Aurora ANIMAL + HOSPITAL
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Veiled Chameleon Care

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Brief Description:

The veiled chameleon (Chamaeleo calyptratus) is a very common species in the pet trade with widely spread captive populations. Native to the Arabian Peninsula it is a common myth is that this species does not need much water or humidity as it is from a desert region, but this is not true; this species inhabits the greenest area of the peninsula where the climate is subtropical to tropical. The veiled chameleon is a large species with an average adult length of 18”-24” (45-70cm). They are well known for their prominent casque (crest on top of the head). Males have a much larger casque and a distinct pattern of green, brown, and yellow barring. Females and juveniles are primarily solid green with some yellow spots and stripes. While uncommon, there are several veiled chameleon morphs that include hypermelanisitc and hypomelanistic (translucent) mutations.

Difficulty: Chameleons in general are not beginner animals but veiled chameleons are considered one of the best beginner species in the hobby with large, stable captive populations relative to other species. They are relatively easy to breed as well.

Behavior:
Like most chameleon species veiled chameleons are tree-dwelling reptiles that are active only during the day. Veiled chameleons are very territorial and don’t tolerate the presence of other chameleons in close proximity, not even a mate therefore must be housed alone. When threatened they will frequently change color and inflate their body to appear larger and may hiss or bite. Some also display the unique ability to vibrate or buzz when frightened, which is an attempt to intimidate other chameleons, predators, or even an insect bothering them. Contrary to popular belief, chameleons don’t change color in a direct attempt to match their background. Their color changes are influenced most by their state of health, emotions or level of stress, and the process of thermoregulation. Pet chameleons are stressed by frequent interaction and should not be handled regularly. Some veileds tolerate occasional handling and even hand-feeding, while many don’t and can be quite aggressive towards people.

Lifespan:
With proper husbandry veiled chameleons can live 5-7 years on average.

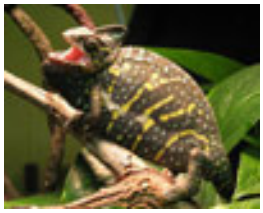
Identification:
Male veiled chameleons have a more prominent and ornately patterned casque compared to females. They also have a noticeable tarsal spur (bump on the back of the hind feet) that females lack, making sexing of this species easy to verify at any age.

Adult Male

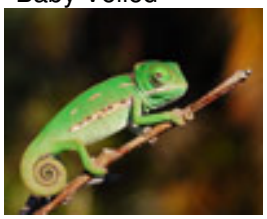
Male Tarsal Spur

Adult Female

Gravid Female



Baby Veiled



Cage Size:
In general when housing chameleons, bigger is better. Veiled chameleons are territorial and easily stressed by the presence of other chameleons, even of their own species. Two or more veiled chameleons should never be kept in the same cage (not even male and female pairs). Cages should be furnished with many plants and climbing branches to provide opportunities for exercise and plenty of places for hiding. Substrate (mulch, soil, etc.) should not be used in chameleon cages except for females to lay eggs.

Screen cage (length x width x height):
juveniles/sub-adults : 16x16x30" (40x40x76cm)
adult female minimum: 18x18x36" (45x45x90cm)
adult male minimum: 24x24x48" (60x60x120cm)

Temperature:
Baby/juvenile (<9 months) and adult females: ambient 72-80 degrees, basking 85 degrees
Adult males: ambient 75-80 degrees, basking 90-95 degrees

Ambient temperature refers to the temperature near the bottom of the cage and basking temperature refers to the hottest point accessible to your chameleon. Basking is where a chameleon absorbs heat from an external overhead source to help regulate their body temperature; it also promotes proper digestion and a healthy metabolism. Nighttime temperatures can safely drop down to 60 degrees so a night heat source should not be used unless temperatures are lower than this. If night heat is needed a ceramic heat emitter or space heater should be used, not a light bulb, even red or black bulbs.

Food & Nutrition:
Veiled chameleons are insectivores meaning they should only be fed live insects. Great feeder insects include crickets, silkworms, hornworms, butterworms, dubia roaches and superworms. Waxworms and mealworms are high in fat content and harder to digest so should only be used on occasion. The rule of thumb is to not feed insects that are longer than the width of your chameleon's head.

Neonates: as many small crickets as they can eat in 10 minutes
Juveniles 3-12 months of age: 10-12 small/medium crickets every day
Adults over 12 months of age: 7-10 medium-large crickets every other day

Chameleons should be fed in the first half of the day to give them time to bask and digest their food properly. Crickets need to be properly gutloaded with calcium rich vegetables (like mustard greens, turnip greens, dandelions, etc) several hours before being fed to your chameleon. Inadequate dietary calcium leads to metabolic bone disease, a very serious illness.

Gutloading:
Gutloading is the process of feeding crickets, superworms, and/or dubia roaches a nutritious diet so they can ultimately provide your reptile with the proper nutrients it requires as it would in nature. Supplementing with a calcium and multivitamin powder is important, but not sufficient alone.

Creating a well-rounded gutload at home can seem daunting but can actually be fairly inexpensive and easy to make! Each time you go to the store get one or two staple vegetables on the list, then rotate them for something else next time. Make sure you wash all produce to eliminate pesticide residues and cut off the peel of fruits and vegetables as they have waxes and pesticides you can't wash off. The time from feeding insects, to your reptile eating those insects, should be 6-24 hours, and gutloading must be done before every feeding to be successful.

