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## Veiled Chameleon (*Chamaeleo calyptratus*)

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### **Vibrant Chameleons with a Casque**

The veiled chameleon, also occasionally known as the Yemen chameleon, is a medium sized to large chameleon species indigenous to the Saudi Arabian peninsula which can be characterized by its green base color with brownish, reddish-orange, or bluish stripes, and a large distinct vertical crest or helmet-like casque. The purpose and function of this casque remains to be fully known and understood, although it is likely used, and tends to be most prominent in male chameleons, for sexual selection, courtship, and reproductive behaviors and displays, as well as possibly to assist in further distorting the chameleon's outline to potential predators. As with most other chameleon species, veiled chameleons are sexually dimorphic in terms of their sizes and coloration and color intensity, with females and juvenile veiled chameleons typically becoming less vibrantly colored than males. Veiled chameleons are perhaps one of the most widely kept and available chameleons in the pet trade, and can provide years of enjoyment and satisfaction for those ready to take on a chameleon.

Chameleons in general are a highly diverse and specialized family of Old World lizards with several extremely unique features and adaptations for survival. Perhaps best known are their color and/or pattern changing abilities. The skin and scales of chameleons possess a thin, superficial layer of color changing pigments, with another deeper layer consisting of guanine cells. In order to change their coloration, chameleons rely on changing the space and distance between these guanine cells, thereby changing the wavelengths of light reflected from the skin and scales. While it is popularly believed that chameleons change their colors and patterns for camouflage or crypsis, and while it is true that this has functions in concealing the animal from predators and prey, this is not the primary reason for their color changes. Instead, they will change color as a means of social signaling, to display territoriality and dominance, displaying defensive behaviors, and/or to aid in thermoregulation. Most chameleons also have highly specialized zygodactylus feet and prehensile tails for climbing and gripping branches as well. They also have highly modified and rapidly extrudable sticky tongues used and designed for capturing prey. Chameleons also possess a pair of highly mobile, independently operating eyes, giving them excellent depth perception and motor coordination as well. These are only some of the many unique features chameleons possess, making them popular and unusual pet reptiles to maintain in herpetoculture.

### **Taxonomy**

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

**Domain:** Eukaryota

**Kingdom:** Animalia

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

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**Class:** Reptilia  
**Order:** Squamata  
**Suborder:** Lacertilia  
**Infraorder:** Iguania  
**Family:** Chamaeleonidae  
**Genus:** Chamaeleo  
**Species:** *Chamaeleo calyptratus*\*  
*\*Taxonomy subject to change and revision.*

### **Lifespan and Longevity**

If provided the proper care, veiled chameleons can attain longevity of 4 to 8 years on average in captivity.

### **Distribution and Habitat**

The veiled chameleon is a relatively medium sized to large species of semi-arboreal chameleon indigenous to the borderline areas of Yemen and Saudi Arabia. Within this fairly small northern African to Middle Eastern range, these chameleons can occur in dry, semi-arid plateaus, mountainous areas, inland river valleys, and dry forests and woodlands. This species of chameleon is arboreal to semi-arboreal, and can tolerate wide range of temperatures within its range, where they occupy low to high vegetation, including trees, bushes, and shrubs.

### **Conservation Status**

IUCN Red List Least Concern (LC).

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

Chamaeleo spp. are CITES Appendix II as of October 2017. Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

### **Experience Level Required**

Intermediate/Moderate.

### **Size**

Adult veiled chameleons range in size from 12 to 18 inches on average. Some males will reach up to 24 inches in some instances.

### **Housing and Enclosure**

Housing must be sealed, well ventilated, and escape proof. Hatchling and juvenile chameleons up to around six to eight months can be maintained in roughly a 20 gallon tall enclosure, but be sure to not use too large of enclosures as they can become stressed and have greater difficulty finding their food. Most adult chameleons should be kept in at least a 30 to 50 gallon tall or equivalent sized enclosure. Glass or screen enclosures can be used depending on your household's ambient temperature and humidity. Providing a substrate is optional as chameleons are arboreal and will seldom use it, but substrates that can be provided can include cypress mulch, sphagnum moss, chemical and pesticide free potting soils, or coconut fiber. Chameleons are highly arboreal and specialized lizards that require additional climbing, basking, and hiding opportunities by providing additional vertical artificial foliage, driftwood, branches, logs, and other furnishings. Most chameleons also will not recognize standing water, and should be misted, by hand or with a commercially available misting and/or fogging system to ensure they receive adequate moisture and hydration.

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

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Provide a lighting and temperature gradient for veiled chameleons from 80 degrees F to 96 degrees F. Use an infrared night time bulb to create nighttime temperature gradients of 75 to 85 degrees F. Providing the correct amounts of UVA/UVB overhead incandescent and florescent lighting, and calcium-to-phosphorus ratios is essential for ensuring the health and overall well-being of veiled chameleons in captivity. Without UVA/UVB, or adequate amounts of it, they can be susceptible to the abnormal bone growth and development known as Metabolic Bone Disease (MBD), and other health and development maladies. Also be sure to spot clean the enclosure for urates, feces, or uneaten food at least twice 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**

***Insectivorous***; In the wild, veiled chameleons are primarily insectivorous, feeding on insects and other invertebrates they can locate and capture using their specialized eye-sight and long sticky tongues. In captivity, feed veiled chameleons a variety of appropriately sized feeder insects such as crickets, roaches, mealworms, superworms, and waxworms. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. Veiled chameleons also require additional calcium and vitamin D3 supplementation 1 to 2 times weekly or as otherwise directed for optimal health and development. This is in order to prevent Metabolic Bone Disease (MBD) and other growth and nutritional deficiencies. Their feeding frequency will depend on the age, size, and overall health of your animal. Food can be given by hand or in a small dish mounted off of the enclosure's floor for arboreal animals. 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**

Veiled chameleons will generally not tolerate frequent handling, and it should be kept to low levels. Should a chameleon be handled, it is important to remember to not forcefully pick up the animal, which may lead to further stress and/or injury. Allow a chameleon to walk onto your hands or gently coax them to do so if possible. Generally, chameleons are better suited as display animals.

**\*\*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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