Lygodactylus williamsi

Care Sheet

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Introduction

Lygodactylus williamsi, also referred to as the electric blue gecko dwarf gecko, is one of the most distinctive, strikingly colored, and sought after geckos in the hobby. These geckos live in a very small geographic range in their native country of Tanzania of only a few square miles. In addition to that they only live on one species of Pandanus palm tree. Due to these very limiting factors combined with deforestation and over-collection for the pet trade these beautiful geckos are now critically endangered in the wild. As a result, collecting these geckos from the wild is now illegal making captive bred individuals the only available ones in the hobby. Luckily, captive bred williamsi are relatively hardy and prolific as long as their needs are met. With that said, they do have some characteristics which do not make them suitable for a novice keeper and if their needs are not met will not do well long term. In this article I will try to condense all of the information which I have learned about this exceptional gecko from many hours digging through the internet as well as several years of personal experience. I am not an expert on this species but I have dedicated myself to maintaining a stable breeding population in my home and as a result I have happily just produced my own F2 offspring. I hope that this article will be a practical guide to help everyone who wishes to keep and breed these wonderful animals achieve success.

Description and Sex Determination

Lygodactylus williamsi are a smaller species of gecko only reaching lengths of about 3.5 inches. This species exhibits pronounced sexual dimorphism (the sexes look different). This does not really apply to size though. While females are generally slightly shorter than the males that is not always the case. Where the dimporhpism is most pronounced is the coloration of the adult animals. Dominant adult males exhibit the brilliant blue color for which this species is known. Adult females are typically a greenish coppery color. Also, dominant males will almost always have a jet black throat region. Females tend to have no black on their throats or mild black striping instead. Both sexes often have black striping around the eyes and snout and this is often more pronounced in adult males. Juveniles all look the same in terms of skin color, much like adult females.

Adult male

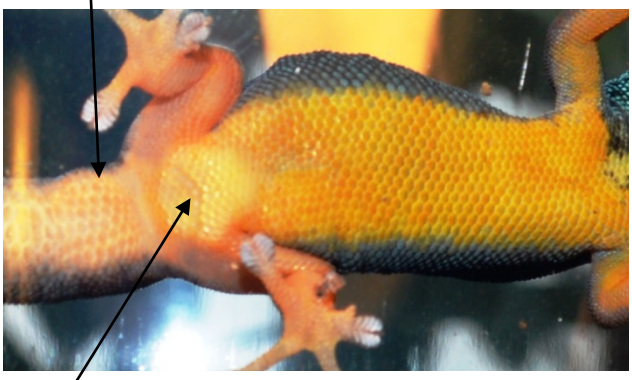
Adult female

Juvenile

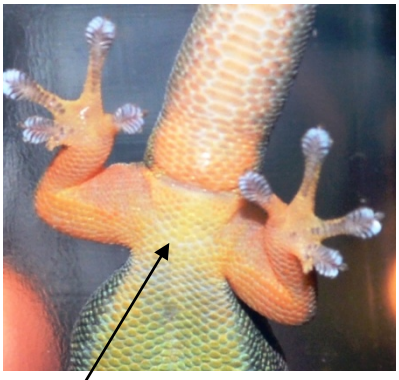
Because of this it may seem very easy to sex individuals on the basis of color alone. Unfortunately this often does not work in many circumstances and other sexual characteristics must be observed. First, only sexually mature (or nearly so) *dominant* males display the vivid blue skin color and jet black "beards". If two males are kept together the submissive male will remain colored like a female. Also, males seem to mature at different rates. Some will be quite blue at six months. Some will not show their adult colors until nine to twelve months. I have also produced females that are almost 50% blue as adults. Some females will also have dark throat regions while others will have no black at all. So unless you are dealing with a fully mature and dominant bright blue male, color should only be used as a secondary means of sex determination.

