

Crested Gecko Care Guide

Loving Leos Reptile Rescue Inc.

EIN 33-4462181

Rescue and Rehabilitation

Science-based Education

Advanced Husbandry Practices



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Introduction

Crested geckos are a species of gecko found in New Caledonia, particularly on the Isle of Pines. These geckos live in tropical environments where the humidity is often quite high. In captivity, crested geckos can live between 10 and 20 years. Crested geckos eat fruits and insects, and will lap dew from leaves to hydrate themselves. Crested geckos do not have eyelids, instead having a hard, protective “spectacle” or brille cap over the living cornea. They have pads on their toes and tail tips made up of “setae”, which are hair-like structures that cause a distance-related attraction between the atoms in their feet and climbing surfaces. These geckos are very prone to dropping their prehensile tails, which do not grow back like other gecko species. Until the 1990’s, it was believed crested geckos were extinct—until one gecko happened to leap onto a field researcher’s tent! Now, crested geckos have become a popular reptile species in the pet trade, and come in a wide variety of color morphs.

Shopping List

1.) Supplies:

- **FOR 0-12 MONTHS:** 18x12x12” Vertical Front-Opening Terrarium
 - Minimum recommended size for ONE juvenile crested gecko
- **FOR 12+ MONTHS:** 36x18x18” (larger is better)
 - Minimum recommended size for ONE adult crested gecko
- Linear UVB (long tube, half the length of the enclosure)
 - Zoo Med ReptiSun T5HO 2.5 UVB Kit (Mounted inside enclosure)
 - Arcadia Shadedweller ProT5 7% UVB Kit (Mounted over mesh)
 - Arcadia Arboreal ProT5 2.4% UVB Kit (Mounted inside enclosure)
 - Reptile Systems T5HO Zone 1 2.4% UVB Kit
 - Leap Habitats T5HO 5.0 UVB Kit
 - **IMPORTANT!** Please avoid knock-off Chinese brands of UVB you may find on Amazon! These are NOT safe and could harm your pet. Brands to avoid for UVB include ReptiZoo, Giangarden, OIIBO, Lucky Herp, Reptile King, etc. The brands listed above are SAFE and thoroughly tested by experts
- Incandescent Basking Bulb
 - Reptile Systems Eco Halogen

- ReptiZoo Intense Basking Spot Lamp
 - Exo Terra Intense Basking Spot Lamp
 - Arcadia Basking Spot Lamp
 - Wattage may vary based on your house temperatures and enclosure size, but typically 25-50w bulbs will work well
 - **Please note, crested geckos may be sensitive to high temperatures. Use the lowest wattages possible that will give you the proper heat gradient and basking surface temperatures**
 - Dimming dome for your heat lamp, OR a pulse proportional dimming thermostat
 - Laser thermometer gun
 - LED 5000-6500k Light Bar
 - Natural, safe substrate options
 - 70/30 Mix of Scott's Organic Topsoil (no fertilizers!) and Quikrete Play Sand
 - Sphagnum moss to mix with substrate
 - Hygrometer/thermometer devices x 2
 - Temperature probe
 - Water dish
 - Cork bark, logs and vines to create hides, climbing options
 - Outlet Timer/Power Strip
 - Pangea Crested Gecko Diet
 - Pangea Growth and Breeding (for 0-12 months)
 - Feeding cups, preferably to be used in elevated holders, OR:
 - Pangea magnetic feeding dish
 - Reptivite OR Repashy Calcium Plus LoD Multivitamin
 - Zoo Med Calcium with D3
 - Zoo Med Calcium without D3
- 2.) Products to Avoid:** (This is not a complete list, just a compilation of the most common unsafe items on the market)
- Coil Florescent UVB Bulbs
 - These bulbs are not inherently bad, but because of their compact size, they should be used in a horizontal position for a wider spread. For many medium and large-sized reptiles who openly bask during the day, they may not provide enough coverage on the animal's body for proper D3 synthesis
 - Mercury Vapor Bulbs
 - These bulbs can lead to serious UVB and heat burns. They do provide UVB and heat all in one, but are dangerously inconsistent in their output and cannot be controlled with a dimming device. MVB's also produce an unnatural green light, which may affect an animal's color vision and inhibit natural behaviors
 - Reptile Carpet
 - Snags teeth, holds bacteria. Cannot be dampened without molding risk
 - Walnut Shell Substrate
 - Serious risk of impaction, oral, nasal and eye blockages. If ingested, this material can cause internal damage
 - Calcium Sand
 - UVB "test" Cards

