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IGUANAS

## Green Iguana

# *Iguana iguana*

*Iguana iguana* is one of the largest lizards in the Americas: an arboreal herbivore that grows to 2 m in length and weighs several kilos. It is diurnal, lives near water and eats leaves, flowers and fruit. As an adult it needs a room rather than an enclosure, strong heat, strong UVB and a diet entirely free of animal protein, and it lives for 15-20 years.

Family: Iguanidae  Former name: *Iguana coerulea; Iguana emarginata; Iguana lophryoides; Iguana melanoderma; Iguana minima; Iguana sapidissima*

KEY FACTS

### THE ANIMAL

| | |
|---|---|
| Adult size | **120-200 cm**<br>total length incl. tail |
| Weight | **1,000-8,000 g** |
| Lifespan | **15-20 years** |
| Active | **By day** |
| Lifestyle | **Arboreal and semi-aquatic** |
| Habitat | **Dry forest, rainforest and wetland** |
| Difficulty | **Experienced** |

### CARE

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|---|---|
| Min. enclosure | **250 × 150 × 200 cm**<br>L × W × H for 1 adult |
| Temperature, day | **26-32 °C** |
| Basking spot | **40-50 °C** |
| Temperature, night | **22-27 °C** |
| Humidity | **60-80%** |
| Water | **Water section** |
| UVB | **Essential**<br>Ferguson zone 3 |
| Diet | **Plants** |
| Kept | **Singly** |

### BREEDING

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|---|---|
| Reproduction | **Egg-laying** |
| Sexually mature | **24-60 months** |
| Clutch size | **10-70 eggs** |
| Clutches per year | **1** |
| Incubation | **70-120 days**<br>at 29-32 °C |

### PROTECTION AND PAPERWORK

| | |
|---|---|
| CITES | **Appendix II** |
| EU annex | **Annex B** |
| IUCN | **Least Concern (LC)** |

## About the species

*Iguana iguana* is a heavily built, arboreal lizard with a long, whip-like tail, a crest of pointed spines running from the nape down over the tail, and a large flap of skin, the dewlap, under the chin. The tail makes up most of the length and is often ringed with dark bands. The teeth are flat and serrated like tiny leaves and are made for cutting plant material. In the middle of the head sits a pale parietal eye, which does not form images but registers light, shadow and movement from above.

Adults reach 120-200 cm in length including the tail, and the body alone (snout to vent) can reach 58 cm. Males are the largest: big males weigh 4-6 kg and a few up to 8 kg, while females are smaller and lighter. Males also have taller dorsal spines, a larger dewlap, heavier jowls and clearly larger femoral pores, which release a scent. The colour is green in young animals, but it varies with origin: animals from Peru can be bluish green, animals from western Costa Rica red and animals from Mexico orange. Older males often turn orange in the breeding season. Yellow, blue and brown colour forms have been bred in captivity.

The species was described in 1758 by Carl Linnaeus as *Lacerta iguana*. Its delimitation is debated. The populations of the southern Lesser Antilles are regarded as subspecies, and the Central American animals with two or three small knobs on the snout were formerly treated as the subspecies *I. i. rhinolopha*; some authors now regard them as a separate species, *Iguana rhinolopha*. This guide follows the broad delimitation, and the care is the same.

The greatest challenge is the size. Small juveniles seem manageable, but the animal grows fast and as an adult needs a whole room, powerful heating and electricity for UVB and heat lamps for more than 15 years. Adult males can become sharp and sudden in behaviour in the breeding season, and the tail, claws and teeth can cause serious injury.

Read more: Lighting and UVB

## Distribution and habitat

*Iguana iguana* has one of the largest ranges among lizards. It lives from Sinaloa and Veracruz in Mexico through all of Central America and down into South America to Colombia, Ecuador, Venezuela, Guyana, Suriname, French Guiana, Peru, Bolivia, Paraguay and large parts of Brazil, south to around the Tropic of Capricorn. It is also found on many islands in the Caribbean, including Trinidad and Tobago, Grenada, the Grenadines, St Vincent, St Lucia and Montserrat, and on Aruba, Curaçao and Bonaire.