There are only a few reliable methods to determine the sexes and they involve waiting until the animal is sexually mature and capable of breeding. First, if you observe two animals mating, you have a pair! Sounds funny I know but this has often been the case for hobbyists. Second, when females are sexually mature they will start to produce eggs whether they have been with a male or not. If you find eggs, you have a female! Luckily, there is another method for determining sexes that can be performed before breeding behaviors occur: observing preanal pores. This can be tricky and subtle in some cases, but with practice can lead to reliable results. Where it's tricky is that both sexes have preanal pores, but they are notably more pronounced in males, even in sexually immature males. The way to do this is to transfer the gecko into a clear container (easier said than done) or wait until their vents are on the glass of the terrarium and look for pores. There are two ways to go about this. One, use a jeweler's loupe to look closely at the pre-vent region (difficult with a fast gecko). Second, and my preferred method, is to take high resolution photographs of the pre-vent region and then magnify and examine the photos on a computer. You are looking for approximately eight scales that form a "V" before the cloaca of the animal. This "V" in females will barely be visible and be flattened and level with the rest of the ventral scales. In males, this "V" of pores will be more pronounced. They will be slightly raised, a darker color, and larger in size. It may not seem evident at first but once you have observed several animals it will become easier. Males also possess hemipenes which can sometimes be observed as enlarged bulges at the base of the tail.

Widened tail base due to hemipenes



Pronounced preanal pores in male L. williamsi



Reduced preanal pores in female L. williamsi

The Terrarium

Being small in size, these geckos have modest housing requirements. I keep my breeding pairs in 16" cubes, although I would not go any smaller than this. Also, bigger is almost always better but I have found the smaller cage size ideal for breeding. My young are raised in 12" cubes until half grown.

The most commonly available appropriately sized terrariums are the glass ones made by Exo Terra and Zoo Med. I will say up front that I do not prefer these for keeping williamsi although they do have benefits in addition to their drawbacks. They are widely available, have great visibility, front opening doors, and proper ventilation. What I don't like about them is that they have a number of gaps and cracks that allow for possible escape and provide inconvenient nesting sites. People have gotten around this problem by modifying the enclosure to seal up these cracks and crevices. Another problem which is not easily fixed is that the front opening doors comprise the entire front of the enclosure. When opened, it's very easy for the geckos to dart out of the cage, especially in the smaller sized terrariums used for williamsi.

The enclosures that I prefer are those made of high density plastics with plexi-glass doors. While these are not as common as the commercially produced terrariums there are a number of builders throughout the USA that build these superior enclosures. On the East Coast, I use and recommend those made by Paul Mitchell Herps (www.pmherps.com). These terrariums are made of pieces of high density plastic that have been chemically welded together. They will have plexi-glass front opening doors that will sit flush into the front and only compromise some large portion of the front side. These two attributes is what makes them so ideal for williamsi. The chemically welded joints ensure that there are no gaps for escape or egg-laying. The front side will have a lip of usually at least one inch around the door. This makes a huge difference when a gecko is startled and darts towards the front when the door is open. Most of the time they will run into this lip and change course instead of continuing right outside the enclosure. The idea of geckos constantly on the loose may turn off some potential keepers but most of these geckos will settle down after a few weeks in the enclosure and will rarely escape. These enclosures will also have ventilation holes drilled into them to promote good air flow. Just make sure that the holes are small enough to prevent escape. Larger holes can be made safe by hot-gluing fine screen over them.

No matter which type of terrarium you choose, make sure that it has no cracks through which the geckos can escape. They are known escape artists and can fit through the smallest gaps.

Various sized high-density plastic terrariums housing the author's williamsi collection.

The Terrarium Interior

The interior furnishings of the terrarium can be as complex or as simple as you want although certain requirements must be met no matter what. Williamsi look great in a large display terrarium, complete with a natural or constructed background full of tropical live plants and beautiful pieces of wood. If it is your goal *not* to run a controlled breeding program but instead would just like a beautiful display for your living room, then this is the way to go. However, if you want to focus on breeding then a simpler set up is best. Keep in mind that your geckos will thrive in either set up as long as all of their basic requirements are met.

All williamsi enclosures need two basic things: perches and cover. Perches can be pieces of bamboo, branches, rocks, and terrarium backgrounds. Cover comes in the form of plants, real or artificial. Williamsi could be kept in something as simple as a ten gallon aquarium with a branch or two, some plastic plants, and paper towel on the bottom. But, this is not something I recommend at all. In a very simple set up like this maintenance increases dramatically. The paper towel and the artificial plants must be removed and cleaned on a regular basis (imagine having to do that every week with lightning quick geckos

to deal with!). In my opinion, even a simple set up should include a drainage layer of pebbles or expanded clay balls, soil, leaf litter, branches, and live tropical plants. Setting up the bottom of the terrarium in this way will allow the waste created by the geckos and the excess misting water to be used by the plants and microorganisms growing in the soil instead of having to clean it out. To clean my terraria I simply spray the walls and branches down to knock the droppings off on to the soil layer. From there bacteria, fungi, and other microorganisms will break down the waste and add its components to the soil to be used by the plants. The plants will give off moisture and oxygen into the terrarium increasing humidity and air quality.