- These items do not accurately detect UVB. They react to light emitted by heat lamps as well, and do not tell you exactly how much UVB is being emitted by a bulb
- UVB “test” Accessories and Décor
 - Just like “test” cards, these items do not accurately detect UVB, and will react to UVA as well.
- Colored Heat Bulbs
 - Encourages reptiles to eat it to supplement calcium, but can cause serious and sometimes fatal impaction
- Freeze-dried or canned insects
 - These feeding options do not provide the necessary nutrition geckos need
- Aspen Bedding
 - This is not a suitable substrate for crested geckos. It cannot be dampened to hold the humidity these animals need for hydration and shedding, and will mold. This can lead to respiratory infections
- UVB “test” Cards
 - These items do not accurately detect UVB. They react to light emitted by heat lamps as well, and do not tell you exactly how much UVB is being emitted by a bulb
- Colored Heat Bulbs
 - Colored bulbs (red, blue, purple) wash out a reptile’s color vision. This can interfere with their natural circadian rhythm and behavior. Heat bulbs should mimic the warm/white color of sunlight
- Heat Mats
 - Heat mats do not provide the correct Infrared heating reptiles need for proper warming, metabolism, digestion. Even with thermostat use, power failures can occur leading to severe, even fatal burns
- Heat Rocks
 - Heat rocks do not provide the correct Infrared heating reptiles need for proper warming, metabolism, digestion. These items have been known to cause serious, sometimes fatal burns
- Cloth and Hemp Hammocks
 - These items can tear out claws and teeth. They are easily soiled and will hold bacteria
- LED UVB Products
 - As of current research (2026), LED UVB products are not recommended for safe usage in reptile keeping. They do not produce vital UVA2 wavelengths, which signal an animal’s body to stop producing pre-D3. This can potentially lead to **hypervitaminosis D3**, and **photoconjunctivitis**

Quarantining

1.) Why Should You Quarantine?

- Quarantining should be done when you first bring your new leopard gecko home. This is to monitor behaviors, and to give you time to have fecal testing done to check for parasites before moving your gecko into their permanent setup
- Typically a quarantine period will last **2 to 3 months**
- Quarantine setups are simplified for the sake of maintenance and monitoring. Keeping accessories to a minimum as well as using paper towels will make clean-up and finding droppings for sampling easier.

2.) How to Safely Quarantine:

- New animals should be kept separately from your other pets, if other pets, especially other reptiles, are present in the home. If possible, keep them in a separate room
- Sanitize the new animal's equipment and accessories separately from other pets' items
- Use separate feeding tools for the new animal
- Use paper towel flooring for easier clean-up and sanitizing
- Schedule fecal and physical exams to check for parasites and possible underlying health issues
- For sick animals, wear gloves when handling, and thoroughly sanitize afterwards

Nutrition

1.) Diet:

- Crested geckos are omnivorous reptiles, feeding on insects and fruit. In captivity, crested geckos can be provided with a diet of pre-mixed powder CGD (complete gecko diets). These are mixed with water to create a gel. Crested geckos also benefit from having live insects in their diet rotation