Outside the native range there are introduced populations in, among other places, Florida, Hawaii, Puerto Rico, several islands in the Caribbean, Fiji and South-East Asia. They are not included on the map.

> **Native range:** Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Venezuela, Guyana, Suriname, French Guiana, Peru, Bolivia, Paraguay, Brazil, Trinidad & Tobago, Grenada, St Lucia, St Vincent & the Grenadines, Montserrat, Aruba, Curaçao and Caribbean Netherlands.

### HABITAT

*Iguana iguana* is diurnal and arboreal and is found in moist tropical forest, dry forest, mangrove and scrub, almost always close to water. Adults bask high in the treetops and on open branches over rivers and lakes, while the juveniles stay lower. When alarmed, the animals leap into the water and swim or dive away with powerful strokes of the tail, and they can fall several metres and land unharmed.

The climate is tropical and warm all year round. The animals warm themselves in the sun and are darker in the morning, when the body is cold, and lighter in the middle of the day. Mating falls in the dry season, so the young hatch in the rainy season, when food is most plentiful. Females come down to the ground only to dig the nest, which lies from 45 cm to over 1 m deep.

## Care

### THE ENCLOSURE

An adult needs an enclosure or a whole room of at least 250 × 150 × 200 cm (length × width × height). Larger is always better. As a rule of thumb, the length should be 1.5-2 times the animal's total length and the height at least as great as the animal's length. Height is just as important as floor area, because the species is arboreal and spends most of its time high up. Ready-made enclosures are not available in that size, so an adult needs a custom-built enclosure, an animal room or a converted room with surfaces that tolerate moisture and are easy to disinfect.

An enclosure of 120 × 60 × 120 cm is only sufficient while the animal is young, and an animal of around 90 cm is already too big for it. Plan the adult housing from the start.

Furnish with thick, sloping and horizontal branches at several heights, the thinnest at least as thick as the animal's body, and put shelves and broad basking platforms directly under the heat. Sturdy, non-toxic plants such as *Hibiscus*, *Ficus*, *Dracaena* and *Epipremnum* provide cover and hold the humidity; artificial plants may be eaten. The substrate must hold moisture and absorb droppings: a 10-15 cm layer of damp coconut fibre or cypress mulch, replaced every month. For a new animal whose droppings need to be monitored, newspaper or artificial turf is easiest. Shield heat lamps with mesh so the animal cannot touch them, and make strong doors with good locks, because the animal is strong.

An adult must live alone. Males must never be kept together, and several animals in the same enclosure easily cause serious bite wounds.

Read more: Humidity, misting and ventilation

### TEMPERATURE

The air in the enclosure should be kept at 26-32 °C by day, with a warmer zone under the basking spot and a cooler one at the other end. The basking spot should be 40-50 °C measured on the surface of the basking platform with an infrared thermometer. At night 22-27 °C is suitable. If the heat lamps are switched off at night, a heat panel or a ceramic heat emitter on a thermostat can keep the temperature up without producing light.

In a large enclosure it is warmest at the top by the lamp and coolest at the bottom, so there must be branches and shelves at all heights so the animal can choose for itself. Use at least two thermometers, one at the basking spot and one at the cool end, and do not measure with your hand. Never use heat rocks, which heat unevenly and cause burns.

Too low a temperature causes poor digestion, reduced appetite and a weakened immune system. Too high a temperature causes heatstroke, and the animal must always be able to get away from the heat.

Read more: Heat and temperature

### HUMIDITY AND WATER

The humidity should be 60-80 % by day and may rise towards 100 % at night. Mist the enclosure and the branches morning and evening so there are droplets to drink from, or use a drip or fogging system. Bathe the animal at least twice a week in lukewarm water. The bath often makes it empty its bowels, and that makes cleaning easier.

