

No. 25



## Pet Tortoises

*Testudo spp.*

An Introductory Information Leaflet from



Europe's Premier  
Reptile Product Company

## Keeping Pet Tortoises

### ...Biology

Tortoises come from warm habitats from Mediterranean and steppe climates, through deserts and prairies and into the tropical rain forests. Most people associate tortoises with dryer habitats but some species come from quite humid environs. Their diet is mainly plant material but almost all will take food of animal origins on occasion. Most of the animals offered as pets will be captive bred and are usually sold as juveniles.

The species covered by this leaflet cover four commonly kept examples, the Greek or Spur Thighed Tortoise *Testudo graeca*, Hermann's Tortoise *Testudo hermanni*, the Marginated Tortoise *Testudo marginata* and Horsfield's Tortoise *Testudo (Agrionemys) horsfieldii*.

### ...Husbandry

Tortoises may be kept singly or in groups. Of course the more tortoises kept in each cage, the larger the cage should be. A three foot cage is suitable to house a juvenile. Larger cages are needed as the animal grows, especially for the larger species. Mature males tend to fight so do not put more than one in the cage. In any case, there should be plenty of retreats and visual screens for individuals to use as hides. Even then, males will pester females throughout the breeding season, so once mating has been successful, it may be as well to house mature males separately.

To handle a tortoise, the whole animal should be gently grasped and held in the hands. One hand beneath, supporting and the other grasping the animal's shell to control it.

Until it has accustomed itself with its new surroundings, including a new owner, the temptation to handle a new pet tortoise should be resisted. In time such handling will be accepted but for the moment, it is best avoided.

The cage will need periodic cleaning but as everything recommended is washable or disposable, this is easily done. Five to six weeks would be about as long as the cage could be left before being completely cleaned. The cage set up advised in this leaflet is practicable and can be made to look pleasing to the eye. If a more natural set up is envisaged, it may be best to wait until some experience is gained. In any case, some of the very informative books on keeping reptiles in general and tortoises in particular could be investigated.

### ...Housing Baby Tortoises

Young tortoises are best housed indoors in a heated vivarium. Some people like the idea of a tortoise table, the details of which can be found on the internet.

The tortoise should be quite warm and a temperature of about 28°C is considered to be the minimum. It should also have access to a basking

spot at about 35°C. The tortoise should have been at these temperatures for at least a couple of hours prior to any feeding

In respect of the tortoise's desire to feel secure, hides and retreats are essential. Most tortoises like the feeling of being concealed within a restricted space. Some will rest under foliage or in the space beneath fallen logs, whilst others will almost bury themselves in loose substrate.

### ...Housing

Tortoises are best housed in as large a cage as possible, as this will take into account their rapid rate of growth. The cage should be set up in a manner similar to the diagram overleaf. It may be necessary to provide a local hot spot near 35°C, while the coolest part of the cage should be nearer 28°C. The hot spot should only operate during the day and the heat source should be screened if there is any chance of it burning the animal or overheating any of the cage materials or contents. Both white and UV light are needed and should be present for a similar period; about fourteen hours per day in summer dropping to ten in the spring and autumn.

Ventilation is an important factor in tortoise management. Most species require an adequate humidity but cannot tolerate stagnant air conditions. Fresh air moving into the cage is essential. Use the upward draught of hot air rising to flush out the cage and drag fresh air in. A light misting with a hand sprayer will provide any humidity

required but the dampness should have evaporated away within a couple of hours. A general range of between 40% and 70% RH would be adequate. Alternatively, a damp hide box may be provided as this will give the animal access to 100% humidity should it choose.

### ...Care Outside in the Garden

During the warmer summer months, tortoises can be kept in an outside pen. How long they spend outside depends upon size and species. Mediterranean species and larger individuals of the more tropical species, will benefit from most warm sunny days. Small specimens should only be put out in really warm weather. They will always require some shade and should be put somewhere they are protected from predators like domestic pets and marauding birds. If confined to a pen, the walls of which should be solid as most tortoises will rub up against a wire fence.

