

Green Iguana

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Natural History

Green iguanas (*Iguana iguana*) are a species of large lizard native to tropical and subtropical Central and South America. These lizards are considered invasive species in Hawaii, southern Florida, the Virgin Islands, and the Rio Grande Valley of Texas. Green iguanas are primarily arboreal and herbivorous, with preferred diets of leafy greens, flowers, and soft fruits. Their dietary needs are complex, and we don't fully understand seasonality and selection choices that green iguanas make. Green iguanas are endangered in their native range where they are over-hunted for food.

Characteristics and Behavior

While green iguanas are very common in the pet trade, their needs are unfortunately not often met in captivity. These are large, powerful lizards that are prone to aggressive behavior. Green iguanas are one of the most frequently abandoned reptiles in the pet trade. While these lizards can be tamed with gentle handling, green iguanas should not be obtained with the purpose of owning a cuddly pet. An iguana's tail is a powerful weapon that they can whip when they feel threatened. While their tail is often their primary defense, an iguana's bite can also do serious damage, as can their sharp claws. Male iguanas reaching sexual maturity often become territorial and aggressive toward their owners and end up being relinquished to rescues. Given their size, life expectancy, and difficult care requirements, green iguanas are only suitable for advanced keepers. Baby iguanas are incredibly cute, but they reach adult size within a few years and can become unmanageable for unprepared keepers.

Lifespan

15-20 years.

Adult Size

5-7 feet with some males reaching nearly 20lbs in weight. Iguanas can reach their adult size by 3-5 years.

Housing

Being such large lizards, green iguanas require very large enclosures. A 20gal enclosure is sufficient for a hatchling, but young iguanas will need to be upgraded

quickly as they grow quite rapidly. Ideally, green iguanas would be kept in large, outdoor enclosures with plenty of room to move around and climb. A 15'x12'x15' is a good starting size for an outdoor enclosure in environments where iguanas can be outdoors for all or some of the year. For indoor enclosures, the bigger the better. The absolute minimum would be 8'x6'x8' (lxwxh), but as large as possible is much more ideal. The general rule of thumb for minimum enclosure size for lizards is 3x the length of their body. That would mean that a 7' iguana would need a 21' enclosure, which is likely impossible to achieve indoors. Being arboreal, iguanas also need significant height. Many serious keepers choose to convert a room into an iguana enclosure. Iguanas are highly territorial and should be kept alone, particularly males.

Plenty of branches, logs, or rocks should be provided to allow the iguana to climb. In outdoor enclosures, basking shelves and ledges can be built. The iguana should be able to climb closer to or farther away from the basking source to thermoregulate. Plants (live or fake), ground clutter, and basking rocks such as flagstone or slate can all be provided to provide enrichment and security. Paper towel should be used for young iguanas, as they are more likely to ingest substrate. Cypress mulch, EcoEarth, or Zilla Jungle Mix are all humidity holding substrates that can be used for iguanas.

Lighting

Like all lizards, iguanas require UVB light to synthesize vitamin D3 in their skin. Vitamin D3 is needed for proper metabolism of calcium and prevention of metabolic bone disease. The Arcadia T5 12% Desert or Arcadia T5 6% Forest are both acceptable choices, depending on where you set up your iguana's basking spot. Arcadia provides a guide as to where to place your UVB fixture in relation to your iguana's basking spot. UVB fixtures should be roughly as long as half your reptile's enclosure length. It is important to note that UVB cannot penetrate glass, so natural sunlight through a window will not be sufficient for a lizard to synthesize vitamin D3. Allowing safe outdoor time is also an excellent source of UVB and visible light. Iguanas taken outdoors should be kept in an escape-proof and predator-proof, non-glass enclosure. Provide shade and basking spots so your iguana can regulate their temperature.

Sunlight is made of ultraviolet, near infrared (IR), mid IR, far IR, and visible light. It is our job as keepers to provide full spectrum lighting, which means as close to sunlight as possible. Unfortunately there is not one source for all of these components, so we must provide multiple types of lighting. For visible light, LED or halide bulbs should be provided.

UVB is NOT optional for lizards. Lack of proper UVB can lead to impaired skeletal, muscle, and immune function. Replace UVB bulbs every 6 months, as they can continue to give off light even when not producing UVB. Lights should be turned off at night to maintain normal day/night cycles. For this reason, red or black nightlights should not be used as they can disrupt normal day/night cycles.

Arcadia UVB guide: <https://www.arcadiareptile.com/lighting/guide/>

Heat

Unlike mammals, reptiles cannot internally regulate their temperature and rely on their environment to heat and cool themselves. Therefore, it is important that we provide captive reptiles with a temperature gradient so they can warm up or cool down as needed. Reptiles have three temperatures to measure: basking spot, warm ambient, and cool ambient. The basking spot is the hottest area in the enclosure where they bask, the warm ambient is the air temperature on the warm side of the enclosure, and the cool ambient is the air temperature on the cool side of the enclosure. Ambient temperatures are best measured with digital thermometers (one on the warm end and one on the cool end), as analog thermometers are often inaccurate. Basking temperatures can be measured with a digital infrared thermometer.

