

The Fat Tail Gecko

Hemitheconyx caudicinctus

-Jeff Galewood Jr.

Fat tailed geckos, *Hemitheconyx caudicinctus*, are native to West Africa, where they inhabit savannah and scrublands. During the day they take refuge in underground burrows, under rocks, or in rotting trees. They come out at night to hunt for small insects such as locusts, spiders, and beetles.

Captive fat tailed geckos originated from wild caught lineages which were mainly imported from Benin, Ghana, and Togo. Most wild caught specimens today come from Benin. They are collected on moonless nights when the fat tails are out foraging for prey.

Keeping Fat Tails

Fat tails can be kept in terrariums for those working with individuals or small collections; however, we house all of our fat tailed geckos in rack systems and plastic containers. Rack system tubs are lightweight, provide good thermoregulation (steady temperatures), and are very easy to clean and maintain making them an ideal choice for large collections.

We house our baby fat tails in groups of two to four in either Vision Hatchling rack systems or small plastic containers about the size of a shoebox. Hatchlings are kept on paper towels initially and moved to substrate of peat moss mixed with vermiculite (in a 1:1 ratio), the same substrate we use for the adults, once they reach 15 grams.

Adult and sub-adult fat tails are housed in Vision Model V-35 rack systems with enclosure dimensions of about 20 inches long, 15 inches wide, and 5.5 inches tall. We also use Freedom Breeder racks with medium tubs and the 25% ventilation lids which are approximately the same size. Individual containers, such as 32 quart tubs, offer a similarly sized enclosure without the racks.

In all of our adult and sub-adult containers we use a one inch layer of the 1:1 mix of peat moss and vermiculite that was mentioned earlier as the substrate. The moisture holding ability of the vermiculite and the mold inhibiting properties of the peat moss combine for a great mix that is also easy to spot clean as needed.

Fat tails require well regulated humidity and temperature. Humidity levels between 50% and 70% are ideal, so daily misting should be done, especially for the babies. The substrate should be kept fairly moist so that the enclosure stays humid, but there should also be some dry spots for the fat tails to lie on. We use thermostat controlled heat tape in our rack system that runs between 88 and 92 degrees which leaves the cool side of the enclosure at about 75 to 80 degrees. As most reptile hobbyists know, fat tails need to regulate their own body temperature and need a basking spot and a cooling spot.

A hiding place is placed over the heat tape, and a second hide is provided in the middle of the cage giving the fat tails different temperature hides to choose from. Finally, a small water dish is placed in the cool side of the enclosure.

Fat tails are nocturnal, so they do not require any basking lights or UVA or UVB rays. A regular light on during the day is sufficient, and a photo period for them that is about 12 hours of light is good.

If you are thinking about getting a fat tail as a pet, keep in mind that they can live to be over twenty years old!

Territorial Behavior

Male fat tail geckos are territorial, and only one male should be housed per enclosure. If two mature males are put together they will begin to fight, and death is a strong possibility. Fat tails mature quickly and males over 15 grams in weight should never be housed together for this reason. Even if raised in the same enclosure, two males can begin fighting as young as 10 weeks old.

Females are not territorial and can be housed together safely.

Feeding and Supplementing

Fat tail geckos are insectivores. They can be fed a variety of prey items commonly available in the pet trade. We feed all of our fat tails a staple diet of crickets. In our opinion, a diet consisting entirely of meal worms or super worms can be too fatty, and these foods should be offered sparingly. Other feeders commonly used for fat tails are wax worms, phoenix worms, roaches, and silk worms.

Once they become adults fat tails can put on a lot of weight very quickly. Consequently, you should carefully monitor their weight and make sure that they are plump, but not overweight. Overweight geckos usually make poor breeders.

Regarding the size of the food offered, we give our baby fat tails 1/4 size crickets until they reach 10 grams. At this point we switch them to 1/2 size crickets, and switch them again to 3/4 size crickets once they reach 18 grams. Once the geckos exceed 25 grams they are offered both 3/4 size crickets and full size adult crickets. All of our fat tails are offered between five and ten crickets at a time every other day, but three feedings a week is enough to raise a healthy fat tail.

In order to maintain a healthy gecko it is necessary to supplement the food. We supplement once a week with vitamin and mineral powder, and twice a week with calcium powder. To supplement the crickets we place them in a 32 ounce deli cup and sprinkle in just enough powder to turn them a ghostly white color. Gently swirling the cup in a circular motion ensures that the crickets are coated evenly, and the crickets are then ready for feeding.

A small cap or dish can also be placed in the enclosure filled with calcium powder for the fat tails to eat directly from the bowl. Fat tails do not eat calcium powder directly as frequently as other gecko species, so this is not necessary or can simply be offered every now and then to ensure your gecko is getting enough calcium.

Handling and Attitude

Fat tails are slow terrestrial geckos that take to being handled really well, which makes them an excellent candidate for a pet. Their calm disposition and sluggish

movement when exploring their surroundings makes them both wonderful to work with and easy to handle. Babies and young fat tails can be a bit skittish when first being handled, so make sure to handle them close to the floor or just above their enclosure in case they decide to leap from your hand.

When picking up a fat tail it is important to scoop them up without grasping them since they do not like being restrained. The best way is to let them crawl about in the palm of your hands or on your lap.

Sexing

We do not try sexing fat tails until they are at least a month and a half old. At this age they are mature enough and will start showing obvious signs of being either male or female. Keep in mind that some mature slower than others, so some geckos may be questionable until they reach two months of age or older.