- Live insects should be dusted with calcium supplements
 - Brands of CGD

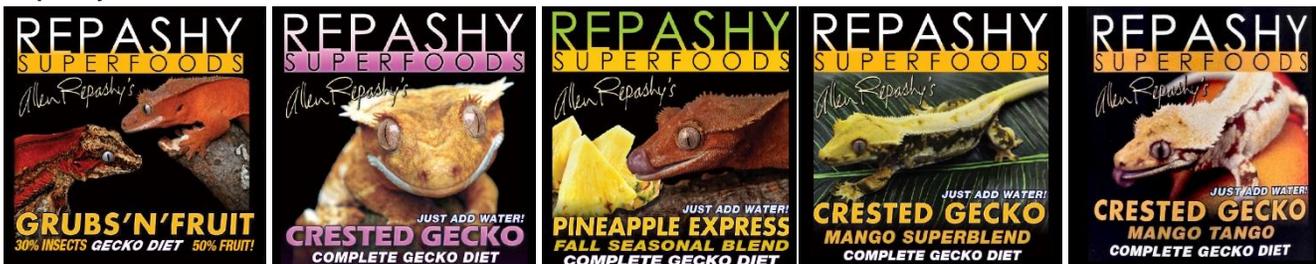
Lugarti



Pangea



Repashy



2.) Supplementation:



Arcadia RevitalizedD3, EarthPro-A, CalciumProMG



Repashy Calcium Plus.

3.) Feeding Regiment and Frequency:

- It is highly important to keep track of your CGD and vitamin expiration dates! Vitamins degrade over time. If old products are used, this can lead to deficiency-related health issues
- Crested geckos prefer to eat in elevated tree branches. Placing feeding cups in high areas will help them to feel more secure
- **Juveniles 0-12 Months:**
 - Pangea Growth and Breeding every day
 - Insects dusted with plain calcium 2-3x's a week
 - If using Arcadia, EarthPro-A can be rotated with CalciumProMG
 - A multivitamin can be used once a month on insects
- **12+ Months:**
 - CGD 2-3x's a week
 - Insects dusted with plain calcium 0-1x a week
 - A multivitamin can be used once a month on insects

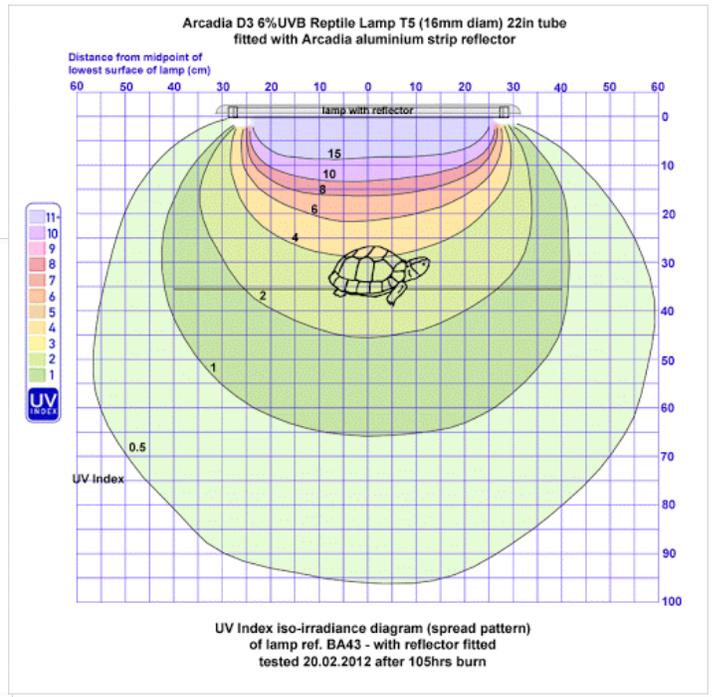
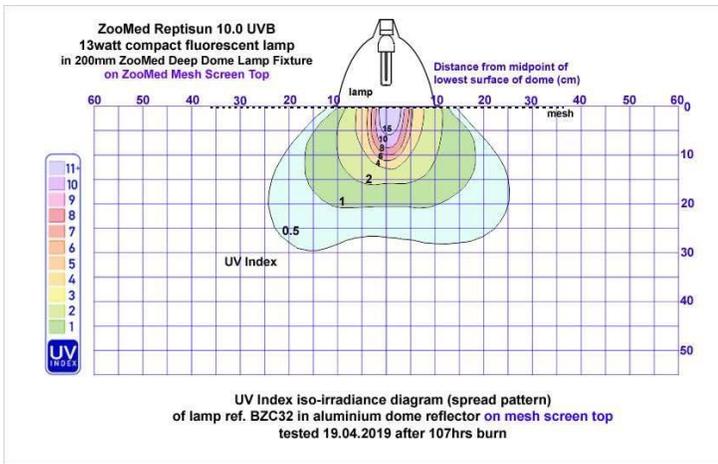
4.) Growth Inhibition

