

# *Phelsuma madagascariensis boehmei*

*Phelsuma  
madagascariensis  
boehmei*  
male

Text and photos by

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*Phelsuma  
madagascariensis  
boehmei* male

## The Madagascar Day Gecko



*Phelsuma madagascariensis* Gray, 1831, comprises four subspecies: *P. m. madagascariensis*, *P. m. grandis*, *P. m. kochi*, and *P. m. boehmei*. Commonly called Madagascar day geckos, three of these subspecies are considered very easy to keep and perfect for beginning hobbyists — the exception is *P. m. boehmei*. In the wild, this last subspecies lives at higher elevations than the others, where temperature and humidity fluctuations are greater, and more difficult to duplicate in captivity.

### Distribution and habitat

*Phelsuma madagascariensis boehmei* Meier, 1982, was first described from specimens in the Périnet (Andasibe) region of central-eastern Madagascar, and has since been also found at Ranomafana and Lohariandava. It lives at elevations of 800–1,200 metres above sea level, where average temperatures vary greatly through the year: from 14°C (57°F) during the coldest month to 22°C (72°F) during the warmest month. Although daytime temperatures are relatively constant year-round, nighttime temperatures drop considerably in winter.



*Phelsuma  
madagascariensis  
boehmei*  
male



*madagascariensis*) and the walls of abandoned buildings. They are often found singly, not in groups as are other *Phelsuma* species.

### Description

I visited the area in March and April of 2000. At that time, temperatures in the early morning (8 a.m.) were 8–10°C (46–50°F), but quickly increased to about 27°C (81°F), as the sun came up. As temperatures rose, relative humidity dropped, reaching a low of about 60 percent by noon. By 10 p.m., humidity had risen again to 90–96 percent.

The vegetation in the area is mainly primary rainforest. Unfortunately these forests are getting smaller and smaller each year on Madagascar because of human impact. *P. m. boehmei* was probably once distributed through most of eastern Madagascar. The Périnet region has three national parks, but unfortunately even these areas are not really safe for fauna and flora. I learned that the nickname of the region is “center of the pet trade.”

*P. m. boehmei* is usually found on the trunks of the largest trees. Sometimes they are also found on traveller’s palms (*Ravanela*

*P. madagascariensis* is one of the larger species of the genus. *P. m. boehmei* reaches 22–24 centimetres in total length, with a snout-vent length of 11–12 centimetres. The background colour is bright green, but can sometimes be bluish, mainly on the sides and the tail. The body is covered with red spots that sometimes form a stripe from the neck to behind the forelegs. On the nose there is a red V-shaped marking that sometimes is broken into spots. A red stripe extends from the nose to the eye, continues from behind the eye to the ear, and then crosses the head. There is often a second line across the neck, parallel with the first. The red stripes on the head are different in the other subspecies. The belly is blue-grey.

One very distinct characteristic that clearly distinguishes *P. m. boehmei* from the others is that the skin between the granular scales is almost black; it is much lighter in the other subspecies. These geckos often change colour between lighter and darker shades very quickly, depending on mood and activity.

Hatchling *P. m. boehmei* differ only slightly from adults in coloration. The belly of the hatchling is brownish red, and the underside of the tail is bright red. In contrast, hatchlings of the nominate form, *P. m. madagascariensis*, differ greatly from adults.



*P. m.  
boehmei*  
female with  
numerous scars



Natural habitat of *Phelsuma madagascariensis boehmei* in Madagascar

The hatchling of that subspecies has a yellow belly, and a series of red dorsal crossbands with variable white spots extending from the neck to midbody, and also has red dorsal crossbands along the full length of the tail.

Hatchlings of any of the subspecies vary considerably from one individual to another (mostly in the amount of red), but in all *P. m. madagascariensis*, they have red stripes on the head that are identical to those of the adults of the same subspecies.

### Captive housing

Keeping *P. m. boehmei* is not really too difficult as long as its natural habitat is kept in mind. Being a large species, it needs a slightly bigger terrarium than others. A suitable size for a pair is 50 x 50 x 90 centimetres (LxWxH). For substrate I use bark mulch at a depth of 10 centimetres. I mist this substrate every evening, which helps maintain the necessary high level of humidity through the night.

The decoration in the terrarium should consist of several live plants, and lots of things to climb on (remember, these are arboreal lizards). Suitable plants are sansevierias, bromeliads, and dracaenas, for example. Bamboo stalks are commonly used as climbing branches

for *Phelsuma* species, but you can use other kinds of branches or pieces of wood to create suitable and attractive furnishings for your terrarium. It is important to place one or two branches horizontally and close enough under the lights so the geckos can bask.