Male fat tails will have hemipene bulges below their vent, and above their vent they will have a row of pre-anal pores. Females may have slight bumps where males have the hemipene bulges, and can also have openings where males have pores. Once both sexes are compared it becomes obvious which is male and which is female, and sexing will become easier for you.

Breeding

We begin to breed male fat tail geckos when they reach an age of seven months old and a weight of 40 grams or more. Our biggest breeder male weighs slightly over 100 grams and is over six years old!

For females we wait until they are a minimum of eight months old and a weight of at least 45 grams. Our largest female fat tail is over three years old and weighs in at 90 grams. Our most productive breeder females weigh between 45 and 55 grams and are a year to three years old.

Fat tailed geckos are seasonal breeders. In the wild they breed from November to March, and even in captivity they tend to cycle around the same time as they do in the

wild. Most of our fat tails breed from October to May, with the majority of our groups starting to breed in December and January.

A short cooling period helps to stimulate breeding in both males and females, but is not necessary. The ambient temperature change of about five degrees in our facility during the fall and winter is enough to trigger all of our fat tails to breed.

If you are going to cool your fat tails we suggest starting to cool them about midway through fall. To begin cooling, simply start to reduce cage temperatures by a couple of degrees every day until they have a basking spot around 82 degrees and the cool side of the enclosure is in the low to middle 70's. Once you start to cool down your breeders, discontinue feeding them until you warm them back up. At night you can turn off their heat so that the entire cage ambient temperature gets down to the low to middle 70's. During the cooling period make sure to keep the fat tails on a dry substrate such as newspaper or paper towels, and keep fresh water available at all times.

After a cooling period of one to two months you can start to warm up the fat tails a few degrees every day until the temperatures in the enclosure are back to normal. Resume feedings during the warm up period, but reduce quantities to two or three crickets for the first few feedings. You can also switch the fat tails back to a moist substrate during this time to help bring the humidity back in line.

Once they are warmed up and back to full feedings you can begin introducing the male with the females. We breed our fat tails in groups ranging from one male with two females all the way up to one male with eight females. We leave our males with the females during the entire breeding season. The breeding will occur shortly after introducing the males, and at this point ovulation takes place and the eggs will begin to develop.

At this time you can place an egg box in the enclosure, but be sure not to place it in the basking area since this will cause it to dry out. We use small plastic containers as egg boxes with an inch and a half hole drilled in the top. We fill the container halfway with the same substrate mix as we use in the enclosures. Make sure the soil in the egg box is evenly moist. You want the soil to be damp enough where you can pick it up and squeeze it and it clumps together, but no water drips out. Check females often when they get close to laying because fat tails sometimes lay their eggs outside of the egg box.

Feeding your female fat tails heavily during breeding season is very important. Offer them as much food as they will take, and be sure to supplement their prey with vitamins and calcium every time you feed.

Fat tails will typically lay 3 to 5 clutches a year. They usually lay two eggs at a time, but some small females will uncommonly lay only single eggs. Average fat tail eggs are between an inch and an inch and a half long.

Incubation

For egg cups we use 8 ounce deli cups with two small holes near the top of the container for air circulation. We fill the egg cup 3/4 of the way with the same 1:1 mix of peat moss and vermiculite. Keep the soil moist, but be careful because fat tail eggs are sensitive to excess water. If you squeeze the wet soil until it no longer drips it should be perfect for incubating eggs on.

The sex of fat tails is influenced by incubation temperatures. We incubate our eggs that we want to hatch out predominantly female at 83 to 85 degrees; for the eggs that we want to hatch out mostly male we will incubate them at 88 to 89 degrees. Once the incubation temperature goes over 90 degrees you will mostly start hatching out females again. We suggest not incubating any eggs over 90 degrees because the females that come out at these temperatures tend to be more aggressive and sometimes make poor breeders. Fatal incubation temperatures for fat tails are temperatures under 82 degrees or exceeding 93 degrees.

Incubation time for eggs at 83-85 degrees is normally 55 to 70 days, and eggs incubated at 88 to 89 degrees will normally hatch in the range of 43 to 48 days. Average sized hatchling fat tails are two and a half to three inches long and weight about 4 grams. After hatching we set up the babies in a hatchling rack and begin offering them food a couple of days later.

Popularity and Genetics

In the past few years fat tail geckos have become more available in the pet trade through captive breeding. Hobbyists have taken notice to fat tails as well because of all

the recently emerging color and pattern mutations. Fat tails can be kept by both experienced and new hobbyists, and the variety of attractive color morphs becoming available as well as the new morphs that will soon be available, make this species more desirable to work with. Fat tail geckos may soon rival the popularity of other commonly kept and bred geckos in the industry, and there is a lot of work that can be done with this species genetically for years to come.

In just the past few years we have seen Patternless, White Outs, Zeros, and Granites become available. In 2008 we started releasing heterozygous Patternless and a few Patternless, and in 2009 we began releasing the White Outs and Zeros. These new morphs are the beginning of the new fat tails being released into the hobby. In the next few years we have a couple of different morph fat tails that we will also be releasing, but at the moment we are still determining the genetic patterns of the traits.

Below is a list of fat tail mutations and their genetic backgrounds:

Banded:	Wild type
Stripe:	Dominant
Albino:	Recessive
White foot:	Recessive
Aberrant / Jungle:	Polygenetic / Line bred
Patternless:	Recessive
White Out:	Co-Dominant
Zero:	Co-Dominant
Ghost:	Recessive
Stinger:	Inconclusive, but believed to be non-striped zero
Patternless White Out:	Homozygous Patternless and heterozygous White Out