

Housing your Mediterranean Tortoise

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Indoors Enclosures

A tortoise should be housed in as large and complex an enclosure as possible with multiple hides at both the warm and cool end. An open topped 'tortoise table' is ideal and allows adequate ventilation. Tortoises are very good escape artists and the edges should be at least 2x the tortoise's length to prevent escape.

Vivarium type enclosures can be used and will maintain an ambient temperature efficiently but do not allow sufficient ventilation. Due to their enclosed nature they do not allow adequate basking temperatures as the enclosure would soon overheat. A typical vivarium can be modified for use by removing the glass doors and using a piece of wood along the front to prevent the tortoise escaping but this is by no means ideal.

The substrate used should be non-toxic and of a type that will not cause impaction such as a 50:50 mixture of clean, top soil and play sand. Other examples of good substrate are newspaper, astroturf, alfalfa bedding, newspaper based cat litter or carpet tiles. DO NOT USE woodchip, calcsand, shavings, sawdust or corn-cob bedding.

Maintaining focal areas of increased humidity is especially important for juvenile individuals and will help to prevent pyramiding. This can be provided in the form of a hide box combined with a moist sponge, oasis or sphagnum moss.

A common misconception is that tortoises do not drink. This is completely false and a shallow bowl of clean water should be provided at all times. The tortoise should also be bathed at least twice weekly in a shallow bowl of warm water (25°C/77°F).

Food should be provided on a clean plate or piece of slate to prevent contamination with substrate. Tortoise diet is beyond the scope of this handout but this is an extremely important part of tortoise care and is described in its own handout "Feeding your Mediterranean Tortoise".

Outdoors Enclosures

Tortoises will thrive if allowed outside during the warm summer months so long as this is done correctly.

The tortoise should not be allowed the entire roam of the garden as this can lead to escape, lost tortoises as they bury themselves in an attempt to hibernate outside, damage from lawnmowers/fires and access to possibly poisonous plants. The best method is to use a purpose built run with an attached house.

The enclosure should be predator proof to prevent attacks from foxes, birds and so on – this is especially important in young, smaller individuals. Covering the run will help to prevent predation but it is important to note that most glass and plastic will filter out the vital UV radiation from the sun.

The walls of the enclosure should be sunken to a depth to prevent the tortoise from burrowing out, this is especially important in tortoises such as Horsefields and can require quite substantial foundations. Sinking the walls approximately 30cm beneath the surface with a base of concrete or at least fine netting is useful.

The surface walls should again be at least 2x the length of the tortoise to prevent escapes.

The substrate should be well drained and varied. A 50:50 mixture of top soil and sand is again very useful with variations in gradient and areas of more stony/rough surfaces such as cement should be provided (take care with fine particles of gravel as some tortoises have been known to ingest these).

Many tortoises in the UK have survived living outdoors for many years without extra provision of heat. However, many tortoises are not so lucky and surviving is not the same as thriving. If a tortoise is to be housed outside a suitable environment providing warmth and UV lighting should be provided as described later. Greenhouses will warm up readily in sunshine but will soon cool down during the night, therefore a small shed or large dog kennel is probably more ideal. These can be fitted with the same heat and lighting set-ups as used indoors as described below. A suitable electrician should be consulted when wiring up outside electronics.

Incorporating a cold frame in a sunny area of the garden will also provide a further hot-spot for the tortoise. Multiple hides should be provided so the tortoise can escape if the environment becomes too warm. Fresh accessible water should again always be provided.

Suitable non-toxic food can also be planted around the enclosure. Please see the handout “Feeding your Mediterranean Tortoise” for more information.

Temperature

Reptiles are ectothermic and as such cannot generate their own heat. For this reason we must provide an adequate temperature range for them to live within.

Two heat sources are generally required. The primary source should maintain one end of the enclosure at 27°C/80°F. This should be attached to a pulse-proportionate thermostat and allow a night-time drop in temperature to 21°C/70°F, this is especially important in larger individuals for if they cool down considerably during the night they will require a very long time during the day to warm up. Such devices include ceramic bulbs and heat mats or a radiator attached to a thermostat can be used to maintain a room at this temperature (this is often required for tortoise table set-ups).

Heat mats must be placed against a side wall and NEVER UNDERNEATH THE TANK. Animals will generally bury into substrate to cool down and if mats are placed beneath the tank then the opposite will occur. NEVER USE DIRECTLY HEATED OBJECTS SUCH AS "HOT ROCKS".

The secondary source should be used to generate a basking spot of $\geq 40^{\circ}\text{C}/104^{\circ}\text{F}$. A focal source of heat and light should be used such as an incandescent light-bulb or ideally a mercury vapour lamp if a tortoise table is used (these generate too much heat for small confined enclosures such as vivaria).

A thermostat will attempt to keep the tank at the required temperature however during very cold periods it may struggle, and during very warm periods although it will turn off the heat source the tank could still overheat. Therefore all vivaria should have a maximum/minimum thermometer (ideally digital) to record the daily temperature range at both ends of the tank.

Lighting

Not only do tortoises require UV-B provision to stay healthy but latest research shows most reptiles can see in the UV spectrum of light and as such it is required for normal behaviour.

Fluorescent tubes (e.g. Zoo Med Reptisun) usually need to be within 15-30cm of the individual and at least every 6m should be replaced or have their UV output checked (the bulbs UV output will reduce with time although it will still shine bright).

Mercury vapour lamps (e.g. Zoo Med, Powersun) are ideal as they provide both a source of heat and UV lighting. However, they need to be used in a large environment otherwise they can quickly overheat an enclosure.

Light sources should be used for 9-15 hours/day depending on the season.

If you wish to check your UV source is producing sufficient radiation and is the correct distance from your pet The Veterinary Hospital have a UV meter available for rental.