Here's how to create your own "bioactive" terrarium as describe above. First, you need a drainage layer where excess misting water can collect instead of collecting in the soil, rotting plant roots. I just use pea gravel purchased at a local hardware store for a few dollars. Put about an inch of the gravel on the bottom of the terrarium. Next, you need to keep the drainage separate from the soil to come. I use landscaping cloth which can be purchased cheaply from any hardware or home improvement store. Cut out a piece that is the exact dimensions of the base of the terrarium and place on top of the gravel. Next, add at least two to three inches of soil. Many different types of soil can be used but you always want something that will hold up well to moist conditions over time. I have found the most cost effective method to be a mixture of peat moss and sand. Again, both can be purchased from any hardware or home improvement store. Ten dollars will give you enough soil to plant a whole rack of terrariums. I use a 75% peat moss and 25% sand mixture. Last, a one to two inch layer of leaf litter is added on top of the soil. Not only does this look natural it provides shelter for springtails and other terrarium cleaners. You can purchase bags of live oak or magnolia leaf litter online at various reptile supply retailers or at local reptile shows. Alternatively, you can collect your own leaf litter. Be sure it is from an area where pesticides and other chemicals aren't sprayed. It is often recommended to bake the leaves to sterilize them but for reptiles I personally don't do this. Wild collected leaves and branches will be full of beneficial critters like springtails and isopods.

That brings me to the cleanup crew of the soil. Many people will buy cleaners, like springtails and isopods, and add them to the substrate. I personally have never done this and all of my terrariums have all sorts of microfauna in them. These get introduced in the leaf litter, plant roots, and branches and will propagate in time. These beneficial little critters will help to break down the animal waste in the terrarium more quickly. If you wish to purchase your own cleaners there is certainly nothing wrong with that and will speed up the process.

Live plants can be purchased almost anywhere. Just do a little research and make sure they are tropical and that they do not attain too large a size. Even larger plants can be kept small by regular pruning though. It just means more work. Wide leafed plants are great for williamsi as they provide both perches and cover. Remove the plant from the pot, knock off any loose soil, give the whole plant a quick rinse in warm water to remove pesticides, and plant in your soil.

Williamsi are arboreal and need perches to move throughout their environment. The simplest things you can use are just branches collected from outside. I have recently switched to dried bamboo for my williamsi perches. The advantages of these are that they can easily be cut to the exact size that you need to fit your terrarium and wedged in place. No matter what you use make sure that there are perches that are horizontal, vertical, diagonal and at different heights. By doing so you are giving the geckos the chance to choose the exact temperature that they want at a particular time. Make sure that all perches are placed securely so that they cannot come loose and crush a gecko.

If your eventual goal is controlled breeding, do not add a terrarium background. Williamsi can easily climb across glass and most plastics so a background is not needed for them to get around. Backgrounds certainly look nice but they often provide various nooks and crannies that the geckos will lay eggs in which are either unobserved or impossible to remove. More on that in the breeding section.

Light, Temperature, and Water

Since williamsi are diurnal and helioliphic animal's bright light of the proper spectrum needs to be provided. Some keepers may disagree but the general consensus is that williamsi require or at the least thrive when strong lighting which provides ultraviolet radiation is provided. T5 high output fluorescent lighting has become the gold standard for terrarium lighting and

if you are lighting a larger enclosure (24" or taller) they are probably your best bet. LED lighting is also becoming more popular for terrariums but does not provide the proper UV radiation. If you are keeping the geckos in smaller enclosures (mine range from 12" to 19" tall) then a standard T8 fluorescent shop light will be more than adequate. The shoplights can be purchased for only $10 for a 48" fixture. The bulbs are also much cheaper as well. Regardless of whether you choose T5 or T8 a dual bulb fixture is recommended. One bulb should be a 6500K bulb which will provide nice white light and will be very beneficial to both plants and geckos. The other bulb should be a UVB producing bulb. The T8 bulbs I use and recommend are the Zoo Med 10.0 bulbs. These should be replaced once a year. The T5HO bulbs I use and recommend are the Arcadia 6.0 bulbs. These only need to be replaced every eighteen months. Linear fluorescent bulbs are best if you are lighting several terrariums. However, if you are only lighting one smaller terrarium then a screw-in compact fluorescent bulb will be your most effective option. UV producing CFL bulbs are available from Exo Terra and Zoo Med although I have no experience with them.

