

NOTES ON KEEPING AND BREEDING *PHELSUMA LATICAUDA* (THE GOLD DUST OR FLAT TAILED DAY GECKO)

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INTRODUCTION

Gold Dust Geckoes are from the Comoros islands off Madagascar, as well as being introduced to other places including Madagascar itself. They are tropical lizards with an insectivorous diet, supplemented by fruit.

During Easter 1995, I obtained three day geckos from a reptile shop in London. I wanted two females and a male but was unfortunately sent two males and a female - this I suspected quite quickly as the fully grown male would not tolerate one of the "females". "She" has now grown and become as big as him, has obvious femoral pores (always much more obvious than on the female) and is definitely a "him".

It is generally recommended that captive-bred reptiles are best as they are tamer and more accustomed to captivity.

DESCRIPTION

In good light they are like living jewels. They have two horizontal bright red stripes across the top of their fairly blunt snouts up to their beautiful blue almost eye-shadowed eyes which do not have eyelids and are licked clean by their long pink tongue. There is often another red bar just behind the eyes. The posterior dorsal surface of the head and anterior half of the back is powdered with a yellowy-gold. Briefly the back is just green and then there are three bright red, "tear drops" which break up posteriorly into numerous small red spots which spread down the yellowy tail with a hint of green. The underside, which is seen through the sides of the vivarium is white; in males the femoral pores can become yellow with chemical secretions. At night and when nervous or otherwise in an emotional state their colouring can very quickly become pale or bright.

They are unusual in being diurnal geckos; most geckos are nocturnal or at least crepuscular. Normally geckos are fairly drab in appearance due to the need to be camouflaged during the daytime while they are hiding and particularly by the lack of need for coloration at dusk/night. Nocturnal geckos are sometimes quite vociferous which is unusual in lizards, but useful at night. Day geckos' coloration serves to camouflage them pretty well and is also useful for courtship rituals. The fact that both sexes are equally colourful indicating a lack in obvious physical sexual dimorphism indicates that other factors play a more major role in courtship and sexual attraction, probably chemical and behavioural. It may also indicate that both males and females compete with each other for partners. Generally males compete for females in animal species when the female looks after the eggs or young; females may compete for males if the males look after the young. The fact that the colour is displayed during courtship must indicate that it is of some importance. Day geckos can vocalise, but it is probably less developed than many non-diurnal day geckos.

Their total length when adult is approximately 13 cm, about half being tail. The females are a little smaller and develop "jowls" (endolymphatic glands) just behind the eyes if fed with enough calcium.

CARE AND FEEDING

In a reasonably warm room the heating and lighting can be turned off at night. If the temperature goes down too low a heater with a thermostat needs arranging. Temperatures of 25-30 °C for day time and a slight drop at night or 26-32 °C are recommended. Personally I find a drop to around 15 °C at night causes no ill effects.

I feed them mainly on crickets and waxworms dusted with calcium and vitamins. They will eat mealworms, but this is not recommended in some books so they are offered only occasionally. I also offer fruit as a treat. I keep a sugar cube with a drop of vitamins on it in the vivaria which the female in particular licks avidly.

Compared to anoles they do not seem to particularly go for bluebottles or flies. They enjoy "sweepings" of spiders from local blackberry bushes. If they escape they seem to be quite fond of the spiders which make their homes in the corner of my study!. I leave cuttle fish bones in the vivaria and put calcium lactate in all the water supply. I also put a drop of reptile vitamins in too.

The young feed well on hatchling crickets, greenfly, sweepings from bramble and holly bushes, and fruit flies. They need vitamin and calcium supplements on their food and exposure to UV light. Calcium lactate should be supplied in all water given (only a small pinch to 1 litre). The one success I have had so far grew extremely rapidly and fed voraciously.

BREEDING

It is recommended that two females to one male is used as the females then have respite from the male's advances.

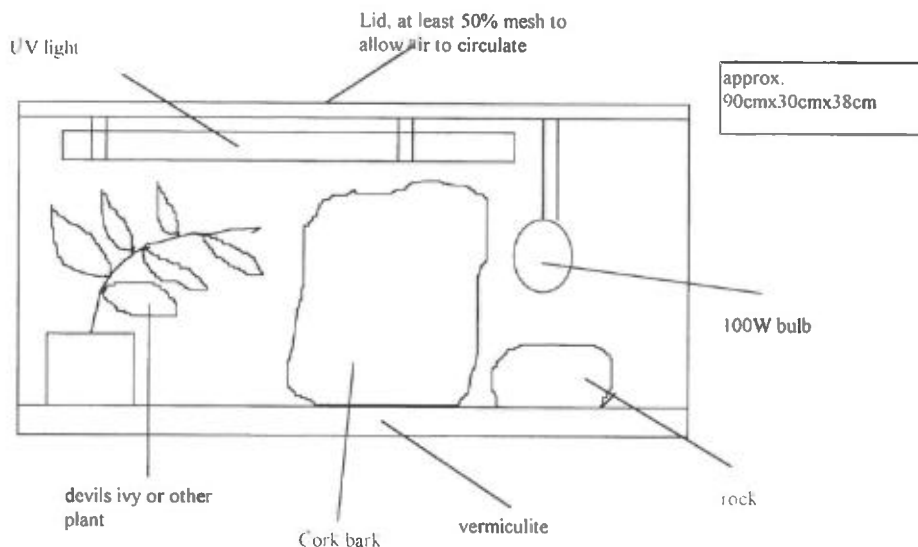


Figure 1. Possible vivarium set-up.