Iguanas need a basking spot of 95-105F, a warm ambient of 85F-90F, and a cool ambient of 75-80F. Any light emitting sources should be turned off at night, but a non light emitting source like a ceramic heat emitter, radiant heat panel, or deep heat projector may be needed to keep the temperature in the mid 70s to low 80s. Sunlight is made of UV, near IR, mid IR, far IR, and visible light. Flood tungsten-halogen bulbs are the most efficient at producing near IR, which is the most abundant IR in sunlight, and they also produce significant mid IR and some far IR. Far IR is the least abundant in sunlight, but is most often produced in large amounts by sources like ceramic heat emitters, heat pads, and radiant heat panels. Tungsten-halogen bulbs should be the flood type to ensure a wide enough basking site. These heat producing bulbs can be found as reptile specific bulbs or at hardware stores. A cluster of bulbs may be needed to provide a basking spot large enough for an adult iguana. Avoid hot rocks as these can easily burn reptiles.

Humidity

Green iguanas require an ambient humidity of at least 70-80%, which should be measured with a digital hygrometer. Foggers or misters may be required to maintain adequate humidity.

Feeding

Previously, iguanas were thought to be omnivorous but consumption of animal protein appears to be associated with non-native or disrupted environments. An iguana's GI tract is designed for fermentation of plant products, and has been shown to be as efficient as mammalian herbivores. Iguanas have a population of microorganisms in their large intestines that aid in digestion of plant products, similar to how a horse or rabbit digests plant matter. Feeding animal protein has been shown to increase growth rates in young iguanas, likely due to the increased protein content, but the effects of this rapid growth are not known, and adults on inappropriately high protein diets have been known to develop kidney disease. Therefore, feeding animal protein to iguanas is not recommended.

Iguanas under 3 feet should be fed 2x/day, whereas larger iguanas can be fed 1x/day. Iguanas are herbivorous and require a variety of foods to provide enrichment and prevent nutritional deficiencies. 60-80% of the diet should be made of leafy greens, 10-20% other vegetables, and 5-10% fruit and fiber (alfalfa hay or pellets). Food should be cut into bite sized pieces. Young iguanas require a multivitamin with vitamin A 2x/week and a calcium supplement daily. Adult iguanas can have a multivitamin 1x/week and calcium every other day. Calcium powders should be calcium carbonate based and should not have any phosphorus. If you are providing adequate UVB, calcium powder does not need to contain D3. Arcadia, Repashy, and ZooMed all have good products. Follow your brand's recommendations to avoid overdosing. Commercial iguana or tortoise food can be offered occasionally as supplemental nutrition.

Leafy greens: Turnip greens, mustard greens, dandelion greens, beet greens, bok choy, swiss chard, collard greens, parsley, escarole, and romaine. Kale and spinach can be offered occasionally.

Vegetables: Squash, zucchini, bell pepper, sweet potato, cucumber, broccoli, carrots, asparagus. Avoid garlic, onion, and rhubarb.

Fruit: Papaya, melon, strawberries, bananas, apples without seeds, plums, grapes, kiwi.

Water

A dish of fresh water large enough to soak in should always be available. Wild iguanas are proficient swimmers so offering the opportunity to swim in a kiddie pool may be enriching for them.

Sexing

Males tend to be larger, have hemipenal bulges, more prominent femoral pores, larger dorsal spines, and larger dewlaps than females. It can be difficult to distinguish sexes prior to sexual maturity, but by 2 years of age a male's femoral pores should be significantly more apparent than a female's. Males will also start to perform jerky head bobs as they reach sexual maturity. Maturity occurs around 3 feet, and at this time both males and females may start showing seasonal aggression.

Zoonosis

Like other reptiles, iguanas can carry *Salmonella*. Always wash your hands after handling reptiles or items from their enclosure. Care should also be taken to carefully clean any bites or scratches.

Health

Iguanas are prone to nutritional-secondary hyperparathyroidism (metabolic bone disease), dysecdysis (shedding issues), kidney disease and reproductive problems. Bowed or abnormal limbs, swelling of the face or limbs, and poor growth are all signs of illness that should be evaluated by a vet. Green iguanas should be examined by your veterinarian every 6-12 months.

Sources and Further Reading:

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- Facebook: Advancing Herpetological Husbandry
- *Mader's Reptile and Amphibian Medicine and Surgery*
- *The Arcadia Guide to Reptile and Amphibian Nutrition*