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Knob Tailed Geckos (*Nephurus spp.*)

Australian “Carrot Tails”

Knob tailed geckos are a genus of mainly terrestrial, nocturnal geckos with very unique tails! They are relatively small to medium sized geckos that can vary greatly in coloration and appearance, ranging in color from light to dark brown, pinkish, orangish, reddish to reddish brown, bluish, to bluish gray. Most species can be characterized by their large heads and eyes, and short, carrot shaped tails ending in a bulbous knob, hence their common name. As with several other species of geckos found elsewhere in the world, knob tailed geckos use their thick fleshy tails to store fat during prolonged dry periods. Their tails can also be lost through caudal autotomy as a means of startling and/or distracting predators long enough for the gecko to escape. Within several weeks to months, a new tail will then regrow, but will remain somewhat more vestigial and limited in function. As with many other geckos, knob tail geckos are also able to vocalize by creating squeaking or clicking sounds when they are defensive, handled, or become territorial. Commonly kept species include the Rough scaled or Centralian (*N. amya*), Banded (*N. wheeleri*), and Smooth scaled (*N. laevis*) knob tailed geckos. Knob tailed geckos are still fairly new to the pet industry, but can make for very personable and enjoyable geckos to maintain overall.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Squamata

Suborder: Lacertilia

Infraorder: Gekkota

Family: Carphodactylidae

Subfamily: Diplodactylinae

Genus: *Nephurus*

Species: *Nephurus spp.**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

Longevity in captivity is still not widely known, but if provided the proper care, knob tailed geckos have the potential to attain longevity of 8 to 10 years or more.

Distribution and Habitat

Knob tailed geckos are a unique genus of small to medium sized, terrestrial geckos indigenous to Australia to New Guinea. More specifically, and depending upon the species, these geckos can occur from Western Australia, through the Northern Territory, through central Australia to South Australia, and into Queensland. Within this range, knob tailed geckos occupy primarily terrestrial environments including dry, arid to semi-arid and/or rocky grasslands, scrublands, open forests and savannahs, dunes, and semi-deserts, where they shelter during the day underneath rocks, other debris, or in burrows.

Origin/History

Nephurus spp. Günther, 1876. Specific species of *Nephurus* would have other authors first describing them during other years.

Several species and subspecies of knob-tailed geckos (namely *Nephurus amya*, *N. wheeleri*, *N. levis* and *N. milii*) have been in captivity for years, although it is not known exactly when these geckos may have been first kept or imported. They were rarely found in most pet stores, although reptile specialty stores on occasion, and private breeders and enthusiasts would begin to more commonly breed these geckos.

Experience Level Required

Intermediate/Moderate.

Size

Knob tailed geckos are fairly small to medium sized geckos that typically are from 4.0 to 5.5 inches in snout-to-tail length as adults depending on the species. Maximum snout-to-vent length ranges from about 3.6 to 5.3 inches snout-to-vent length (SVL) depending on the species.

Housing and Enclosure

Enclosure System: Primarily Terrestrial. Housing must be sealed and escape proof. Hatchling knob tailed geckos can be housed in a 5 to 10 gallon or similar sized terrarium or enclosure, while adults will require at least a 10 to 20 gallon long enclosure. These active, nocturnal to crepuscular geckos are primarily terrestrial, and floor space is more important than height. Provide a substrate that holds humidity reasonably well but is not readily ingestible such as play sand mixtures, crushed walnut shells, or natural bark substrates. Provide a hide box and artificial foliage, driftwood, rocks, or logs for ample basking and hiding opportunities. For moisture, provide a small bowl or dish of fresh water two to three times per week and mist once to twice weekly.

Temperature, Lighting, and Humidity

Create a thermal gradient, or a warm side in the enclosure, and consider that the ideal temperatures for knob tailed geckos range from 75 to 80 degrees F on the cool side and 85 to 90 degrees F on the warm, basking side. Specific temperature and humidity requirements may also vary slightly depending on the species or subspecies of knob tailed geckos being kept. These geckos are primarily nocturnal to crepuscular, and typically do not require overhead UVA/UVB or additional lighting, although providing it in moderated amounts can be greatly beneficial for their health, immune system, and overall wellness. For any supplemental heating that may be needed, use a low wattage incandescent or UVA/UVB bulb, radiant or ceramic heat emitter, or UTH (under tank heating element). 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. Knob tailed geckos should be maintained at relative humidity levels of 30 to 40%, which can vary somewhat depending on the exact species. A humid hide is also strongly recommended with these species.

Feeding, Diet, and Nutrition

Primarily Insectivorous; In the wild, knob tailed geckos are primarily insectivorous, meaning they eat insects and other invertebrates. In captivity, feed knob tailed geckos a variety of appropriately sized feeder insects such as crickets, roaches, mealworms, superworms, fruit fly cultures, or waxworms. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. These geckos 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. These geckos will also eat several of the commercially available meal replacement powders such as crested gecko diets two to three times weekly. Their overall feeding frequency will 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

Many knob tailed geckos will tolerate some levels of handling, but are generally not as hardy or handleable of a gecko species as some other commonly kept species are. Handle your gecko gently and deliberately, but do not drop or injure the animal. Some species may drop their tails if overly stressed or threatened. Do not grab your gecko by its tail or it may detach if they perceive you as a predator or threat. Knob tails may also "bark" or emit other vocalizations when agitated or threatened as well. Allow knob tails to walk in between or from hand to hand as a way of best handling them.

****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

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