- Slow growth is a common issue in crested geckos. The most common issue is not enough food and/or protein, and not enough nutritional content in their food
- Pangea Growth and Breeding CGD is a great diet to help your gecko grow at a healthy pace, and is recommended by breeders to be used for the first year of life

UVB, Heating and Visible Light

1.) The Importance of UVB

- UVB lighting is superior to D3 powder supplementation for the following benefits:
 - Creates beta-endorphin “feel-good” hormones in the skin
 - Promotes better organ health
 - Stimulates white blood cells and promotes better immune health
 - Facilitates natural D3 synthesis for calcium absorption
 - Simulates natural UVB that would be provided by the sun in the wild and promotes more natural behaviors

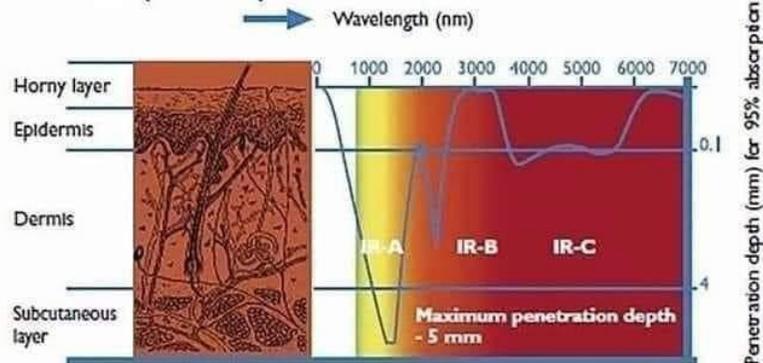


Difference between Coil/Compact UVB coverage, versus Linear T5HO tubes