Williamsi come from a tropical climate and so require fairly warm temperatures. Like with keeping all reptiles, thermal gradients are the key to success. You want to provide a variety of suitable temperatures from which the geckos can choose. Williamsi need a basking spot which is provided by a light source. My heat light of choice are halogen puck lights. A string of four or five can be purchased for $20 or less. Only use one per enclosure unless dealing with a very large terrarium. There are a few things to consider when using these lights. First make sure you get the halogen and not xenon puck lights that do not have a self contained dimmer switch. These will not work with a timer. Also, the puck lights should be plugged into a dimmer switch. This allows you to very precisely control the amount of heat produced by these bulbs to achieve the desired temperatures. Use of a dimmer also dramatically increases bulb longevity. A plug-in dimmer can be purchased cheaply online.

Halogen puck lights

Plug-in dimmer switch

Both heat lights and fluorescent lights should be plugged into a timer. This allows for a predictable light cycle which the geckos can follow. This also easily allows you to adjust the time that the lights are on during different seasons. My lights are on for fourteen hours during the peak of summer, ten hours during winter, and twelve hours during fall and spring.

Your heat lights and fluorescent lights should create nice thermal gradients in the terrarium. For williamsi I try to aim for a localized basking spot of around 90-95 F. The top most part of the terrarium is around 80-85 F and 75-80 F towards the bottom. A night time drop is natural and is easily accomplished just by turning off the lights at night. My nighttime temperatures are around 70 F. During the winter months all of these temperatures are about five to ten degrees cooler.

One of the most common mistakes that new keepers make with williamsi is keeping them too wet. While they are from the tropics the do not live on the forest floor surrounded by moist rotting vegetation. They live out in the open on trees that are dry for much of the day. In the small enclosures that williamsi are often kept it's easy to go overboard with the misting.

To provide your geckos with adequate moisture you will need some way to mist the terrarium. This can be as easy and cheap as a one dollar hand mister that is usually used for hair or as complex as an automated misting system. If you only have one or two terrariums you could get away with hand misting but I think that an automated misting system is one of the best investments you can make. The mist provided is very fine, can be regulated precisely with a timer, and doesn't disturb the animals. I use and recommend MistKing misting systems. I have several MistKing pumps in operation including one that has seen continuous use for ten years without issue.

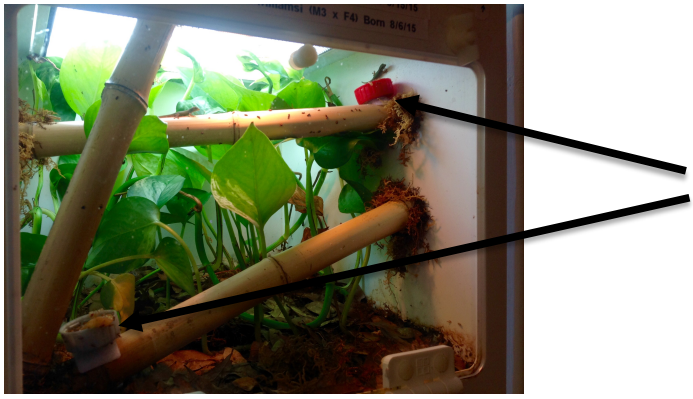
My animals get misted twice a day for approximately one minute each session. However, this is something that needs to be adjusted for every enclosure and keeper. The goal is to thoroughly cover the leaves of the plants and the sides of the terrarium with water droplets and then stop before the soil becomes overly saturated. It is important not to mist the enclosure again until all of these water droplets have evaporated and the top most layer of the soil/leaf litter has started to dry out. To make sure this happens proper ventilation must be present in the enclosure. This is easily achieved by making sure the entire lid of the enclosure is screen and that at least one of the sides has some ventilation openings. All of the terrariums that I have previously mentioned have this type of proper ventilation. I will not list a proper humidity for this species as I have never measured it in my terrariums. It may take time and practice to find the proper misting schedule for your own enclosures. Just remember, it's OK for the terrarium to dry out for most of the day.