The following however, assumes that there is a 1:1 ratio. I have found that it is very important that the female is in good condition. Before breeding I have found that it is useful to keep the sexes apart so that the female is not accosted and able to get into good condition. She should be feeding well and have had access to good supplies of vitamin D and other vitamins as well as calcium. This leads to a fattened area on either side of the neck with a store of calcium.

The male can then be introduced to the female. It is probably recommended that it is this way round as males are a little bigger and more powerful and it helps the female to feel more secure.

This is an account of some of the courtship rituals I once recorded. "One of my males has in the past 10 minutes been introduced to my female. He has moved towards her in a slow jerky fashion, sticking his tongue out in an almost flag waving gesture. She has reciprocated and has not run off. Now, flattening and tilting his body in front of her, his "offside legs" leaving the surface of the vivarium side, he is showing his gaudy colours to their best advantage. She has moved away, at times stopping and holding one back leg in the air and poking her tongue out too. At present she is not totally impressed and has moved well away from him. He keeps licking the air and the sides of the vivarium. She has turned a little pale in colour while he is close but now she is moving a little distance from him she is turning back to her original glory. Males and females seem to be of equal brilliance regarding colour. Her cloaca is a little distended and he is slowly and deliberately closing in on her again. She is waving her near side foot and he briefly displayed his body as before. Quickly and jerkily he has moved fairly near to her, she has lifted her tail and waved it but then she has jumped down to the floor of the vivarium to escape his ardour. He is now displaying his body again and waving his tail slowly. He is shaking his head sideways in a very jerky manner. The female seems impressed but a little nervous, hiding behind a plant pot and looking round it at her suitor. Now they have both moved onto the same side of the vivarium. He has moved away from her, still facing her, occasionally walking away, waving his tail, then turning round. She is moving up towards him a little. Still moving, she is within fifteen centimetres, occasionally licking her lips. She is also sticking her back right leg in the air."

After mating the eggs become very obvious through the skin of the underside, just above the cloaca at first. Usually there are two eggs and both become visible. After about 1 month the eggs are laid in a secluded position, usually the floor. The day geckos can retain sperm so mating is not necessary before egg laying. I have not had any opportunity to test this as yet.

I tend to move them to incubate them, but this has caused mishaps! Eventually I found a technique of very gently pushing a piece of flat plastic under the eggs a reasonable way of getting them out safely.

I incubate the eggs in an old plastic butter container filled with dampish vermiculite, all placed into a plastic bag which is folded under the container. This is carefully moved to a home-made incubator - basically a smallish aquarium with a 100W light bulb connected to an external aquarium type thermostat. This has worked incubating Giant Day Gecko eggs, Anole eggs and also Ibizan Wall Lizards.

The sex of day geckos is supposed to be determined by the temperature of the incubation. I have incubated eggs at 25°C to try and encourage females - this led to a female (which died in January 1996). It took 10 weeks to hatch. Obviously this could have just been by chance, a much bigger number would be needed to confirm the sex determining factor.

The eggs I incubated in 1996 were at 28-29°C and took just 6 weeks to hatch. Whether these were males or females I never found out.

PROBLEMS

- 1 Moving the eggs is very difficult, they are hard and calcified unlike other lizard species and very delicate. They are less than 1 cm in diameter and a couple of eggs are usually glued together - on no account try and separate them! They must be incubated in the same orientation in which they were laid. It may be best to try and leave them in situ with a plastic container Sellotaped/glued over them. Some references recommend this.
- 2 After egg laying in January 1996 the female became very subdued in colour and behaviour, having difficulty sloughing and becoming very reluctant to eat. This was, I think, due to two reasons. Firstly she needed a break from the attentions of the male, and secondly I had let them get a little cool while away at Christmas. A baby which I had raised to a length of 4 inches died. Until this point it had been feeding very well and had grown rapidly. Since it was a female I was anticipating a whole colony of day geckos in the near future! I am sure it was the cool snap. Do not let the night time temperature fall below 13-15°C as they are tropical lizards - and give the female a break from the male. Due to these problems she has lost a little of the ends of a couple of her fingers. I have been supplying her with sugar cubes with drops of reptile vitamins and keeping her separate. She has been eating and behaving healthily for a couple of months (it is now September 1996) or so now and is nice and plump. The males have not lost condition at all despite being kept in similar conditions to the female. I must assume that the stress of the continual presence of the male and the egg laying caused her loss of condition. The nearly adult offspring was in a vivarium which lost all its heating while I was away.
- 3 Do not put males together - they fight!

COMMENTS

Gold Dust Day Geckos are fairly easy to keep, not needing much humidity so long as they receive a spraying of water each day which can then evaporate leaving the vivarium fairly dry. The males seem to be a little more confident than females, but both seem quite robust and not very shy if healthy. I have kept the male Day Geckos in very good condition in the same vivaria with Green Anoles and even with Ibizan Wall Lizards. They seem to co-exist quite happily with the other species for much of the year, pretty well ignoring each other. At present I have no Anoles and I cool off the Wall Lizards from October to January so the Day Geckos will be alone then.