Staple Ingredients (Highest in calcium and other nutrients)					
					
Collard Greens	Turnip Greens	Mustard Greens	Escarole	Endive	Dandelion

Good Ingredients (Use as supplements to staples listed above)					
					
Sweet Potato	Papaya	Kale	Butternut Squash	Berries	Mango
Commercial gutloads: Repashy Superload, Cricket Crack, Super Chow					

Avoid These Ingredients (Low in calcium and/or high in phosphorus, oxalates, goitrogens)
Idaho potatoes, cabbage, iceberg lettuce, spinach, broccoli, tomatoes, corn, grains, beans, bread, cereal, meat, eggs, dog food, cat food, fish food, canned or dried insects, vertebrates (pinkies, lizards). While convenient, some commercially available gutloads (Farms Orange Cubes, Fluker Farms High Calcium Cricket Diet, Nature Zone Cricket Bites) are low in calcium, imbalanced and/or insufficient for good nutrition.

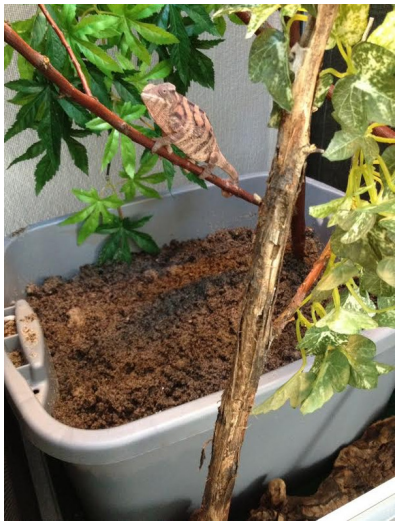
Supplementation:
Feeder insects should be lightly dusted with powdered supplement before being fed to your chameleon. Many keepers successfully use calcium (without D3 or phosphorus) at nearly every feeding, multivitamin (like Repashy Calcium Plus) once every 2 weeks. Adult males over 2 years of age can reduce calcium dustings to once weekly.

Lighting:
All lighting and heat bulbs should be outside and on top of the cage. Chameleons MUST have UVB light to survive and a lack of UVB will lead to Metabolic Bone Disease, severe deformation, and death. A commercially available UVB bulb is necessary as UVB does not penetrate glass or plastic so having the cage near a window does not work. Look for UVB listed specifically on retail packaging before buying. *After about 6 months of use most bulbs will stop emitting adequate levels of UVB, even though they are still shining, so it's important to change the bulb every 6 months.*

There will need to be a separate heat bulb for basking, preferably white light not red or black. When choosing a basking bulb start with a 60watt bulb and monitor temperature closely. Higher wattage bulbs are hotter in temperature and vice versa so chose the appropriate wattage bulb based on the temperatures achieved. A bulb that makes it too hot can burn your chameleon badly even from several inches away and through the screen.

Humidity & Hydration:
Humidity is an important aspect of chameleon husbandry. Veiled chameleons require levels around 60-80%, which can be achieved by several misting sessions a day over all areas of the cage, cool mist humidifier, or timer-controlled misting system. This raises relative humidity as well as stimulates your chameleon to want to drink. Water can be provided by means of a dripper (not a waterfall or water bowl). The dripper should be placed on top of the cage so that the water droplets drip down and accumulate on plant leaves. Chameleons do not generally recognize standing water as a drinking source. Live plants help increase and maintain humidity.

Female Chameleons - Egg Laying
Chameleons do not need to be mated or even have seen a male to develop eggs. Even if you only have a single female chameleon since she was a baby it will be critical to provide her a place to lay eggs because egg binding (being unable to lay eggs) is fatal. Veiled chameleons can start to develop eggs as early as 4-6 months of age. However, it is highly recommended not to breed your chameleon until the female is at least a year of age so she is mature and can dedicate calcium stores to eggs instead of stripping it from her own growing bones. A receptive female will often display blue spots on the body, but not always. A clutch can contain on average 20-70 eggs and fertile or infertile makes no difference on size of clutch or whether or not the female will have trouble laying them. Females can lay 1-3 clutches per year on average, during any season. A single breeding may produce several clutches from the same pairing due to sperm retention by the female. Egg laying is a big strain on the female's body and heavy breeding can shorten life span. Extra calcium should be given to gravid females to keep up with the need of making eggshells. A female that is unable to lay her eggs for environmental, nutritional or medical reasons causes a serious condition of egg-binding, or being eggbound. This is a medical emergency and will be fatal if not treated. Over feeding can cause complications with egg laying and larger clutch sizes, making them more prone to becoming eggbound.



A female over 6 months of age should always have a laying bin available. The laying bin should be at least 16x16x16" with depth of substrate of at least 12" being crucial. The egg laying substrate should be either washed playsand or a mixture of washed play sand and organic soil moistened so that a tunnel retains its shape and does not collapse. There should be one or several branches going into the laying bin so that the female can crawl in and out as desired. A female about to lay eggs will often become restless, pace her cage and make decrease or stop eating in the week before. Once a female enters the laying bin she may dig several test holes before choosing to lay eggs. They dig head first to make the tunnel and then back into the tunnel to lay their eggs before covering the tunnel completely. It is absolutely critical to give a chameleon complete privacy while she is in the laying bin. If she is disturbed she may abandon her tunnel and could be become eggbound. It can take several hours up to several days to lay eggs. A female that is weak, very uncomfortable, or refuses to use a laying bin may need veterinary assistance immediately. After a female lays eggs is it is very important to give her at least a week of minimal stress, increased hydration and calcium-rich food to recuperate.

For more information on Lighting, Cage Setup, Nutrition, Humidity, Health and other questions visit http://www.chameleonforums.com/care/chameleons/