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Dwarf Day Geckos (*Lygodactylus spp.*)

Hard to Come by Electric Blue Beauties

Dwarf day geckos are a genus of small, arboreal geckos with other common names that include the turquoise dwarf day gecko, William's dwarf day gecko, and electric blue dwarf day gecko. Of these, the Electric Blue Day Gecko (*Lygodactylus williamsi*) is perhaps the most sought after, and commonly kept and bred species in herpetoculture. This is a small, diminutive gecko species, with females and juveniles being a bronze, to brown, or light green with few to no dark striping on their throats. Males are the most vibrantly colored, and can range from black, grayish, to vibrant blue or turquoise with dark throat striping. The electric blue day gecko is a Critically Endangered species (CR) that is threatened by habitat loss, poaching and habitat encroachment, and unlawful collection and importation. Increased captive husbandry and breeding efforts for this species, as well as their plight in their natural ranges, are needed as a way to curb the illegal collection and importation of this species.

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: Gekkonidae

Subfamily: Gekkoninae

Genus: *Lygodactylus*

Species: *Lygodactylus spp.**

*Taxonomy subject to change and revision.

Lifespan and Longevity

If provided the proper care, dwarf day geckos can attain longevity of 5 to 10 years or more in captivity.

Distribution and Habitat

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The electric blue day gecko is endemic only to Tanzania's Kimboza and Ruvu Forest, where they are found only within a very small area of less than 5 square miles. This species is also found only on or within Pandanus trees within this range. Other species of dwarf geckos from the genus *Lygodactylus* can also occur on Madagascar and many countries of mainland Africa, each depending on the range and distribution of the 60 species within this genus. Two species, however, are also endemic to South America as well, where these species may occur from Brazil, northern Paraguay, to eastern Bolivia. Within this range, these species of dwarf geckos occupy primarily arboreal to semi-arboreal environments, where different species may occupy different habitats, niches, and elevations. Generally, however, most dwarf day gecko species occur in, and seek shelter in coconut palms and other high trees of tropical to sub-tropical forests and woodlands, as well as in and around human habitations and suburban areas, and agricultural plantations.

Conservation Status

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

Legal and Regulatory Status(*Subject to Change)

Lygodactylus williamsi is CITES Appendix I as of October 2017. Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

Experience Level Required

Intermediate/Moderate to Advanced.

Size

Dwarf day geckos are small geckos, which very seldom exceed 2 to 3 ½ inches as adults depending on the species.

Housing and Enclosure

Housing must be sealed and escape proof. Despite their diminutive size, these geckos require relatively large, sufficiently sized front opening arboreal screen or glass enclosures. For a single gecko, an arboreal enclosure that is about 20 gallons tall is recommended. Add height or vertical space for pairs or subsequent geckos; for a pair. Substrate for dwarf day geckos can include peat moss or non-toxic top-soil, natural peat moss, cypress mulch, or sphagnum fir mixtures. In a more naturalistic vivarium or setup, hydroton balls should be used for drainage, polyfoam to act as a divider between the drainage and plated layers, and the above substrates or similar for topsoil. These geckos do best in a naturalistic enclosure with ample hides, climbing opportunities, and retreats including microhabitats that very closely replicate the conditions these geckos live in in their natural ranges. Live or artificial plants, rocks, branches, vertical cork bark, and/or logs for ample basking, climbing, and hiding opportunities are recommended. Live plants can also help maintain adequate levels of humidity and moisture that these geckos require. Adequate humidity levels, as well as a small shallow dish of fresh water for hydration, is also recommended when keeping these geckos. Manual and/or an automatic misting or fogging system every other day can also maintain adequate humidity levels.

Temperature, Lighting, and Humidity

These geckos are primarily diurnal, and will also require large amounts of the correct lighting

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and UVA/UVB, as well as a thermal gradient and regular misting in the enclosure. For lighting, compact florescent strip lighting, along with a basking, mercury vapor, or halogen bulb of appropriate wattage, depending on the size of the enclosure, can be used. Create a thermal gradient, or a warm side, in the cage/enclosure with an appropriate incandescent bulb for a basking area of around 90 to 95 degrees F and a cooler area of around 70 to 80 degrees F. Nighttime temperatures can be permitted to drop below 70 degrees F, but an infrared nighttime bulb should still be used to maintain conditions at around 70 to 75 degrees F. Access to natural sunlight, although not required, is also beneficial for these geckos. Maintain humidity levels at around 60 to 80% overall. 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 Microphagous to Frugivorous; In the wild, dwarf day geckos are insectivorous to frugivorous, meaning they will eat insects and other invertebrates as well as fruit and vegetable matter. Many species are also microphagous, meaning they will also eat tiny insects and other invertebrates as well. In captivity, many commercially available fruit based diets are available that contain many of the essential nutrients, vitamins, and minerals required for their optimal health and nutrition. These diets are quite simple to use and prepare for your animal(s) as instructed. Feeder crickets, roaches, superworms, waxworms, mealworms, and microfauna such as isopods, springtails, and fruit fly cultures or other small insects of appropriate size can also be given depending on the species, but should be no larger than the animal's snout to eye. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. Food should be offered in a small dish mounted off of the enclosure's floor, particularly for largely arboreal species that seldom come to the enclosure floor. Be sure that calcium and vitamin D3 supplementation needs are still being met with any diets used 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. 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

Dwarf day geckos are small, fragile geckos will not tolerate frequent handling, and have soft, delicate skin that can easily be torn or injured, and therefore, handling should be kept to a minimum. These geckos are better suited and viewing or display animals rather than be handled. With time, patience, and regular interaction, however, some specimens can become quite bold and accustomed to small amounts of handling and interaction.

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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