

Chameleons as Pets

History and Biology: Chameleons are native to many different geographic regions. In the wild they live in a variety of habitats, ranging from tropical rainforests, subtropical woodlands and mountainous jungles.

Chameleons are very unique lizards having a prehensile tail that can be rolled into a coil when not in use. Their toes are fused to form pincer-like structures which help them grip branches and bushes. Most chameleons are able to change their color, which acts as their primary defense, as they are generally extremely slow-moving creatures. Each species will only have a certain range of colors at its disposal.

Housing:

- In the Pacific Northwest, a chameleon should be housed in solid-sided enclosure, NOT a mesh one. Mesh enclosures can be covered with plexi-glass, cardboard or foil to help trap heat and humidity. The temperatures in Oregon are not suitable for chameleons most of the year.
- **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, an infection of the mouth, and can scratch the eyes.
- **It is important to remember that in tall enclosures, heat lamps and lights mounted above the enclosure must be able to heat and illuminate the bottom of the enclosure.** If the lamps are not strong enough to heat the bottom, consider using a reptile heating pad below the enclosure.

Heating and Lighting:

- Day-time ambient temperatures inside the habitat will vary depending on the species. Low land species of chameleons, such as the Veiled chameleon, should be kept between 85 – 95 degrees F as measured with an accurate thermometer, such as a dial or mercury thermometer. Cooler temperatures, in the 77-85 degrees F range, are appropriate for Jackson's chameleons. 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 72 – 75 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 chameleon and should be left on directly over the enclosure for 12-14 hours during the day. Chameleons 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 chameleon 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 chameleon 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 chameleon. 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:

- Chameleons are carnivorous and should be fed small insects and other small prey. Veiled chameleons may eat a small amount of vegetation. Small earthworms and silkworms are good choices as they are high in protein, have good Calcium to Phosphorus ratios, and are low in fat. **Appropriate vegetables are leafy greens that include kale, mustard greens, varieties of leaf lettuce, parsley, watercress, endive and dandelion greens.**
- Crickets can also be fed as prey items, but must be gut-loaded to enhance their calcium content. A gut loader such as T-Rex cricket food and gut loader can be fed to the crickets 24-48 hours before feeding to the chameleon. It is important to remove any uneaten crickets promptly and feed them, as crickets may start feeding on the chameleons.
- **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. Large bowls of water should not be left in the terrarium, as chameleons may urinate and defecate in the bowl and then develop skin infections or mouth 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.

