

Uromastyx (*Uromastyx* spp.)

Difficulty: Intermediate

Uromastyx (also known as spiny-tailed lizards) are a group of 9-30" lizards with round heads, bulging cheeks, round bellies, and a heavily-spiked tail of variable length. Color and pattern varies by sex and species, from tan or gray to bright blue and green.

There are approximately 20 different Uromastyx species and subspecies:

- *U. acanthinura*
- *U. aegyptia aegyptia*
- *U. aegyptia leptieni*
- *U. aegyptia microlepis*
- *U. alfredschmidt*
- *U. bent*
- *U. dispar dispar*
- *U. dispar flavifasciata*
- *U. dispar maliensis*
- *U. geyri*
- *U. macfadyeni*
- *U. nigriventris*
- *U. occidentalis*
- *U. ocellata*
- *U. ornata ornata*
- *U. ornata philbyi*
- *U. princeps*
- *U. thomasi*
- *U. yemenensis*

U. dispar maliensis, *U. geyri*, and *U. ornata ornata* are the most common in the U.S. pet trade. Others are also available, but they are more likely to be wild-caught.

These lizards are native to north Africa and the Middle East. They are true heat-lovers, and can be found out basking even during the hottest part of the day. They are true terrestrial lizards, skilled at climbing rock stacks and burrowing.

Uromastyx can live for over 25 years with good care, and quite possibly as long as 60 years. Some species are more tolerant of humans than others, but once you get their husbandry right, they can make delightful pets.

Shopping List

- 48"x24"x24" front-opening reptile enclosure, OR LARGER (preferably with a mesh top)
- 5.5" diameter ceramic-socket dome lamps, x2
- 100w PAR38 halogen flood bulbs, x2
- Light-colored flagstone or slate tile, for basking (at LEAST one large piece)
- Digital thermometer/hygrometer device with probes
- Infrared thermometer ("temperature gun")
- 22" T5 HO Arcadia Dragon 14% UVB kit
- 34" 6500K LED plant light, at least one
- Surge protector with digital timer
- 4-6" naturalistic substrate (2.6-4 cubic ft for a 48x24x24)
- Appropriately-sized reptile hideout/cave
- Environmental enrichment items (rocks, logs, drought-tolerant plants, etc.)
- Food and water dishes
- Calcium powder supplement (low or no D3)
- Multivitamin powder supplement

Housing

Although uromastyx lizards vary widely in size, a good rule of thumb is to plan for no smaller than a 120 gallon (48" L x 24" W x 24" H) enclosure. Particularly large species however, such as *U. aegyptia*, will need something much larger — at least 6'x3'x3', although a longer and especially taller enclosure than would be even better.

The enclosure should be front-opening for easy access, with excellent ventilation.

Can multiple uromastyx be housed together?

Possibly. Most species of uromastyx can be housed in pairs or small harems with one male and multiple females. However, you must be willing to buy/build an enclosure that is at least double the recommended minimum size. Furthermore, there's no guarantee that the individuals will get along.

In other words, it's best to stick to one lizard per enclosure. Don't worry, they like to live alone too.

Lighting & UVB

Uromastyx are *diurnal*, which means that they are most active during the day. This also means that they are stimulated by the presence of bright white light in their environment, and they require strong, high-quality UVB lighting for survival.

UVB Lighting

UVB lighting can be tricky, because in order to get the right strength of UVB (UV Index, or UVI), distance and potential mesh obstruction must be considered. To provide appropriate UVB for a uromastyx's needs, you will need a 22" Arcadia Dragon 14% bulb, half the length of the enclosure, and placed on the warm side. It should be mounted in a reflective T5 HO fixture such as the Arcadia ProT5 or Vivarium Electronics T5 HO fixture.

The basking area should be placed so the lizard's back is at the given distance from the UVB lamp:

- UVB mounted over mesh: 8-13" below UVB lamp
- UVB mounted under mesh: 14-20" below UVB lamp

(These recommendations are approximations based on available data. For best results, use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 4.0-6.0 in the basking area.)

Full-Spectrum Lighting

Bright light with a color temperature of around 6500K is strongly correlated with optimal mental and physical health in uromastyx. Uromastyx with additional "daylight" lighting in their enclosure are markedly more alert and active than those without, as well as demonstrating better appetite and more natural behaviors.

Full-spectrum lighting is not the same as reptile UVB lighting, so you will need two separate lamps. The Arcadia Jungle Dawn LED Bar and Bio Dude Glow & Grow are both excellent lamps for this purpose. The 6500K lamp should span at least most of the enclosure's length.

Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Uromastyx, however, are *cold-blooded*, which means that they have to move between areas of different temperatures in

order to regulate their body temperature. Uromastyx warm up by basking under the sun in the wild. In captivity, they do best with a halogen heat lamp as a heat source.