Bamboo stalks should have an inside diameter slightly greater than the girth of the geckos. This way they can also serve as places for hiding and egg-laying. Be sure to provide enough hiding places in the terrarium so that each animal has one. Each section of a bamboo stalk can be cut open with a saw to provide an entrance. In addition, if you split the whole thing and tape it back together, it will be easier to remove eggs.

The terrarium should have correct ventilation. The air should circulate, but not so much that the terrarium dries out quickly. Buying a hygrometer to measure humidity is a relatively inexpensive investment in your animal’s well-being. The level of humidity in the terrarium should fluctuate between 60 percent during the day and 90 percent at night.

Lighting the terrarium correctly is very important for keeping any *Phelsuma* successfully. The important parameters are CRI (colour rendering index), UV radiation, kelvin units, and light intensity. I use two

fluorescent bulbs for each terrarium. One has a CRI of 98, and 6,500K. This lamp emits plenty of light that brings out the animals’ best colours, but it does not emit any UVB. Therefore, the other lamp I use is one that does not produce the best light, but emits the necessary UVB for the animals. Together with these lamps, I use a 20-watt halogen spot lamp for basking. Daytime temperatures in the terrarium are 22–26°C (72–79°F) with a hot spot of 30°C (86°F) under the basking light. At night when the lights are off, temperatures drop to about 20°C (68°F).

From February to November, the lights are kept on for 14 hours a day. In December and January, the photoperiod is reduced to 10 hours a day, and the spot lamp is not used. Thus, during this winter period, temperatures reach a daytime maximum of 26°C (79°F), and drop to 15°C (59°F) at night. At these cooler temperatures, females stop

laying eggs and are able to build up fat reserves for the next reproductive season.

### Diet

*P. m. boehmei* can be fed the same diet as all species of the genus. The staple food insect is crickets. Mealworms (*Tenebrio*) and king mealworms (*Zophobas*) should be avoided because they contain too much fat and are difficult to digest.

Other foods such as fruit are also an important part of the diet. You can use all sweet fruits, but the favourites are papaya, banana, peach, and mango. To vary the diet, you can also occasionally offer yoghurt. I feed my animals three times a week: twice with insects and once with fruit. The insects are always dusted with multivitamins before being offered to the lizards.

### Breeding

Kept under these conditions your animals will hopefully breed.

The first eggs usually appear in late March. A clutch normally



*Phelsuma  
madagascariensis  
boehmei*, dorsal view

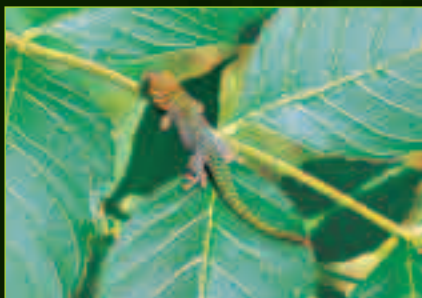




Double clutches of various species of *Phelsuma*.  
From top to bottom:  
*P. madagascariensis ladiguensis*, *P. m. kochi*,  
*P. m. madagascariensis*, *P. sundbergi ladiguensis*,  
*P. astriata astriata*, and *P. pusila pusila*



Male *Phelsuma madagascariensis boehmei*



*Phelsuma madagascariensis boehmei* juvenile



Terrarium setup suitable for *P. m. boehmei*



Row of glass terrariums for *Phelsuma madagascariensis boehmei*

consists of two eggs with fused shells, usually hidden inside bamboo stalks or between the leaves of a sansevieria or other plant. Unlike other species, *P. madagascariensis* females (of any subspecies) do not glue their eggs to the surfaces where they lay them. During a normal season, one female lays 5–7 clutches.

Incubated in an incubator set at 28°C (82°F), eggs hatch in about 55 days. Both eggs of a clutch normally hatch the same day, but they sometimes hatch 1–3 days apart. Hatchlings measure about 55 millimetres in total length. I leave hatchlings in the incubator until after their first shed.

The hatchlings are raised individually in small terrariums kept at the

same temperatures and humidity levels as those for adults. They are no harder to keep than adults, and normally feed and grow without any problems.

Breeders of *P. m. boehmei* have however found one problem. Very few if any male hatchlings have been produced. In my own experience, I have hatched 31 animals over the years, and not one has been a male! This problem is also known in some other species of *Phelsuma*. It is hoped that by trying different incubation conditions a solution to the problem will be discovered.

Since all species of *Phelsuma* are controlled by CITES regulations, and exporting wild-caught animals is permitted with only four species,

we must quickly learn how to produce males in captivity if we are to continue keeping these animals. We no longer can or should rely on wild-caught animals to get breeder animals for our collections. ■

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