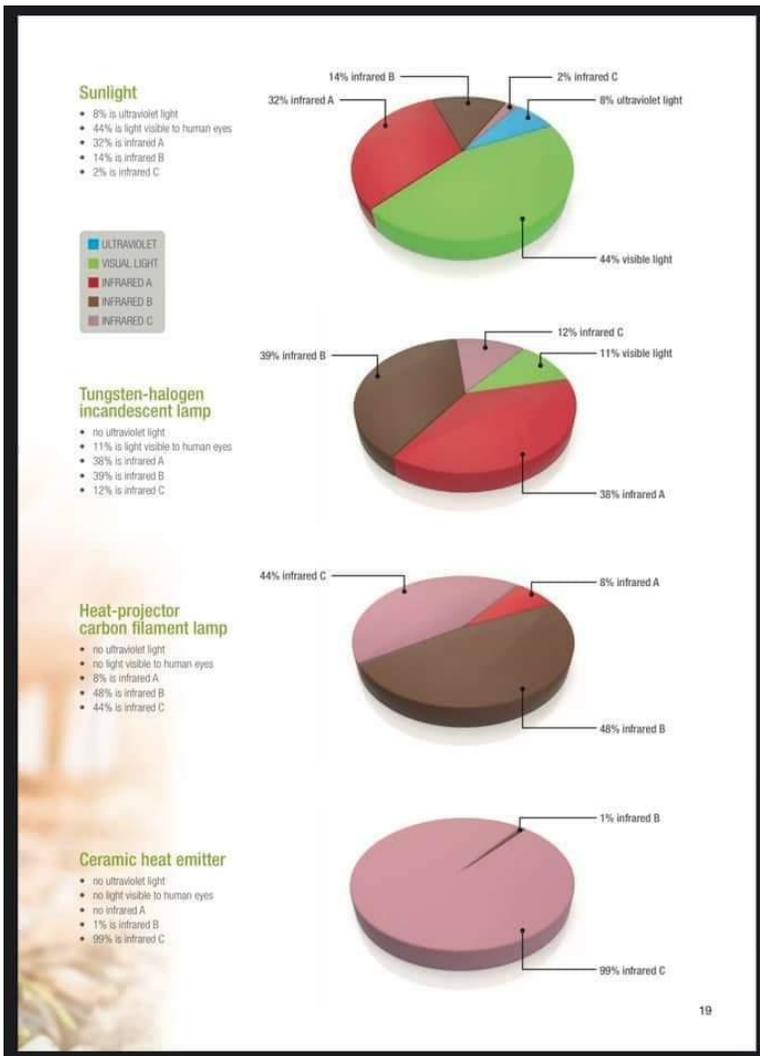
2) The Importance of Infrared Heating

- Heat sources that provide Infrared A and B are important for:
 - Deep tissue-penetrating heat
 - Faster warming of the animal's body
 - Less time needed to bask
 - Better metabolism and digestion
 - Promotion of more natural behaviors
 - Surfaces below the basking area that absorb IR-A wavelengths will radiate that heat back out as IR-C, so your animal gets the full spectrum of Infrared heating

Depth of penetration into the skin



Example illustrating the depth of penetration between IR-A, IR-B and IR-C wavelengths. IR-A penetrates into the subcutaneous layer, where IR-C is relatively surface-level on the epidermis

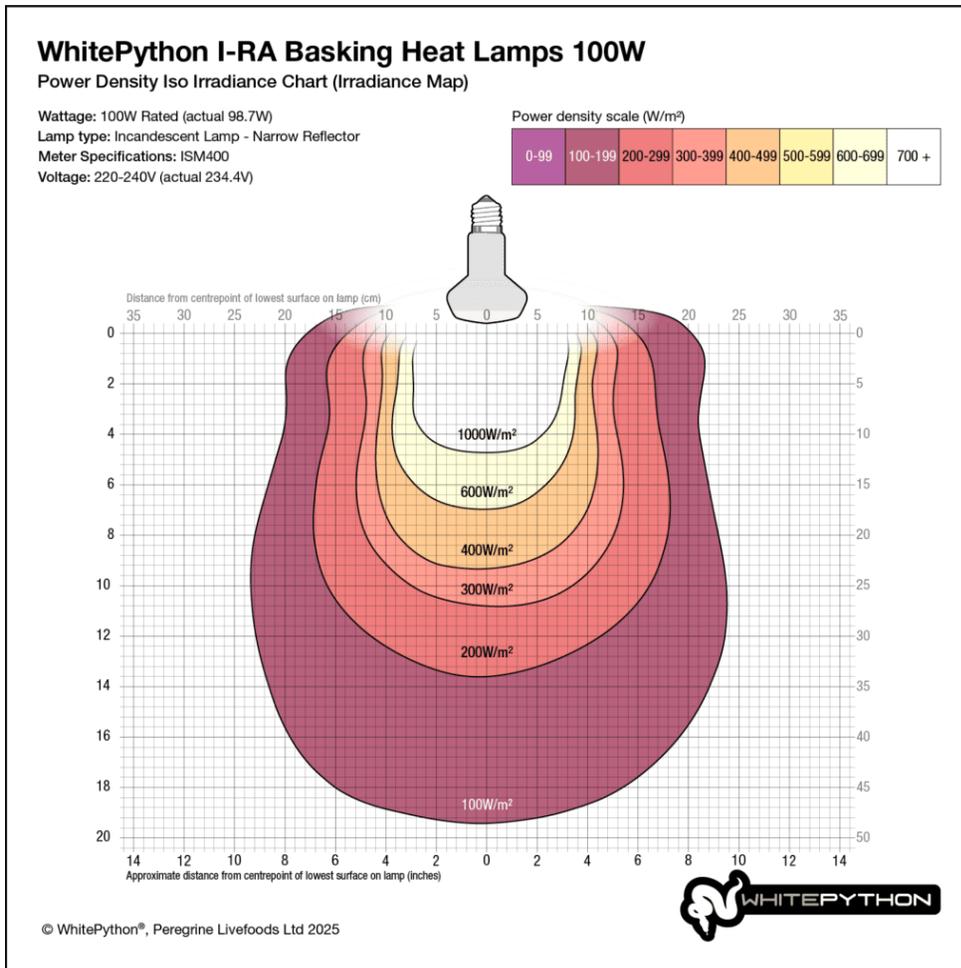


The difference between various heating elements. Incandescent lights provide the most natural array of IR

