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Pygmy or Leaf Chameleons (*Brookesia* spp.), (*Rieppelon* spp.), and (*Rhampholeon* spp.)

Living Leaves of Madagascar and Mainland Africa!

Also known as the Pygmy chameleons, or the “stump-tailed” chameleons, the African leaf chameleons consist of several genera and species generally known to be among the smallest chameleon species, and even lizard species, in the world! With most species being found within very small geographic home ranges throughout central to eastern Africa, and/or Madagascar depending upon the species, these small and unique chameleons can range in color from brownish, to grayish brown, or greenish-brown, with short, prehensile tails, and highly fringed appearances which give them the strong resemblance to dead and dried leaves or other vegetation on or near the forest floor. With most species being primarily terrestrial to slightly arboreal, these fun and unique chameleon species can be fairly simple and enjoyable species to maintain in the vivarium by the intermediate to moderate level enthusiast!

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 possesses 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
Subfamily: Brookesiinae
Genus: Brookesia
Species: *Brookesia spp.* *
**Taxonomy subject to change and revision.*

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Genus: Rippeleon
Species: *Rippeleon spp.* *
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Species: *Rhampholeon spp.* *
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Genera and Species and Distribution and Habitat

The “pygmy” or dwarf chameleons consist of several different genera and species, with range being largely dependent upon the genus and/or species. The genus *Brookesia* occurs on the island of Madagascar from dry deciduous forests, woodlands, and savannah to northern rainforests, and consists of approximately 31 species. The most commonly encountered species in the hobby and trade have included *B. stumpffi*, *B. superciliaris*, *B. thieli*, and *B. perarmata*. The genus *Rippeleon* is a smaller, mainland genus of about 3 or 4 species ranging from eastern Usambara and Uluguru, to northeastern Tanzania and Kenya. The Bearded Pygmy Chameleon, or *R. brevicaudatus* is perhaps the most commonly seen species. The genus *Rhampholeon* consists of about 19 species found in central to eastern Africa, and the DR Congo.

Lifespan and Longevity

Although they are relatively short lived species, if provided the proper care, pygmy chameleon species can attain longevity of at least 1 to 3 years on average in captivity.

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Conservation Status

Conservation status dependent upon the species. Some species are IUCN Least Concern (LC). Some are IUCN Near Threatened (NT), Conservation Dependent (CD), Vulnerable (VU), Endangered (EN), to Critically Endangered (CE). Some Not Evaluated for the IUCN Red List (NE) or otherwise Data Deficient (DD).

Legal and Regulatory Status(*Subject to Change)

Brookesia perarmata are CITES Appendix I as of October 2017. Brookesia spp. are CITES Appendix II (Except the species included in Appendix I) as of October 2017. Palleon spp. are CITES Appendix II as of October 2017. Rhampholeon spp. are CITES Appendix II as of October 2017. Rieppeleon 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

Most of the pygmy chameleon genera and species, as their common names imply, are small, minute species, ranging anywhere from 1 ½ to up to 4 inches in the largest species. Pygmy chameleons very seldom exceed these sizes.

Housing and Enclosure

Housing must be sealed, well ventilated, and escape proof. A 10 gallon tall or similar enclosure can be used to house an individual to trio of these chameleons, but be sure to not use too large of enclosures or overcrowd them, as they can become stressed and have greater difficulty finding their food. Some of the larger species may be maintained in a 15 to 20 gallon tall or similar enclosure. Glass or screen enclosures can be used depending on your household's ambient temperature and humidity. Providing floor space will be more important for these chameleons than height, and substrates that can be provided can include cypress mulch, sphagnum moss, chemical and pesticide free potting soils, or coconut fiber. Pygmy chameleons are specialized lizards that also require and benefit from 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

Provide a full spectrum lighting and temperature gradient for pygmy chameleons from around 75 degrees F to about 85 degrees F. Use an infrared night time bulb to create nighttime temperature gradients of 75 to 85 degrees F but do not exceed 85 degrees F or so for prolonged periods of time. Different genera and species of pygmy chameleons may have differing temperature, humidity, and lighting requirements, and some may be more tolerant or less tolerant than others. 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 these 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

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needs, as well as those of one's animals can be given as well.

Feeding, Diet, and Nutrition

Insectivorous; In the wild, pygmy 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 pygmy 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. Panther 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

As with most chameleons, pygmy 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. These species' small size, and shy, delicate nature should also be considered if or when handling them as well.

****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

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