My geckos do not get a water bowl. They receive all of their required water by lapping up the water droplets from misting that has accumulated on plant leaves and the sides of the terrarium. In my opinion, water bowls are unnecessary and unnatural for this species. As long as the terrarium is misted at least once per day the geckos will get all of the water that they need.

Diet and Nutrition

One of the easiest aspects of keeping williamsi is feeding as they are ravenous eaters. In fact, it's easy to go overboard and feed them to the point of obesity. My adults are fed every other day. Juveniles are fed daily. My colony is mostly fed small insects which I raise myself with a weekly supplement of prepared fruit based diet. The one hurdle to feeding these geckos is making sure to get a variety of small insects. Mine primarily eat fruit flies (melanogaster and hydei), bean beetles, and banana roach nymphs. Pinhead crickets are also a good feeder. I used to feed dubia roach nymphs but I have had the nymphs escape the bowl and grow to a large size in the terrarium before being discovered. One of these ate three hatchling geckos before it was discovered! When feeding roaches or crickets feed only insects that are ¼" or less. You don't want to add too many feeder insects. You should only add enough for the geckos to clear them out within one or two hours. Like with all insect eating reptiles, making sure all feeder insects are properly gut loaded is essential to good long term health. Variety is also important, feed as many different types of insects as you can. I dust all of my feeder insects with Repashy Calcium Plus LoD supplement powder and am very happy with the results.

Williamsi are also partially frugivorous (fruit eating) and it's important to replicate this in captivity. My favorite product to use are the powdered diets made by Pangea (www.pangeareptile.com). I use the Pangea Complete formula and I buy a different flavor every time. These powders are mixed with water to achiever a slurry consistency. I put the diet in bottle caps which I then velcro to elevated perches. The geckos relish this food source and would eat it every day. For young geckos this is a great way to encourage growth but for adults this can quickly lead to obesity. My adult pairs are offered one full capful once a week. My young geckos always have a capful of Pangea Complete in their enclosures. I replace it every other day. In addition to being a nutritious meal for the geckos, fruit flies will congregate around the cap of food and feed upon the diet. This creates concentrated feeding stations as well as further increasing the nutritional content of the insects! Ripe pieces of fruit can also be used in place of a prepared diet. Banana and mango work well.



Breeding

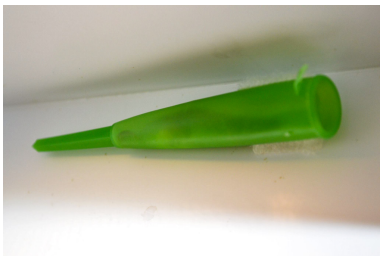
Getting williamsi to breed is actually pretty easy. If you have an adult male and an adult female kept together in an appropriate terrarium, odds are they will breed and lay eggs. However, getting those eggs to hatch and then to raise those offspring to maturity can be more difficult. In this section I will try to cover all of the possible complications in breeding and raising young williamsi as well as solutions to overcoming them.

Mating pair

One very important aspect to consider *before* keeping your pair together is female health. This is often a major obstacle to long term success. Female williamsi often will produce a pair of eggs every three weeks. This fast pace puts a huge strain on their bodies. Some keepers will suggest that you not keep a female with a male until they are at least a year old. The reasoning behind this is to not put the strain of breeding on her until she is fully developed. However, in my experience female williamsi will start producing eggs once they hit sexual maturity whether they are in the presence of a male or not. The key is to keep your williamsi in peak health from the beginning. This means maintaining them at a proper weight and ensuring the females get enough calcium. For many keepers achieving a "proper weight" means to feed the geckos as much as they will eat. While this is true for growing animals this can lead to health problems in adult animals. Williamsi are gluttonous feeders and this can quickly lead to obesity in adults. You want your geckos bodies and tails to be full and well rounded but without rolls. Once you start to see rolls in the tail you need to cut back on feeding. See my recommended feeding schedule in the Diet and Nutrition section. Next is calcium. It seems to be completely impossible to provide female williamsi with enough calcium through food alone. All williamsi enclosures (especially those with breeding females) need to have a small container of pure calcium powder. I use and recommend Repashy SuperCal NoD. I place the calcium powder in bottle cap lids. The females, and possibly males, will actually lap up the powdered calcium to meet their requirements. I change out the calcium powder about every two weeks. Keep the powder away from water as it hardens once it becomes wet. If this happens replace it. Without proper calcium and diet for breeding females reduced lifespan has been observed as well as increased hatchling mortality. One final concern is that under continuously ideal conditions females will continue to produce clutches throughout the year. This will likely lead to a decreased life span. This is something that I am still experimenting with. I have tried separating females from males for several months but most of them keep producing eggs anyway! Another method which I am currently trying is to cycle them out of breeding by decreasing the heat and photoperiod to which they are exposed for a few months. The difficulty of this is to find the right temperature that will get them to stop egg production but which will still keep them healthy. I am aiming for a decrease of 5-10 F during the winter months.