3.) Bulb Power Density

- Power density is the intensity and spread of infrared radiation from an incandescent/halogen heat lamp. This is measured by **wattage-per-meter squared (W/m²)**.
- Power densities vary between bulb styles and brands, and providing infrared is not one-size-fits all.
- It's important to note that basking surface temperatures don't tell us much about the power density of a bulb. This is because different basking surface materials don't absorb and radiate infrared the same (i.e., a slate basking surface and a faux resin rock may give different temperature readings, even when under the same heat lamp and at the same distance).
- Ultimately, we want to aim to provide irradiance between **200-350W/m²**. The distance for this range is different between bulb styles and brands, but there is an easy "test" to measure this distance for the bulb you have. This will help you determine how high or low your basking area should be.
 - **The Hand Test:** Human skin is just as sensitive to infrared radiation as that of reptiles. The tingly sensation of sunlight on your bare skin is the effect of infrared penetrating the epidermis and down into muscles. For this test, think of your hand as your pet reptile's back.
 - Let your basking bulb warm up for a few hours
 - Place your hand on the bottom of the enclosure and raise it until you feel tingly warmth

- If you can comfortably keep your hand under the lamp at this distance for 60 seconds, you are within the 200-350W/m² range



Power Density Irradiance Chart, © WhitePython. Note the range for 200-350W/m² is between 14-10cm (5.5-3.9in) for this particular bulb, but may be closer or farther away based on bulb wattage and make. Refer to the Tomaskas LTD for irradiance charts for a variety of bulbs

4.) The Importance of Full Spectrum Lighting and LUX

5.) Many reptiles have **tetrachromatic vision**, meaning they have four rods in their eyes for color detection and can see much more of the visible light spectrum than we can. Providing additional full spectrum lighting helps with:

- More visible colors for your animal to see
- Promotion of natural behaviors
- Closer visible replication of what they would experience under sunlight

6.) Currently, there are very few products available that cover more of the visible spectrum (as of 2026). Companies working on true LED full spectrum products are:

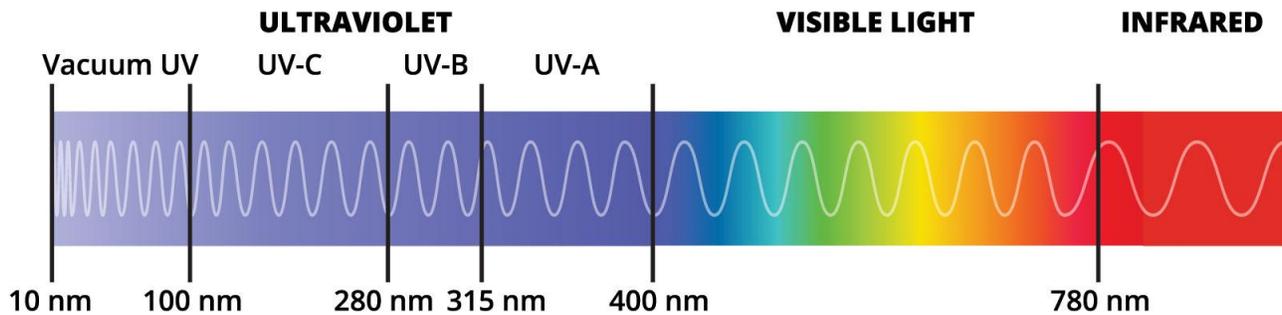
- Fauna-Lux
- Reptile Systems

7.) **LUX** refers to the amount of light that illuminates surfaces. Consideration should be taken that the sun's brightness is far greater than the UVB, heat lamps and LED's we offer in captivity (the sun offers 32,000 – 100,000 LUX!) Providing more **LUX** over the **basking area** in the form of bright, white light can promote:

- More natural basking behaviors

b. Mental and physical wellbeing

ULTRAVIOLET LIGHT



Quality lighting will cover some of the visible light spectrum (here shown between 400nm to 780nm); however, the purple, or Ultraviolet spectra will be covered in part by UVB lighting. Note that UV-C wavelengths are excluded from UVB and full spectrum equipment and are dangerous

