



An Introductory
Information Leaflet
on

Keeping Fresh Water Terrapins



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An aquarium
set up to
house
hatchling and
other small
freshwater
terrapins.

PLANTS

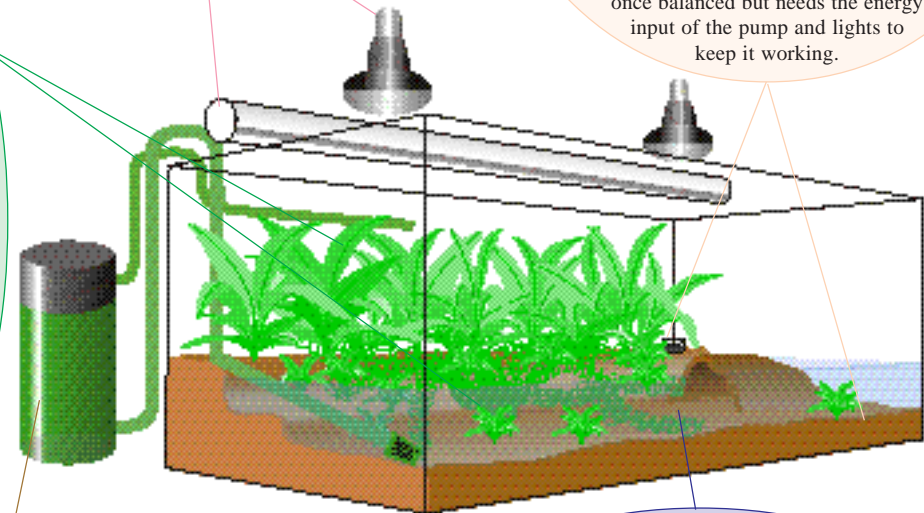
Aquaria function and look better if they are furnished with live plants. A typical set up would have several bunches of a suitable aquatic plant like *Elodea spp.* This could be free floating but looks better if anchored into the substrate. Other plants are best chosen from those species of bog plants that will live happily both under water and above the surface. Many tropical aquarium plants are of this type and have the interesting habit of producing different leaves above and below the water's surface. Choose types that are compatible with the species and size of terrapin being kept.

LIGHTS

Lighting the aquarium will be necessary as terrapins thrive best when exposed to UV light. Light is also needed for the animals to see their food and for people to look into the aquarium. If plants are used, extra light will be required. In any case, illuminating the aquarium with an overhead lamp makes the setup very much more attractive and natural looking. A fluorescent tube, either alone or in combination with a spot lamp can be used. Agitating the surface of the water creates patterns with the light that is most pleasant.

BIOLOGICAL FILTRATION

An undergravel filter pulls up water from a space below the filter plate. Usually an air lift is used but the small masthead water pumps are also very effective. The filter gains its effectiveness from the water being drawn through the gravel or similar medium overlying the filter base plate. As the water passes through the medium, suspended matter is trapped. Bacteria in the gravel act on the organic content and convert it to simpler, less harmful substances. The water and dissolved materials pass into the space below the plate and then up through the lift pipe back into the bulk of the water. Plants, powered by light driven photosynthesis, adsorb the dissolved substances as nutrients, thus cleaning the water. This biological system works well once balanced but needs the energy input of the pump and lights to keep it working.



EXTERNAL CANISTER FILTERS

Water is syphoned out of the aquarium into the base of the canister. Here, it passes up through various filtering media to the top of the canister. On its way, much of the suspended waste matter is taken out. If chemical agents, like activated carbon, are being used, then some of the dissolved waste will also be removed. Do not forget to change this type of medium regularly, as they soon *fill up* and cease to be effective. The water is returned to the aquarium by the pump. If this returning water is allowed to play on the surface, the movement will create an aerating effect. Not only will the aeration return the oxygen/carbon dioxide balance to equilibrium, it will add to the visual attractiveness of the set up, especially if light beams through the disturbance.

CLEANING & MAINTENANCE

The water in an aquarium should circulate through the system so that it remains clean and fresh. An easy way to assess this is to judge it on small and visual clarity. As the system is closed, toxic waste cannot be allowed to accumulate. In the system described, particles of waste are filtered out and trapped in a medium. Here they can be removed, by cleaning out the canister filter for example, or natural processes can be relied on to convert the waste to less harmful substances. Soluble waste is circulated around and is acted upon by biological agents like bacteria in the filter media or chemical agents like carbon in the canister filter. Both these reduce the level of harmful substances. They must be helped by cleaning and renewing the filter media in a canister filter or changing some of the water in all systems. Look upon the water as diluting any waste to a tolerable level but it must be cleaned or renewed before the allowable level of pollution is exceeded.

Fresh Water Terrapins ...

...Biology

The freshwater terrapins discussed in this leaflet belong to the family *Emydidae*. They are within a group of shelled reptiles that are collectively called Chelonians. The group includes the land tortoises, the semi aquatic box turtles and the marine turtles. Terrapins live in most habitats with access to fresh water that have a warm temperate to tropical climate. They are found on all continents except Antarctica.

Quite a few are regularly available as pets each year, although supply is seasonal. Most are available as hatchling and other conveniently sized, small specimens. They will, however, grow quite quickly, often to substantial animals that will require appropriate accommodation and facilities. The species most often encountered are the N. American Cooters and Sliders, *Trachemys* and *Pseudemys spp.*, Painted Terrapins, *Chrysemys picta*. From Eurasian comes the Pond Tortoise, *Emys orbicularis* and other terrapins that are *Mauremys spp.*

This leaflet describes the early stages of keeping small specimens. As the animals grow, it may be expected the experience of the keeper will also increase. These later stages are a little more testing and will involve the use of larger and more expensive resources. A commitment to the extra responsibilities a growing terrapin will involve must be appreciated when starting to keep these fascinating reptiles.

