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## Lyre Snakes (*Trimorphodon* spp.)

### Beautiful Lyres

Lyre snakes belong to a genus and group of relatively small to medium sized, rear fanged colubrid snakes indigenous to the arid to semi-arid deserts, grasslands, and scrublands of the southwestern and western United States and Mexico. These small to medium sized snakes are primarily crepuscular, most often hunting, basking, and foraging during the early morning and evening hours, where their small, primarily ectothermic prey is captured and subdued by their pair of enlarged, rear-ward oriented teeth and venom designed to subdue smaller prey. These oftentimes underappreciated snakes consist of several different species and subspecies, most notably including the Western Lyresnake (*T. biscutatus*), Sonoran Lyresnake (*T. lambda*), Texas Lyresnake (*T. vilkinsonii*), Mexican Lyresnake (*T. tau*), as well as other species. These snakes can be identified by their fairly slender bodies, ranging from grayish, to tan or light brown ground color with a series of large, irregular dark brown, reddish-brown, to orangish-brown rows, or alternating rows of dorsal and lateral blotches or crossbands. The head is fairly broad and distinct, and eyes and pupils large and elliptical. Lyre snakes are named from the spearpoint, or “lyre-like” pattern on the backs of their heads and necks. Although these species are seldom kept or bred in captivity in any great numbers, these snakes can make for unique, challenging, and enjoyable captives for the more intermediate to experienced enthusiasts with a solid understanding of their needs in captivity and in the wild.

### Taxonomy

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Reptilia

**Order:** Squamata

**Suborder:** Serpentes

**Infraorder:** Alethinophidia

**Family:** Colubridae

**Subfamily:** Colubrinae

**Genus:** *Trimorphodon*

**Species:** *Trimorphodon* spp.\*

*\*Taxonomy subject to change and revision.*

### Lifespan and Longevity

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If provided the proper care, lyre snakes have the potential to attain longevity of at least 10 to 12 years or more in captivity.

### **Distribution and Habitat**

Depending on the species and subspecies, lyre snakes range across much of the southwestern and western United States and into northern Mexico, where they may occur in a variety of arid to semi-arid habitats including deserts, scrublands, grasslands, montane coniferous forests, open savannahs and woodlands, and steep, rocky slopes.

### **Conservation Status**

IUCN Red List Least Concern (LC) or Data Deficient (DD) depending on the species.

### **Legal and Regulatory Status(\*Subject to Change)**

Consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

### **Experience Level Required**

Intermediate/Moderate to Advanced.

### **Size**

As hatchlings, lyre snakes begin their lives from about 4 1/2 to 9 inches. As adults, they are typically small to medium sized snakes, ranging from 24 to 40 inches in length.

### **Housing and Enclosure**

Housing must be sealed, secure, and escape proof. Hatchling and juvenile lyre snakes can be housed in a 10 gallon terrarium or enclosure. Adult lyre snakes should be housed in a minimum of a 20 to 40 gallon long terrarium or enclosure. Lyre snakes are primarily terrestrial, and floor space is more important than height. Provide a substrate that can enable burrowing or hiding such as cage carpet or cage liner, fine aspen shavings, cypress mulch, or coconut fibers. Avoid excessively humid conditions with these species. Do not use pine or cedar shavings, as these substrates are toxic to snakes. Provide additional basking and hiding opportunities using live or artificial foliage, rocks, logs, driftwood, or other hides. Also be sure to include a sturdy water bowl or dish as well.

### **Temperature, Lighting, and Humidity**

Create a thermal gradient (or a warm side) in the cage/enclosure with an appropriate sized UTH (or tank heating pad), ceramic or radiant heat emitter, or incandescent, UVA/UVB, or other heat producing bulb. Ideal temperatures for lyre snakes range from 75 to 80 degrees F on the cool side and 80 to 88 degrees F on the warm side. Most species of snakes have fairly simple and undemanding heating and lighting requirements in captivity, and do not require additional UVA/UVB lighting, although providing it can be greatly beneficial for their health, immune system, and overall wellness. Also be sure to spot clean the enclosure for urates, feces, or uneaten food at least once per week. Be sure to periodically replace the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Feeding, Diet, and Nutrition**

*Carnivorous*; In the wild, lyre snakes are carnivorous, and will prey upon insects and other invertebrates, amphibians, small lizards, snakes, and other reptiles, eggs, and occasionally small

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rodents or other mammals, or small birds. Prey is captured and overpowered using their enlarged rear-ward teeth and mild venom and can also be constricted by these species. In captivity, lyre snakes are primarily reptile and amphibian eaters, and can be given feeder lizards or insects of smaller size to initially stimulate their appetites, and then appropriate sized feeder items. Offer a variety of small, lizard feeders such as anoles, house geckos, or side blotched lizards or other species within their same range, if available if reluctant feeding becomes an issue with these species. Small, scented rodents can also be tried if one wishes to convert these snakes to a more rodent based diet. In most circumstances, it is recommended to provide humanely pre-killed rodents acquired from a reputable source, as offering live rodents to any snake can carry risk of serious injury or even death to your snake when the rodent bites to defend itself or otherwise gnaws on your animal. A general rule of thumb when selecting feeder rodent sizes for your snake is to provide prey items that are approximately the same width as the snake's widest point. It should also be noted that many snakes may refuse food for longer periods of time over several weeks or months, especially in the fall and winter months or if several other husbandry conditions are not being met. While this can be alarming to new pet owners, it is oftentimes normal, but their overall health and weight should be monitored during these times to make sure they do not lose weight or otherwise deteriorate. Most snakes typically are fed whole prey items, and do not usually require additional calcium or vitamin D3 supplementation unless otherwise directed. Their feeding frequency will also depend on the age, size, and overall health of your animal. Use care as to not overfeed them, as obesity and other health related issues can become an issue. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Handling**

As with many snakes, hatchling and juvenile lyre snakes may initially be nervous and defensive than adults. When threatened, these snakes may musk, triangulate or flatten their heads, or thrust their bodies and mock strike towards a potential threat. While lyre snakes are mildly venomous, they very seldom bite humans or larger animals, and are not considered dangerous or medically significant. At least some level of caution and common sense should be used when handling any rear-fanged or potentially venomous species, however.

**\*\*Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens\*\***

### **Contact**

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at [info@madisonherps.org](mailto:info@madisonherps.org)

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