Temperature, Humidity and UV Index

1.) Temperature

- Temperatures should be provided in a “hot-to-cool” gradient across the tank, with your basking bulb placed on one side of the enclosure
- Temperatures can be monitored by placing a hygrometer/thermometer device on the hot side, and one on the cool side. A thermometer temperature probe can be placed just outside of the beam of light beneath the incandescent heat bulb.
 - Hot side temperatures: 75-78f
 - Refer to the “hand test” for guidance on the basking area, but aim for 82-85f degrees surface temperature
 - Cool side temperatures: 70-75f
 - Night time temperatures: 65-70f
- Surface temperatures can be measured with a laser thermometer gun

2.) Humidity

- Crested geckos live in the tropical regions of New Caledonia. This environment experiences high levels of humidity
- In captivity, we can maintain humidity and provide spikes by misting routinely, but we should aim for the following levels:
 - 70-80% ambient humidity ranges
 - Occasional spikes of 100% can be implemented
 - Allow the enclosure to dry out to 50-60% before misting again
- Hygrometer/Thermometer combo devices can be placed at the top of the enclosure and at the bottom to monitor ambient temperatures and humidity

3.) Safe UVB Exposure

- UVB should be provided through a linear tube that spans halfway across the enclosure. It should be aligned with your basking bulb to one side of the tank, with the basking bulb centered with the middle of the tube

- Not all UVB bulbs are created equally! Certain strengths, bulb styles and brands are not safe or effective for crested geckos (refer to the Shopping List for safe UVB products)
- Crested geckos are **nocturnal** reptiles. This means they are most active at night. They may cryptic bask in the early morning hours, exposing a small portion of themselves to heat and
- On the Ferguson Zone (the UV requirement scale for various reptile species), crested geckos are in Zone 1. This means they need a UVB index between 0.7-1.4
- The height of your enclosure, whether your UVB is mounted above mesh or inside the enclosure, what brand of tank you have (different open-top tank brands have different mesh types) all affect how much UVB your crested gecko will be exposed to, and how high or low your basking area needs to be to achieve the correct UVB index. To figure out how to safely provide UVB for gecko, refer to the following sources:
 - Reptile Lighting on Facebook
 - Crested Geckos Advancing Husbandry on Facebook
 - Northampton Reptile Center – Ferguson Zone
 - Thomas Griffiths, Tomaskas LTD
 - Reptile Academy
 - Reptiles: Advancing Husbandry Practices
 - Arcadia Reptile (for Arcadia product specifications)
 - Zoo Med (for Zoo Med product specifications)
 - Leap Habitats (for Leap Habitats product specifications)
 - Reptile Systems (for Reptile Systems product specifications)

8.) Proper Lighting Placement

- Heating and UVB lighting should be provided in a “light-to-dark”, “hot-to-cool” gradient, with the highest concentration of light over the basking area
- Basking bulbs should be centered with the middle of the UVB tube, where the strongest UVB wavelengths are. This effectively creates a “patch of sun” where the animal can get UVB and heat all in one area
- Full spectrum LED lighting should overlap with the UVB and basking bulb

Enrichment

1.) The Importance of Enrichment

- Many reptile species, including crested geckos, enjoy living in a stimulating environment where they can climb, bask, sleep, hunt and explore
- When these animals are housed in small, bare enclosures, they often exhibit “stereotypy” behaviors, which may include glass surfing, aggression, frequent hiding, pacing, pushing at enclosure doors or corners, and listlessness. These are all indicators of boredom, stress, frustration, anxiety, and eventually sensory-atrophy
- Giving our animals more space and more things to investigate, climb, etc, allows them to exhibit natural behaviors and stimulates their senses. These provisions also decrease fear and stress, and enhance the animal’s sense of security

2.) Ways to Provide Enrichment

- Enrichment can be provided by “cluttering up” your crested gecko’s home. Add in lots of branches, cork bark rounds, plants and substrates for digging
- Female crested geckos will especially utilize substrates for egg-laying

Enclosure Example



90 gallon 24x24x24" PVC enclosure, complete with natural substrates, leaf litter, clean-up insects, UVB and LED lighting, incandescent heating