Williamsi are egg gluers. This means that when a female lays her clutch (almost always two but occasionally one egg) they dry and attach very quickly to the surface on which they were laid. Once they have been glued it is basically impossible to remove them from that surface without destroying the eggs. Unless they are provided with specific nesting sites females will often choose to lay on the glass or cage surface. They instinctively prefer tight spaces so those troublesome ridges and gaps that exist on the lids of Exo-Terra and Zoo Med terrariums often become inconvenient laying sites. There are several problems with leaving the eggs to incubate naturally in the terrarium without keeper interference. First, when those eggs hatch the young are often eaten quickly by their parents! So unless you are very lucky and catch the hatchlings before the parents those babies often don't make it long. Also, the hatchlings are TINY and can often escape enclosures that the adult geckos cannot. There are several solutions to this problem. If the eggs are laid on a flat surface it is often possible to tape or

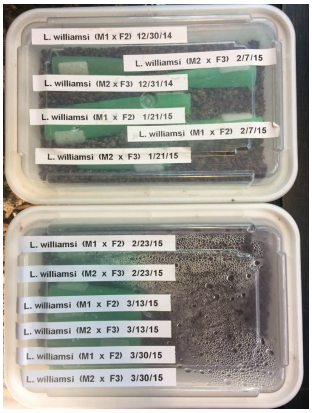
glue a small plastic condiment cup over the eggs so that when they do hatch the babies are contained in the cup and safe from hungry parents. Even this poses a problem though. Eggs left in the terrarium are subject to the environmental conditions of the terrarium at that particular spot. This is a problem because williamsi are subject to TSD (temperature sex determination). Eggs are often laid high up in the terrarium where temperatures are higher. This is why there are so many more male williamsi available in the US than females. The key to getting around this problem is to provide more appealing egg laying sites that can be removed from the terrarium and be incubated under controlled conditions. There are a number of ways to do this but the one that I prefer is to use opaque florist tubes that have been attached to the upper sides of the terrarium using velcro. The tubes should be positioned horizontally. My females choose these sites 100% of the time. Florist tubes can be purchased cheaply at a hobby shop, like Michaels, or online. There is one caveat to ensuring that your females choose these sites: they must be present in the terrarium *before* the geckos are added to the terrarium. Otherwise the female may not recognize these as laying sites.



A female laying her clutch inside of a florist tube which has been velcroed to the side of the terrarium.

Once the eggs have been laid in the florist tubes they can be removed from the terrarium for controlled incubation. Immediately replace that tube with another identical one for the future. I am still experimenting with different incubation strategies but what I have found to work well so far is to provide both good ventilation and high humidity. I do this by placing the florist tubes on top of a layer of saturated Repashy SuperHatch. Other media, like vermiculite or perlite, will also work but I prefer the SuperHatch for two reasons. First, even when wet, the SuperHatch is not very sticky or messy. Second, when it dries out it changes color making it easy for the keeper to know when to add water. The SuperHatch and the florist tubes are placed in a a plastic container with multiple small air holes. You want enough air holes so that there is not constant condensation but not so many that the humidity is lost. Take care that the holes are very small so that newly hatched geckos don't escape. I also like to place a layer of very fine mush over the container (secured by the lid) to prevent any possibility of escape and to keep fruit flies from entering. I have had problems with fruit flies laying eggs on infertile or dead gecko eggs.