### ...Food & Feeding

Leafy vegetables like cabbage and other green leafy items form the staple diet in captivity. To bulk out the food, grated root vegetables are often used and these could include items like carrot and swede. A lesser proportion of the diet, say 25%, could be made up with fruit and salad items. These, whilst relished, probably cost more than they are worth and are a bit short on the coarse fibre that is essential. Most tortoises will require a bulk source of calcium and in captivity will accept crushed limestone and cuttlefish bone. Occasionally some individuals

will eat food of animal origin and such things as dog and cat food have been taken. One or two small meals per month would seem to do no harm but neither does omitting this type of meaty food all together.

### ...Food Presentation.

Offer whole leaves of cabbage and other leafy plants like spinach, kale and carrot tops. The smaller amounts of other vegetables and fruit should be chopped or grated as the animal will have to be able to bite mouthfuls off. A whole apple or carrot would prove a daunting prospect!

Some dry tortoise diets are excellent foods and many individuals accept them with enthusiasm. They are, however, still substitutes.

Tortoises seem highly attracted to some smells and canned tomatoes, for example, seem to be almost irresistible. So using them to flavour new food items can be tried.

Food is only eaten if the tortoise is warm enough and not distracted with other activities. Feed the tortoises every day with as much fresh food as it will eat. It is not usually possible to over-feed a tortoise on fresh leafy food. If more concentrated food is offered, such as commercial diets or other bulky carbohydrate rich items, controlled amounts are advisable.

Most tortoises seem to know that they have a high dietary requirement for calcium, primarily as the carbonate. Sprinkling the food with powdered

limestone like *Medivet Natural Calcium* or crumbled cuttlefish bone may help.

Any diet needs to be supplemented with vitamins and minerals. Dusting the food with *Reptavite* two or three times per week would normally be sufficient. If an individual animal is showing signs of bone or shell disease, such as softness or distortion, a more potent supplement is advised. For such short term treatment, *Repton* is the preferred supplement but do not use it continuously over a long period.

Select out unwilted leaves with good edges because the animal can bite most easily from these.

Be careful when offering artificial diets like canned dog food. A tortoise will eat many items if allowed. Wandering around a garden it may well find meals offered to other pets. This willingness to eat other food does not mean they are unreservedly good.

### ...About Difficult Feeders

The first consideration will be to establish as near to an ideal environment as possible. The will mean getting the temperature and humidity ranges correct. The heating and ventilation systems in operation over the course of the day will see to this. The lighting system will, of course, control the levels and quality of the illumination and should be coupled to coincide with the heating. Other physical parameters like the provision of hides; retreats and substrate texture complete the obvious material aspects of the environment.

A small water dish kept full of fresh water should always be available. A tortoise that is eating normally will not normally drink much. It is worth placing a non feeding tortoise in a 1 cm bath of tepid water for a short while. Watch the animal at all times and do not be surprised if all it does is pass faeces and urates. If it is constipated the bath may offer some relief.

Some tortoises habituate onto quite a narrow range of foods and are claimed to refuse the normal fare. This is often more a consequence of human preference than anything the tortoise may prefer. All the tortoises sourced through British Herpetological Supply have eaten a basic diet of leafy green cabbage leaves and dry tortoise diet. This diet is supplemented with a regular sprinkling of *Reptivite*.

### ...Reproduction

Male tortoises have a more concave plastron or lower shell, while in the females, it is almost flat. The male's tail is slightly longer and the vent opens near the middle rather than at the base, which is the case with females.

After the mature animals emerge from hibernation, they will begin the reproductive stage of their life cycle. So if offspring are contemplated, then would be the time to put the sexes together. A period of courtship proceeds mating and during this time much activity can be expected. The males court the females with much shell bumping and pushing. Rival males will also try to see each other off. To

limit this activity, keep males apart from each other and limit the amount of time they can court the females. Once a few matings have been observed or about a month has passed, it is best to house the male away from females, as this will allow both to feed properly throughout the summer.