Common Crested Gecko Illnesses

1.) Bacterial and Fungal Infections

- Bacterial and fungal infections can occur from being exposed to unclean environments, and contaminated wood, leaf litter or plants. These infections can sometimes be passed between animals, depending on the strain of infection they are afflicted with
- Sterilizing organic accessories like wood and leaf litter before they are added to the enclosure can help reduce the risk of infection, as well as cleaning plants before placement, and cleaning up feces regularly
- Having adequate ventilation in the enclosure will help facilitate dry-out periods, so the air and soil don't become a stagnant breeding ground for harmful fungi and bacteria
- Beneficial fungi and bacteria should not be confused with contagious strains
- Infections need to be treated with the appropriate antibiotics, and may need prolonged, aggressive treatment to cure



Crested gecko with fungal lesions

2.) Parasitic Infection

- Parasites are an unfortunate reality of keeping reptiles, especially those who may be wild caught, or who require animal or insect proteins in their diets. Parasites can also be transmitted through cohabitation or unclean environments
- Some common parasites may include coccidia, giardia, pin worms, round worms and nematodes (these may be deadly)
- Fecal exams should be done routinely to check for parasite populations, and so they can be treated as needed



Crested gecko fecal sample with parasitic nematode

3.) Shedding Issues

- Shedding problems in crested geckos are often due to humidity levels that are too low, or vitamin deficiencies

- Because crested geckos are arboreal animals who rely on their toes for climbing, it is highly important to make sure they are able to shed properly. Stuck shed can constrict around their toes, which may cause them to die and fall off. This will prevent the gecko from being able to climb
- Stuck shed can also cause retained eye caps, which can lead to eye infections and damage to the cornea and living lens



Crested gecko with stuck shed over the eye spectacle

4.) Obesity

- Obesity in crested geckos can be caused by feeding too frequently, feeding too many fatty insects, not enough enclosure space for proper exercise
- A crested gecko who is overweight is at risk of developing fatty liver disease, their ability to climb may be affected, and overall lifespan may be shortened



Morbidly obese crested gecko, before and after weight loss

5.) Metabolic Bone Disease (MBD)

- Metabolic bone disease (MBD) is a broad-spectrum term for a variety of illnesses affecting reptiles' skeletal structures. Most commonly in captivity, it is caused by a lack of D3 in the animal's body, which prevents calcium absorption. This leads to softening bones, permanent physical deformities, disability, and death if the condition is allowed to progress

- MBD is one of the most easily preventable diseases in captive reptiles, but it is the most common ailment seen from poor keeper knowledge
- MBD can be prevented by providing species-appropriate UVB, changing out UVB bulbs according to the brand's specifications, and proper supplementation



A crested gecko with severe deformities from MBD

6.) Floppy Tail Syndrome (FTS)

- Floppy Tail Syndrome is a condition that causes a crested gecko's tail to become soft, and bend over its back at the base of its spine
- If left alone, FTS can cause spinal deformities and reproductive issues
- There are no concrete causes for FTS, but some theories include:
 - Metabolic bone disease
 - Not enough climbing options, where the gecko is forced to rest on flat glass. When in an upside-down position, this may cause stress on the tail
 - Genetic predisposition



A crested gecko with a floppy tail

Resources

- **Facebook**
 - Reptile Lighting
 - Behavior Education
 - Crested Geckos Advancing Husbandry
 - Reptiles: Advancing Husbandry Practices
 - Loving Leos Reptile Rescue Inc.
- **YouTube**
 - Animals at Home
 - Reptiles and Research
 - Herp Talk
 - Jessica's Animal Friends
 - Leopard Gecko YouTube (has relevant info on crested geckos as well as leopard geckos)
- **Supplies**
 - Pangea Reptile
 - Bean Farm
 - Light Your Reptiles
 - Reptile Basics
 - Dubia Roaches
 - PetCo
 - PetSmart
- **Experts who have published papers online for science-based research**
 - Thomas Griffiths, Tomaskas LTD, Zoo Husbandry Consultant
 - Dr. Frances Baines, Veterinary Surgeon
 - Dr. Sarina Wunderlich, light physicist
 - Lori Torrini, Behavior Education, Animal Behaviorist
 - The British Herpetological Society