



*Photo Credit: DeviantArt

Day Geckos (*Phelsuma* spp.)

Charismatic and Famous Geckos

Day Geckos are small to large, colorful arboreal geckos consisting of over 70 known species which can be quite variable in color and appearance depending on species. They can be insectivorous to frugivorous species (feeding on fruit and vegetable matter, as well as honey, nectar, and pollens). Most, however, have vibrant green, blue, red, or orange coloration, and well defined toe pads which they use to climb and adhere to many different surfaces. These toe pads are lined with pads known as lamellae, and millions of microscopic hairs known as setae that use van der Waals forces. Unlike most other species of geckos, day geckos are primarily a diurnal species (active during the day) and lack eye lids, using their tongues instead for eye cleaning. Madagascar day geckos are an iconic species of gecko that is widely associated with tropical to sub-tropical, exotic locations and environments, and is likely the genus of geckos which has inspired the popular talking Geico gecko appearing in many different TV commercials, and other media promotions.

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: *Phelsuma*

Species: *Phelsuma* spp.*

*Taxonomy subject to change and revision.

Lifespan and Longevity

If provided the proper care, Madagascar day geckos can attain longevity of 8 to 12 years or more.

Distribution and Habitat

Day geckos are a large genus of relatively small to large, delicate scaled arboreal geckos with a fairly wide distribution over much of the southern to southwestern portions of the Indian Ocean.

Most species are indigenous to Mauritius and the Island of Madagascar near the southeastern coast of Africa, although a few species are also indigenous to the Andaman Islands of southern to southeastern Asia, as well as the eastern mainland coast of Africa, namely Tanzania. Within this range, day geckos occupy primarily arboreal environments, where different species may occupy different habitats, niches, and elevations. Generally, however, most 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.

Origin/History

Phelsuma spp. Gray, 1825. Different species and subspecies would be described first by other authors during other years.

Day Geckos (and most of the other small diurnal geckos) were imported in some numbers in the 1980s and early 1990s when Madagascar allowed for the exporting large numbers of its herptile species. Luckily, there has been a dedicated group of gecko breeders who have specialized in these beautiful lizards since these early times, and captive-hatched specimens are available at larger reptile shows, pet stores, and online (Timberline 2023). Day geckos from the genus *Phelsuma* spp. were also the most likely inspiration for the popular British-speaking “Geico” gecko seen in many television advertisements also beginning in the 1990’s.

Experience Level Required

Intermediate/Moderate to Advanced.

Size

Madagascar day geckos can vary in size depending upon the species, with members of this genus ranging from 2.5 to 12.0 inches in total snout-to-tail length. Maximum snout-to-vent lengths depend greatly on the exact species as well, but range from about 1.2 to 8.5 inches snout-to-vent length for the largest species (SVL).

Housing and Enclosure

Enclosure System: Primarily Arboreal. Housing must be sealed and escape proof, and the size of the enclosure recommended will depend on the age, species, and size of the gecko. For hatchlings up to 6 months or so, a 5 gallon tall aquarium, terrarium, or similar enclosure is recommended. Once a gecko reaches or exceeds six months or so, an approximately 18” x 18” x 24” tall terrarium or enclosure should be used depending upon the species. All species of day geckos are arboreal, and height is more important than floor space. Provide plenty of live or artificial plants, branches, cork bark, or other furnishings for ample climbing and hiding opportunities. Substrates that retain and hold humidity well are recommended, and naturalistic substrates can include sphagnum moss and fir shavings, natural moss, or similar substrates. To maintain humidity and hydration, daily or regular misting is necessary. They will drink the condensation from the enclosure’s furnishings and walls, and a small water dish can also be provided, and must be kept clean, but will usually be seldom used.

Temperature, Lighting, and Humidity

Day geckos are primarily diurnal, and will also require the proper UVA/UVB lighting and a thermal gradient and regular misting in the enclosure for their optimal health and well-being. Create a thermal gradient, or a warm side in the enclosure with an appropriate incandescent bulb for a basking area of around 90 to 95 degrees F and a cooler area of around 80 to 86 degrees F. Nighttime temperatures can be permitted to drop to around 75 degrees F. Access to natural sunlight, although not required, is also beneficial for these geckos. 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. Day geckos require moderate to high levels of relative humidity, which should be at, or within 55 to 65%, although this may vary somewhat with the exact species.

Feeding, Diet, and Nutrition

Insectivorous to Microphagous to Frugivorous; In the wild, day geckos are insectivorous to frugivorous, meaning they will eat insects and other invertebrates as well as fruit and vegetable matter. Some 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, butterworms, 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

Most day geckos will not tolerate frequent handling, as they are soft and delicately thin-skinned geckos which can easily be torn or injured. Therefore, handling should be kept to a minimum. These geckos are better left viewed rather than handled. Many can become quite bold and accustomed to being fed or otherwise being around humans, however.

