

Tortoises as Pets

History and Biology: Tortoises are reptiles which come in a variety of sizes and inhabit many parts of the world. Smaller tortoises are one to two feet long, while larger species can measure three to four feet long.

Species of tortoise can be found in semi-arid grasslands and shore areas to the great interior deserts. Colors range from a dull brown – gray to vivid browns with red – orange markings on the feet. The carapace (top of the shell) can have a variety of patterns depending on the species. Although tortoises are related to turtles, they are not aquatic but rather live their lives on land.

Tortoises are long lived, with some of the smaller species living to be 60-70 years old and the larger land tortoises living to be over 100 years old. If owning a tortoise is right for you, be sure to consider who will care for them if they are likely to outlive you!

Housing:

- A smaller tortoise should have a large terrarium designed for reptiles. Generally, these are longer and shorter than those made for fish. Lids should be used and should be closed down with aluminum foil or plexi glass to help trap heat and humidity. Up to 75 percent of the top can be closed off. It is important to remember that a larger enclosure will require more heating to keep the tortoise at an appropriate ambient temperature.
- Larger tortoises may eventually need a room or a larger enclosed area. If a room is to be used, it needs to provide appropriate broad-spectrum (with an ultraviolet-B spectrum) light and be kept between 80-90 degrees.
- **Substrate in the enclosure should be artificial turf or reptile carpet.** Coconut husk, corn cob and play sand are not appropriate, and may cause gastrointestinal obstruction if ingested. Reptile sand, even if it is dissolvable, should also be avoided as it can also cause gastrointestinal obstruction, mouth rot which is an infection of the mouth, and can scratch the eyes.

Heating and Lighting:

- **Day-time ambient temperatures inside the habitat should be kept between 82 – 93 degrees F as measured with an accurate thermometer, such as a dial or mercury thermometer.** Temperature readings should be taken at several areas in the enclosure, including in the shade. The shade temperature is often the most accurate as it is not affected by heat lamps or heating pads.
- Temperatures that are too low or too high will cause decreased immune system function and metabolism, which leads to disease and failure to thrive. Night time temperatures should not fall below 77 degrees F.
- Heating for the habitat can be achieved through heat lamps or reptile heating pads placed under the terrarium. It is best to use heat lamps which emit no light, or emit a

dim purple or red light. Ceramic heat lamps are readily available at most pet stores in the reptile section, or are available on-line.

- Lighting is critical to the health of the tortoise and should be left on directly over the enclosure for 12-14 hours during the day. Tortoises require both visible “white” light, and ultraviolet (UV) light, specifically UV-B. **UV-B is found in sunlight and is essential as it helps the tortoise synthesize vitamin D which aids in the absorption of dietary calcium.** Without UV-B, metabolic bone disease (hypocalcemia) will result.
- All UV lights are not equal. Some bulbs only provide UV-A which does not aid in synthesizing vitamin D, but may have some psychological and emotional benefits. **High-quality broad-spectrum or full-spectrum fluorescent tube lights often provide good UV-B, though it is important to change these bulbs every 6-8 months as the lifespan of the UV-B spectrum is limited.** It is important to remove any plexi-glass, glass or plastic shields which are often screwed into the fixture to provide more security for the bulb. UV-B rays will be blocked by the plexi glass, glass or plastic so the tortoise will not receive adequate UV-B.
- Mercury vapor lamps are also available. These lamps provide UV-A and UV-B. They also produce a fair amount of heat and should be kept 18-24 inches away from the pet. Mercury vapor bulbs also cost a little more, usually \$40 – \$120.
- **As a general rule, incandescent bulbs do not provide adequate UV and should not be used as the only UV source.**

Diet:

- Tortoises are mostly herbivorous (eat plants) and should be fed vegetables with a Ca:P ratio of 2:1. **Appropriate vegetables are leafy greens that include kale, mustard greens, varieties of leaf lettuce, parsley, watercress, endive and dandelion greens. A few fruits are appropriate which include blackberries, raspberries and papaya.**
- Some of the larger land tortoises will also eat timothy hay, which is an appropriate food choice and can also serve as bedding for their enclosure or room.
- **A small bowl of water should be provided at all times.** It should be cleaned daily as bacteria may actively reproduce in the water bowls at the higher ambient temperatures in the terrarium. Though tortoises may not drink frequently if their diet is high in leafy greens, studies show having water available will help reduce the risk of formation of bladder stones. Large bowls of water should not be left in the terrarium, as tortoises may urinate and defecate in the bowl and then develop skin infections or shell rot from sitting in and drinking the contaminated water.
- The only safe supplements to use include the multivitamin supplements **Reptocal or Reptivite**. Only one small pinch should be used over the food once a week.