Eggs are laid after mating and they may take several weeks to hatch. To grow to adult in captivity may take as short a time as four or five years but in the wild, six to ten years may elapse. A cooler winter period will be needed to condition the tortoises for breeding in the following season. The tortoises available as pets are usually captive bred. In their native habitats they are still relatively common but European regulations prevent them from being imported from the wild. Some species will need a DEFRA permit to enter trade.

### ...Hibernation

Tortoises kept out of doors or those intended for breeding, are best hibernated as adults. In the autumn, as soon as the weather turns, bring the tortoise in and house in a heated vivarium. From about September to the beginning of November, feed the animal a good varied diet and check that the animal feels reasonably heavy for its size. The next thing to do, is empty the gut in preparation for hibernation.

Keeping the animal reasonably warm and watered for about a week but

without feeding will do this. Once empty of food but well hydrated, the tortoise can be safely hibernated. Cool the animal down to between 5°C and 10°C over a few days and then introduce it to the hibernation container. This can be a wooden or stout cardboard box filled with loose hay. Cover the tortoise with a little more hay and then shield from the light with a piece of sacking or a newspaper.

Store the contained animal in a safe, vermin free location at a stable temperature of between 5°C and 10°C for about three months.

The tortoise can be removed from hibernation around the end of March and this is done by bringing the animal in from the cold and letting it reach room temperature over the course of a day. Once active, the most important thing to do is rehydrate the tortoise by putting it in a shallow pool of about 1 cm of tepid water. It may be advantageous to add a probiotic and electrolyte mix like ProBalance to re-establish a physiological equilibrium.

The reawakened tortoise can then be housed in a normally furnished vivarium and offered its favourite food.

### ...Health & Disease

Tortoises live for many years in the wild but seem to live even longer in captivity. They do not suffer from many diseases and veterinary attention is rarely needed. An environment and diet as described in this leaflet will preclude most problems.

The most often encountered disease will be a metabolic bone disorder caused by insufficient vitamin D<sub>3</sub> or calcium. Some specimens may also suffer from a shell deformity showing as a peaking of the upper shell plates to give a rather nobly appearance. Most species have a smooth form to the shell and the distortion that is sometimes found is due to too low a humidity in the environment.

If tortoises have had any contact with wild or free living specimens, then it is likely that they will have acquired some parasites. Look out for signs of worms being shed in the faeces but if at all in doubt, consult a vet.

Good practice, hygiene and first aid will probably deal with most of the other problems. If real disease is discovered, a vet must of course, be consulted. Pet tortoises do not pose a real threat to human health. All the normal hygiene precautions regarding humans and animals should, however, be observed.



email: [info@eurorep.co.uk](mailto:info@eurorep.co.uk)  
website: [www.eurorep.co.uk](http://www.eurorep.co.uk)

## Indoors

### Cage Set Up

The cage should be set up to allow an active tortoise plenty of scope to move about, bask in a hot spot, move to a cooler retreat, drink and look for food. The tortoises should also be able to secrete themselves into refuges and rub themselves against something when shedding their skin.