<u>Left</u>: Florist tubes containing eggs in the incubation container of Repashy SuperHatch. When saturated the media is a rusty red. When dehydrated it becomes a light tan.



<u>Right</u>: Incubation containers labeled with lay date and parentage information.

As mentioned earlier the sex of the geckos is determined by the temperature at which the eggs are incubated at. Average daily temperatures of 70-76 F produces females. Temperatures of 78-81 F are used to produce both males and females. Temperatures of 83 and above will yield males. These are not meant to be constant temperatures but rather day time averages. A night time drop should be incorporated. My nighttime temperature is around 70 F.Williamsi do not bury their eggs but instead lay them more or less out in the open exposed to changing air temperatures. This is also why an overly humid incubation environment should not be used. Instead of placing the eggs in an incubator I place them in a location in

my reptile room which maintains the proper temperatures. Be sure that there is some climate control in the room and that they don't get too hot (88 F and above) or too cool (69 F and below).

When I first started breeding these geckos I incubated all of my eggs to produce females as they were much more scarce in the hobby. When incubating for females at an average daytime temperature of 75 F I experienced very long incubation times of 90-125 days. I also observed a fairly low hatch rate of around 60%. Of those that did hatch out only about 60% of those thrived and survived to adulthood. I have since adopted a more moderate approach and incubate at a daytime average of 80 F to produce an even mix of the sexes. These eggs hatch in about 60-80 days. Of those eggs I am seeing a near 100% hatch and survival rate.

As long as the breeding females have been well taken care of and the eggs have been incubated correctly rearing of the young is not too difficult. Although, it is not without complications.

I have tried several different methods for rearing the young but I will only go over the method that I have had the most success with and currently use. Basically, I keep the young exactly like the adults. My hatchling geckos are kept in the same type of PVC enclosures as the adults except in smaller 12" cubes. The same type of UV light, heat, water, and cage furnishings are provided. I feed them the exact same foods, just more frequently. I always have food available for the growing young. There should always be fruit flies crawling around and some sort of fruit based diet available for the geckos. Just make sure that there are not so many flies in the enclosure that the geckos are constantly swarmed by them. Not only does the constant availability of food allow for a quick and healthy growth rate but it also reduces competition when raising the young together. This is the main problem with raising these geckos from hatchling to young adults. The young geckos can be just as territorial as the adults. Even when kept just as pairs there is often a dominant animal that will prevent the other from basking or eating as much. When this occurs it is important to separate the animals or you will end up with a stunted or dead gecko. This does not always happen but it is common enough to watch out for. Mostly due to necessity I have been experimenting with keeping larger groups of four to six geckos together. So far this has actually yielded better results with less bullying as the territoriality is either suppressed or spread out among the animals. Make sure to keep only similarly sized geckos together. The important thing to consider is to make sure that no matter what type and size enclosure you use that the geckos have choices just like the adult enclosures. Some areas should be warmer and some cooler. Some should be drier and others wetter. I encountered the most problems raising young when the enclosures were allowed to get too saturated with moisture.

The other issue with raising the young is their size. They are *extremely* small when they first hatch out. Any enclosure for hatchling williamsi needs to be completely escape proof with no cracks or large holes. Also, there are very few food insects available for animals this small. While variety is best I will admit that my geckos only receive melanogaster fruit flies and fruit diet for the first month. More variety would certainly be better but this diet does work until they are big enough for other food items. Under this care regimen my geckos double in size within a week or two and are half grown within two months.

The extremely small size of newly hatched williamsi can pose a challenge for feeding and enclosure selection. They grow quickly however and should double in size within a week or two.

Some Final Comments

As you can probably tell from this wordy article I am very passionate about these little geckos. They are some of the most beautiful, behaviorally interesting, and challenging animals that I have worked with. Due to their limited range and low numbers in the wild these critically endangered jewels deserve our attention in the hobby. Luckily, when properly cared for they can be highly prolific in captivity. Everything about these geckos is fast paced, allowing the new keeper to go from novice to breeder in a short amount of time. Please keep in mind that the care regimen I have detailed here is just a guideline and there is more than one path to success. I do hope that my experiences will prove useful to those new keepers and that these beautiful geckos become well established in captivity. For advice and interaction with williamsi keepers from around the country and world please check out and join **Lygodactylus williamsi USA** on Facebook.

Please feel free to share this care sheet in it's entirety freely with full credit given to the author.