

Care Sheet for the Genus *Uromastyx*

Subtitle

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Introduction

These interesting lizards have become more popular during the last few years. Unfortunately there is little known about the genus. The following guidelines will help maintain these animals in captivity. Hopefully as more people work with the genus success stories will become more numerous. The only way to ensure better husbandry for these unusual lizard is for all herpetoculturists to share their information.

Taxonomy and Distribution

There are approximately 13 species in the genus *Uromastyx*. These lizards are adapted to arid regions and are found from northwestern India throughout southwestern Asia and the Arabian Peninsula to the Sahara of Africa (Moody 1987). Members of this genus are referred to as dab lizards or spiny tailed lizards.

There are six species (*U. aegypticus*, *U. ornatus*, *U. ocellatus*, *U. acanthinurus*, *U. hardwicki*, and *U. benti*) which are occasionally available in the United States. The other seven species are seldom if ever imported. *Uromastyx aegypticus* is the largest member of the genus with individuals reaching 30 inches or more in total length and weighing several pounds. The other species are usually under 14 inches in total length.

Coloration is variable between and within species. *Uromastyx aegypticus* and *Uromastyx hardwicki* are usually dark to light brown. *Uromastyx acanthinurus* can be yellow, green, bright orange or a combination of these colors. *Uromastyx ornatus* are sexually dimorphic with adult males being green or blue green with blotches of yellows and oranges. Females have more subtle yellows, browns, and some orange.

General Characteristics

Behavior differs between species and even individuals within the same species. Some, *Uromastyx acanthinurus* and *Uromastyx aegypticus*, can be very shy, often retreating to a hide spot when someone approaches the cage. Others, *Uromastyx ornatus*, will often be tame. Individuals differ in their behaviors and you can find exceptions to the above generalizations.

Large numbers of *Uromastyx aegypticus* and *U. ornatus* have been imported into the country during the last few years. The U.S. Fish and Wildlife Service estimated that 7,000 members of the genus were brought in 1994. For unknown reasons the death rate for *Uromastyx ornatus* is rumored to be as high as 80% during the first two months of captivity. *Uromastyx aegypticus* is hardier and with proper treatment adapts to captivity.

Uromastyx acanthinurus have not been imported from Morocco for several years, however, a few animals occasionally come from Europe and a only two private

breeders are known to occasionally produce captive born animals. There is probably less than 100 animals in the United States. This species adjusts well to captivity even if reproductive success is not common.

Sexing

The presence of large femoral pores with waxy protuberance and hemipene bulges can often distinguish males, however this is not obvious on all species. Males tend to have broader heads but this is often subtle or misleading. *Uromastyx ornatus* are the easiest to sex due to enlarged femoral pores on the males and adult males are more colorful than females. *Uromastyx acanthinurus* can be extremely difficult to sex. Probing does not work with *Uromastyx acanthinurus* and may not be a useful tool for the genus.

Social Behavior

Most lizards are territorial, which means that the male and sometimes the female will defend an area from members of the same species or even other species. Often in captivity two male lizards will fight openly. Even if aggression is not overt, the submissive male can be adversely affected. Research with green iguanas indicates that submissive males in sight or smell of a dominant male have slower growth rates.

Uromastyx males should be housed separately. Some herpetoculturists even house females individually and only introduce them to males during the breeding season (Matt Moyle, personal communication).

Caging

Each species of lizard is adapted to specific environmental conditions. Knowledge about a species macro and micro habitat is critical in designing a cage setup, however limited information is available regarding habitat type for each species of *Uromastyx*. Generally the species are found in deserts, therefore they are best kept in desert setups.

Cages can consist of glass aquariums, metal stock tanks, or wooden boxes. Sand, dirt and newspaper are often used for substrate. Rocks or other objects should be placed in the cage to allow climbing and basking sites. Any heavy objects, such as rocks, must be securely anchored or the lizard will burrow underneath causing the rock to fall and crush it. Hide boxes provide the animals with a sense of security and are especially important for gravid females.