...Housing

The most suitable containers for these animals are aquaria. Set up with half land and half water, these tanks make admirable quarters. As the animals housed may become quite large, it is best that the aquaria are as large as possible. Even then, some will outgrow all but the biggest tanks and will require some other purpose built accommodation. During the summer, some garden ponds, especially those that get a good deal of sun are much appreciated. Care must be taken to ensure the temporarily paroled animal cannot escape into the wild.

The water in the aquarium may be filtered in some way and the movement necessary to do this, used to aerate it at the same time.

To set up the tank, add the substrate to form a base and into this anchor the plants. Any other items of decor can then be positioned. Finally, fill the aquarium with water. Ordinary tap water is suitable but may be improved by adding a proprietary conditioner. The filter should be installed and run for about a day to settle the environment. (If an undergravel filter is used, it must of course, be installed before the substrate.)

The substrate has two functions. One is purely decorative and the other, functional. Where decor is concerned, much is dictated by personal taste but a few points are worth considering. Choose the colours to blend into a pleasing background that contrasts well with the animals. Either a very dark or very light

colour will probably make the best contrast. A terraced effect, built behind retaining walls, gives the impression of depth and allows both the animals and plants access to different levels. The functional role of the substrate will centre around its ability to trap and hold particulate material and how much microbial life it can support. Chemically, it is better if it is inert. The best substances to choose are the fairly coarse, lime free sands and gravels used for aquariums. Alternatively, the artificial medium, Hortag is also recommended.

Plants again, serve in both decorative and functional roles. They are better planted towards the rear of the tank and choose a species like *Elodea*, *Scindapus* and *Tradascantia* that are tough and will provide good oxygenation.

Some terrapins are active climbers so a secure, escape-proof lid is essential. If some of the lid is made from a non-corroding metal mesh, this will allow for ventilation. It may also be possible to direct the light into the cage through this mesh. If the light levels are too low, however, the lighting should be installed to the underside of the cage lid. This may require the expertise of an electrician, as mains equipment and water certainly do not mix! It is essential all electrical equipment is installed correctly and adequate protection made against electrocution.

...Husbandry

Terrapins cannot really be handled. If it is necessary to move them from one aquarium to another, a suitably sized net should be used. Return the terrapin to water as quickly as possible and avoid escape by capping the net with a free hand. Larger animals can be quickly grasped with both hands and gently lifted from one place to another. Try not to touch the animal for any longer than is necessary.

As far as cleaning out is concerned, the nature of the recommended set up only allows for minor interference. Every week between half and two thirds of the water can be removed and replaced with fresh tapwater. Allow the new water to stand in a separate container for a day to let some of the chlorine escape and for the temperature to equilibrate.

The only other major task is to trim the plants as they grow and fill the tank. If they are not thriving, this is a good indication that something is wrong and needs to be corrected. The most common reason for plants to fail is insufficient light.

Most terrapins appreciate quite a warm environment, so additional heating is required. The easiest way to heat the enclosure, is to immerse an aquarium type heater-thermostat into the aquatic portion. Follow the manufacturer's instructions for precise fitting details. Set the thermostat at 27°C and check the water temperature is controlled at the set temperature with an accurate thermometer. It may be a good idea to direct any circulating water over the heater-thermostat to ensure adequate mixing. To augment the background heat, a Basking Spotlamp could be

used to provide a local hot spot. Make sure the beam of light and heat is directed onto a solid basking area where the terrapin can climb to heat up and drop back into the water to cool off. With this basking behaviour the animal can maintain its preferred body temperature. To do this, however, the water must be cooler and the basking spot warmer than the temperature the animal prefers. Some experimentation may be called for.

...Food & Feeding

Terrapins usually recognise food by smell and movement. Like many animals they will snap at moving objects in the hope that they might be a meal. If the morsel tastes OK and is of a size that can be swallowed, it is eaten.

The majority of terrapins eat both animal and vegetable foods. Whilst still juvenile, animal foods certainly predominate but the best diet for captive terrapins are the pelleted foods especially prepared for them. Pelleted fish foods are similar and can also be offered. Older references recommend feeding whole animals and pieces of meat or fish. Because of the mess these diets make, they are best avoided by the beginner.

Once tame, terrapins will feed if moved to and offered food in another container apart from their main enclosure. This reduces the amount of work involved in their maintenance. A plastic washing up bowl, reserved exclusively for the purpose, is ideal. Any bits of uneaten food can then be discarded and will not be left to decompose and foul the main enclosure. Feed the terrapins in water at the same temperature as the water from which they have been taken.

...Reproduction

It may be possible to breed terrapins in captivity. Adult pairs will, of course, be required. To tell the sex of a terrapin it is usually necessary to wait until the individual is mature. The details of sexing and breeding will be found in the many excellent publications available on keeping terrapins. A 'Herpetological' club or society could be contacted as another way to learn more and meet other people interested in terrapins. The Internet is also a good source of information.

...Health & Disease

Pet terrapins do not suffer from many problems. Occasional fungal infections of the shell may show and can usually be dealt with preparations suitable for fish. The treatments and advice are available from aquarists and pet stores. Good practice, hygiene and first aid will probably deal with rest. If real disease is discovered, a vet must of course, be consulted. Despite uninformed media speculation, pet terrapins do not pose any substantial threat to human health. All the normal hygiene precautions regarding humans and animals should, however, be observed. This would include washing hands after touching anything associated with the animals. For legal reasons and because of a risk to our native fauna, it is advised the N. American Red Eared Terrapin and the Northern Painted Terrapin are not kept.