- **Basking surface temperature: 120-130°F (49-55°C)**
- **Cool zone temperature: ~85°F (29°C)**

100w PAR38 halogen flood bulbs should be plenty to achieve those basking temperatures if you build up the basking platform to be about 10-12" below the heat lamp. However, if you notice that they're getting too hot, dial it down with a plug-in lamp dimmer or reduce the height of the platform. If your basking area is too cool, you will need higher wattage bulbs.

To measure the basking surface temperature, use an infrared thermometer (a.k.a. temperature gun). To passively track basking temperature, use a digital probe thermometer, with the probe placed on the basking surface under the heat source. The [Etekcity 774](#) is a good infrared thermometer, and most reptile-brand digital probe thermometers function well.

Humidity

Uromastyx require very low humidity levels — **around 20-30%**, as measured by a digital probe hygrometer with the probe placed on the ground on the cool side of the enclosure. Humidity levels that are consistently higher than that can make your uromastyx sick!

However, uromastyx do benefit from having access to some kind of humid "burrow" in their enclosure. This is usually a burrow they've dug out for themselves in the substrate, so it's advisable to periodically add water to the substrate to help prevent burrows from collapsing and make sure the burrows maintain healthy humidity levels. The top 1" or so of substrate should always be dry, however.

NOTE: Certain coastal Uromastyx species prefer more humid conditions than average. U. yemenensis needs an average humidity of around 50%, and U. macfadyeni needs it to be around 30-35%. Occasional nighttime misting may be appreciated by these species.

Substrate

Uromastyx are healthiest and happiest when they are housed on a substrate (a.k.a. "bedding") that imitates the conditions of their natural habitat. In northern Africa and the Middle East, that habitat is typically sand or very sandy soil. So the substrate in your uromastyx's enclosure should be fine sand or sandy soil, packed at least 4" deep — preferably deeper, if at all possible.

Jurassic Natural Australian Desert Dragon Habitat, Jurassic Reptile Substrate, Zoo Med ReptiSand, and even clean play sand are all suitable for uromastyx. You can also make your own DIY desert mix of 50% play sand, 30% organic topsoil, and 20% Zoo Med Excavator Clay.

Sick or wounded uromastyx should not be kept on loose substrate. Instead, use paper towels.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced once every 3-4 months.

Décor

Decorations play an important role in your uromastyx's enclosure as environmental enrichment. Enrichment items encourage exercise, stimulate your pet's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nice! Here are some ideas:

- Flagstone
- Concrete pavers
- Cork logs
- Cork flats
- Sturdy branches
- Drought-tolerant, edible live plants
- Ledges
- Caves

Food

Uromastyx are true *herbivores*, which means that they need an entirely plant-based diet to get the nutrition that their bodies need. How often and how much they need to eat depends on age. **Juvenile uromastyx should be fed daily, as much as they can eat. Adults should be fed 4-5x/week.** The key to providing a healthy, balanced diet for your uromastyx is VARIETY!

Safe greens: collard greens, cactus pad, spring mix, arugula, kale, pea shoots, alfalfa, carrot greens, spinach, dandelion greens, hibiscus leaves, endive, clover, lettuce (no iceberg), grape leaves, turnip greens, grass

Resources such as TheTortoiseTable.org.uk are helpful for finding other plants you can feed to your uromastyx.

Safe vegetables: acorn squash, butternut squash, carrots, green beans, green peas, opuntia cactus

Edible flowers like dandelions, rose petals, clover, hibiscus, and squash blossoms make great treats. Fruits like papaya, figs, apple, prickly pear, berries, or cherries can also be offered as a rare treat. Make sure that flowers are free of pesticides before feeding.

Commercial diets can be used (either whole or ground-up) as "salad toppers" for extra nutrition. Zoo Med Natural Grassland Tortoise Food, Mazuri Herbivorous Reptile Diet, Re-Cal Juvenile Iguana Food, Tortoise Supply Herbal Tortoise Hay, and Arcadia Optimized 52 are all good options.

Interestingly, Uromastyx also need seeds (ex: lentil, white millet) as a regular part of their diet. These provide an important source of protein and fat. Offer a small quantity no more than 1x/week.

Treats: Insects like mealworms and superworms can make great treats when offered sparingly. These provide extra nutrients that are much harder to get from plant foods. One bug 1x/week is appropriate for juveniles and every other week is appropriate for adults.

Low-sugar fruits like figs, prickly pear, and berries can be offered no more than 1x/month.

Supplements

To ensure that your uromastyx is getting all of the vitamins and minerals that they need, you will need a calcium powder and a multivitamin powder like Miner-All Indoor and Vit-All mixed 50/50. Alternatively you can use a good all-in-one like Repashy Superveggie. For best results, use as directed by the manufacturer.

Drinking Water

Uromastyx are well adapted to living in drought conditions and get most of the water they need from their food. However, a small bowl of fresh water should still be available at all times.