for normal calcium metabolism, to form vitamin D₃ and to prevent metabolic bone disease. This can be supplied by UV fluorescent bulbs outside of the vivarium or within the vivarium surrounded by a protective cage. Remember that UV light cannot penetrate through glass, Perspex or plastic. The UV light will need to be within 30cm of your frog. In summer, the UV light should be on for 12-14 hours per day, while in winter this can be reduced to 9-12 hours. The UV component of any light source will degrade faster than the visible light source, so it is recommended to change the globe every 6-9 months.

Water Changes and Water Quality

If a bowl of water is provided to your frog, it must be changed daily. Water must be conditioned and have an appropriate pH (7) before your frog can access it.

In vivaria with a permanent water source (aquatic or semi-aquatic vivaria) the nitrogen cycle should be established and small, regular water changes should be performed. This will remove wastes and chemicals and prevent them from building up to toxic levels. Water quality parameters should be tested regularly to ensure that the nitrogen cycle is functioning in your tank. Refer to the handout 'Water Quality and the Nitrogen Cycle' to read more about this topic.