Uromastyx can and should be kept outside during the summer or all year in the southwestern United States where temperatures seldom drop below the mid 60's F. A variety of outdoor caging types can be constructed, including a simple sheet metal ring sunk 12 inches in the ground and standing 24 inches above ground (the height is adjusted depending upon the size of the animals). Outdoor cages should be secured with a wire top to prevent predators (e.g. cats, birds, raccoons) from entering.

Temperature

These lizards are adapted to hot desert conditions. The cage should have a daytime hot basking spot where the temperature exceeds 120 F, however the lizard must be able to retreat to areas in the low 90's. Incandescent spotlights can provide hot basking spots. The wattage selected depends upon the size of the cage. Thermometers should

be placed at both ends of the cage and monitored to ensure a proper temperature gradient.

Under tank heaters can be used to supplement heat, however these are diurnal species and regulate their body temperature by basking in the sun. Spotlights more accurately approximate the way diurnal lizards obtain their heat naturally.

Night time temperatures should be less than the daytime highs. Temperatures should be allowed to drop into the mid 60's F.

Lighting

Ultraviolet light is believed to be important for most lizards. Unfiltered sunlight (i.e. not through glass) is the best source of ultraviolet light and lizards should always be exposed to sun whenever possible.

There are several full spectrum fluorescent light bulbs on the market. Most claim that they duplicate the sun's light spectrum, however it is unlikely that any can achieve the intensity of ultraviolet light emitted by the sun. There is no scientific research supporting the assumption that these bulbs are beneficial, however their use is recommended since there is some anecdotal evidence that they provide psychological benefits to the lizards. The new Zoo Med full spectrum bulb appears to have the highest UVA and UVB of any of the full spectrum bulbs on the market, therefore it is recommended.

Water

Most desert species are adapted to live without free water. *Uromastyx ornatus* comes from the Sinai Peninsula where it rains less than 2 inches per year. Many species obtain moisture from the food they consume. There is evidence that some species, such as the Australian Moloch and North American horned lizards, collect morning dew on their scales which is then channeled toward the mouth.

Many herpetoculturists soak their *Uromastyx aegypticus* in water and claim that the animal swells as it absorbs water. Whether the animal is actually filling up with water or only filling its body cavity with air is unknown. Considering that this is a desert species, soaking in water seems inconsistent with adaptations to arid conditions and could lead to respiratory infections if the animal does not thoroughly dry after soaking.

Water can be provided infrequently in a bowl. The bowl should not be left for long periods in the cage or it can raise the humidity to possibly unacceptable levels. Baby *Uromastyx ornatus* will drink water sprayed on the side of the cage.

Food

Uromastyx are omnivorous which means they consume both animal and plant materials. Since there is no data about the specific nutritional requirements of this genus a large variety of food items should be offered.

Young animals more readily accept insects such as wax worms, crickets, and super meal worms, which should be offered three or four times per week. The following vegetables should be offered; kale, collard greens, mustard greens, sweet potatoes,

carrots, peas, corn, and green peas. In addition, dandelion greens, alfalfa, grass, and flowers can be added to the diet. Beans such as split peas, lentils, navy beans, and other should also be provided. Some of these beans can be sprouted prior to feeding. Bird seed should also be mixed in with the salad.

A reptile vitamin containing calcium should be sprinkled on the salad. Some of the commercial iguana chows can also be mixed in with the salad to ensure better nutrition.

There are some indications that nutritional needs are not easily met for this genus. Several herpetoculturists who are raising young *Uromastyx aegypticus* and *U. acanthinurus* report slow growth rates. For example, I obtained two captive born *Uromastyx aegypticus* that were three inches long. Within eight months one animal was five inches long and the other 11 inches and much bulkier. The only difference in husbandry was that the larger animal would eat insects and smaller one would not. I have also observed slow growth in captive born *Uromastyx acanthinurus*.

Reproduction

Several zoos (Christie 1993, Thatcher 1990, Wheeler 1988) and private breeders have successfully bred *Uromastyx aegypticus* and *Uromastyx acanthinurus*. However reproduction is not a regular occurrence. All breeders provide a winter cool down to stimulate reproduction.

Apparently *Uromastyx* take several years to reach sexual maturity. As a comparison, North American chuckawallas, an ecological equivalent, take five to seven years to reach sexual maturity. Some of the smaller *Uromastyx* may reach sexual maturity in two or three years.