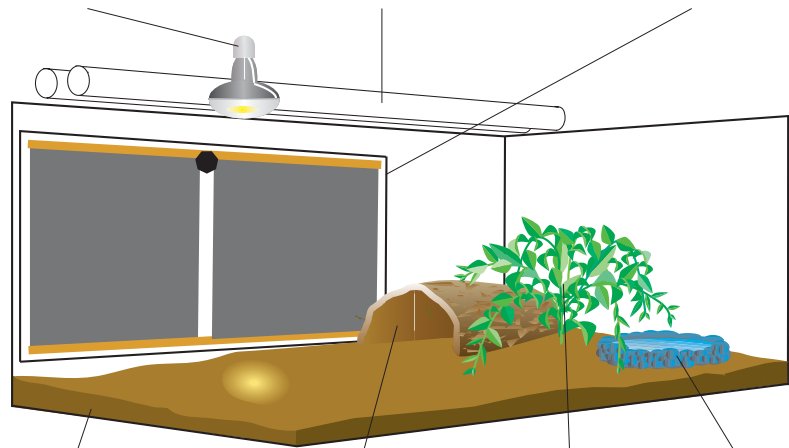
### Background Heat

Use a heat mat between half and two thirds the size of the cage to provide background heating if necessary. The hottest spot in the cage should not be above 40°C while the coolest should not be below 28°C. Use a HabiStat Mat - Stat if the temperature is too hot but put the whole cage in a cooler place if the temperature is not cool enough.

Spot lamp controlled by a HabiStat Dimming Thermostat

Fluorescent Tubes giving White, UVA & UVB light

HabiStat Heat Mat controlled by a HabiStat Mat - Stat



Substrate

Hide made from a cork bark roll or a Repti-rock cave

Plastic Repti-Vine

Tortoise pool

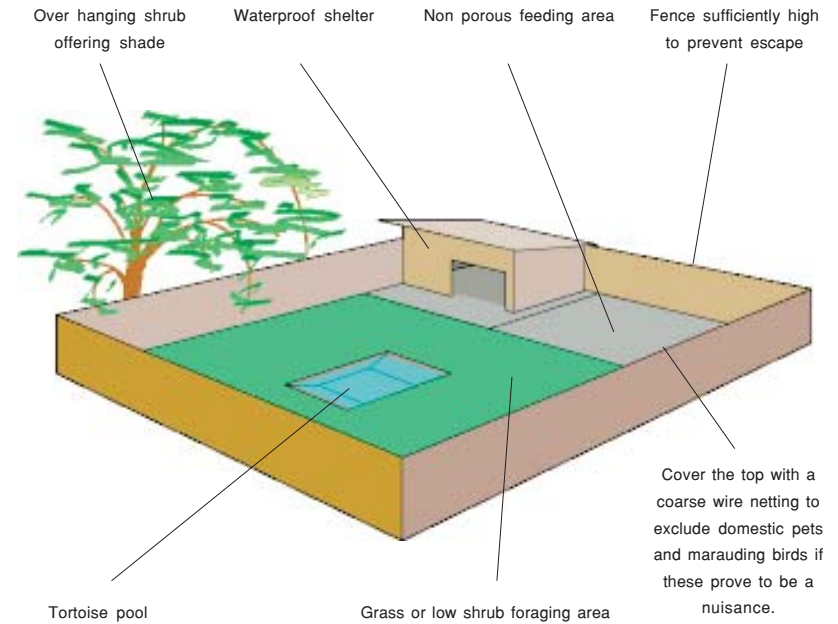
### Hot Spot

A local area of higher temperature can be created with a spot lamp or a ceramic heater. Use in conjunction with a HabiStat thermostat for precise control. Hot spots should be maintained for the same day length as the lights, sixteen hours per day in summer, eight in winter.

**Light:** Tortoises need a source of vitamin D<sub>3</sub> and calcium to remain healthy. The more natural way is to allow UV light to synthesise the vitamin in the skin. Indoors, a lamp like a *Reptile D<sub>3</sub>* or *Natural Sunlight* will be needed. Allow the tortoise to bask directly underneath these tubes, which should be no more than 30 cm away. The tube should also be renewed every year. Otherwise, make sure the food has an adequate amount of the vitamin.

## Cages Suitable for Tortoises

## Outdoors



### Basic Points for successful Tortoise keeping

- Make sure the tortoise is kept warm at over 25°C for at least part of the day between April and November
- Feed as much coarse green, leafy food as it will eat each day
- Offer retreats and hides so that the tortoise can escape too high temperatures or too low humidities
- Ensure a sufficient source of calcium, Vitamin D and UVB light