****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:

Eric.S.Roscoe@gmail.com

Disclaimer: Note that the information provided in these, or any care sheets, are not intended to be all-exhaustive, and further research and care should always be sought and provided when it comes to any species one may prospectively be interested in. These care sheets are also not intended to serve as substitutes for professional veterinary medical care and husbandry should any animal require it. Always seek proper and professional veterinary care for any animal should the need arise, and be prepared ahead of time for any and all husbandry costs and expenses that may occur with any animal beyond the initial purchase. Any animal owned is ultimately a matter of personal/individual care and responsibility. We cannot make any claims or guarantees regarding any information in this care sheet therein. This care sheet may be reprinted or redistributed only in its entirety.

Appendix: Full List of Phelsuma Species and Subspecies:

- Phelsuma abbotti
 - P. abbotti abbotti- Aldabra Island Day Gecko
 - P. abbotti chekei- Cheke's Day Gecko
 - P. abbotti sumptio- Assumption Island Day Gecko
- Phelsuma andamanensis- Andaman Islands Day Gecko
- Phelsuma astriata- Seychelles Day Gecko
 - P. astriata astovei
 - P. astriata astriata-Seychelles Small Day Gecko
 - P. astriata semicarinata
- Phelsuma barbouri- Barbour's Day Gecko
- Phelsuma berghofi
- Phelsuma borai
- Phelsuma borbonica
 - P. borbonica agalegae- Agalega Day Gecko
 - P. borbonica borbonica- Reunion Island Day Gecko
 - P. borbonica mater
- Phelsuma breviceps
- Phelsuma cepedianana- Blue Tailed Day Gecko
- Phelsuma comorensis
- Phelsuma dorsivittata
- Phelsuma dubia- Zanzibar Island Day Gecko
- Phelsuma edwardnewtoni- Rodrigues Day Gecko (Extinct)
- Phelsuma flavigularis- Yellow-Throated Day Gecko
- Phelsuma gigas- Rodrigues Giant Day Gecko (Extinct)
- Phelsuma gouldi
- Phelsuma grandis- Madagascar Giant Day Gecko
- Phelsuma guentheri- Round Island Day Gecko
- Phelsuma guimbeaui-Orange Spotted/Mauritius Lowland Forest Day Gecko
- Phelsuma guttata- Speckled Day Gecko
- Phelsuma hielscheri
- Phelsuma hoeschi
- Phelsuma inexpectata-Reunion Island Ornate Day Gecko
- Phelsuma kely
- Phelsuma klemmeri- Yellow-headed Day Gecko
- Phelsuma kochi
- Phelsuma laticauda-Broad-tailed Day Gecko
 - P. laticauda angularis
 - P. laticauda laticauda-Gold Dust Day Gecko
- Phelsuma lineata
 - P. lineata bombetokensis
 - P. lineata elanthana
 - P. lineata lineata
 - P. lineata punctulata
- Phelsuma madagascariensis
 - P. madagascariensis boehmei- Boehme's Giant Day Gecko
 - P. madagascariensis madagascariensis-Madagascar Day Gecko
- Phelsuma malamakibo
- Phelsuma masohoala

- Phelsuma modesta-Modest Day Gecko
 - P. modesta leiogaster
 - P. modesta modesta
- Phelsuma mutabilis- Thickettail Day Gecko
- Phelsuma nigristriata-Island Day Gecko
- Phelsuma ornata- Mauritius Ornate Day Gecko
- Phelsuma parkeri- Pemba Island Day Gecko
- Phelsuma parva
- Phelsuma pasteurii- Pasteur's Day Gecko
- Phelsuma pronki
- Phelsuma pusilla
 - P. pusilla hallmanni-Hallmann's Day Gecko
 - P. pusilla pusilla
- Phelsuma quadriocellata-Peacock Day Gecko
 - P. quadriocellata quadriocellata-Four Spotted Day Gecko
 - P. quadriocellata bimaculata
 - P. quadriocellata lepida
- Phelsuma ravenala
- Phelsuma robertmertensi- Robert Merten's Day Gecko
- Phelsuma roesleri
- Phelsuma rosagularis- Mauritius Upland Forest Day Gecko
- Phelsuma seippi- Seipp's Day Gecko
- Phelsuma serraticauda-Flat Tailed Day Gecko
- Phelsuma standingi-Standing's Day Gecko
- Phelsuma sundbergi- Praslin Island Day Gecko
 - Phelsuma sundbergi ladiguensis- La Digue Day Gecko
 - Phelsuma sundbergi longinsulae- Mahe Day Gecko
 - Phelsuma sundbergi sundbergi-Seychelles Giant Day Gecko
- Phelsuma vanheygeni
- Phelsuma v-nigra- Indian Day Gecko
 - Phelsuma v-nigra anjouanensis- Anjouan Island Day Gecko
 - Phelsuma v-nigra comoraegrandensis- Grand Comoro Day Gecko
 - Phelsuma v-nigra v-nigra