Ventilation must not be sacrificed for humidity. If the air is still and wet, mould grows and the animal develops respiratory problems. Use a fan in large, sealed rooms and a hygrometer to keep an eye on the humidity.

### WATER AND WATER QUALITY

The animal must always have access to fresh water in a container large enough for it to lie in. The species drinks, bathes and often defecates in the water, so the container is cleaned and filled with fresh water every day. Weigh the container down or sink it so it does not tip over, and do not make it so deep that small animals can drown. A larger body of water that the animal can swim in is an advantage for an adult, but it requires a filter and daily cleaning.

### LIGHTING AND UVB

*Iguana iguana* is diurnal and needs strong UVB all day to produce D3 and absorb calcium. Use powerful UVB tubes (T5 HO) or metal halide lamps that give Ferguson zone 3, that is, a UV index of around 3-4 at the basking spot. The distance depends on the type of lamp, so follow the manufacturer's instructions and preferably measure with a UV index meter. UVB does not pass through glass or plastic.

Replace the tubes according to the manufacturer's instructions even if they still light up, because the UVB output falls before the light does. Keep the light on for 12 hours a day and use a timer. The UVB lamp alone gives too little light in a large enclosure, so supplement with powerful LED lamps. Time in natural sunlight outdoors under supervision is good when the temperature is 27-35 °C, but never in a closed glass container in direct sun.

Read more: Calcium, vitamins and supplements

### FEEDING

*Iguana iguana* is a herbivore, and the diet must be entirely free of animal protein: no insects, cat or dog food, eggs or meat. Animal protein puts a strain on the kidneys and can cause kidney failure, gout and overly fast growth, and it is one of the most common mistakes in keeping the species.

The staple is dark green, leafy plants, which should make up 60-80 % of the diet: dandelion leaves, rocket, mustard greens, kale, chard, parsley, clover, hibiscus leaves and many other wild herbs. The rest is other vegetables such as courgette, butternut squash, green beans, carrot and parsnip, and fruit may make up at most 10 %, for example mango, papaya, figs and berries. Flowers such as dandelion, hibiscus and mallow are good food. Avoid iceberg lettuce and other watery salads with no nutritional value, and give spinach, banana and grapes only sparingly, as they bind calcium or are rich in sugar.

Juveniles are fed twice a day, young animals daily and adults daily or every other day. Varied food is the most important thing, and small portions that have to be found give more exercise. Dust the food with calcium (calcium carbonate or gluconate without D3 and phosphorus) every 2nd-3rd day for juveniles and weekly for adults, and give a reptile vitamin mix once a week to juveniles and once a month to adults. Calcium and phosphorus must be in a ratio of 2:1, and overdosing of vitamins A and D is toxic. Keep an eye on the weight: animals that get too much fruit and too little exercise become overweight.

### BEHAVIOUR AND HANDLING

Young animals are handled briefly and calmly every day, but adults are strong and can cause serious injury. The tail can lash like a whip, the claws scratch deeply and the teeth can cut the skin open. The species is solitary and territorial, and males can be aggressive in the breeding season. Use gloves and long sleeves when handling larger animals, support the body close to the ground, because the animal can leap suddenly, and never grab the tail, which can break off and grows back as a different-looking tail.

Threat behaviour is head-bobbing and an extended dewlap, an inflated body, hissing and tail whipping. Let a new animal settle in for a couple of weeks before it is handled, and begin by feeding it from the hand. Time outside the enclosure is good, but only under supervision, because the animal can fall, swallow small items and get hurt by other animals. The species carries *Salmonella* in its gut, so wash your hands after every contact with the animal and the enclosure, and do not let small children touch it unsupervised.

Read more: Quarantine and hygiene

## Breeding

### SEXUAL MATURITY AND SEXING

The sex is only clear in mature animals. Males are larger, have taller dorsal spines, a larger dewlap, heavier jowls and strongly developed femoral pores, while the females' femoral pores are small. In juveniles the sex is hard to determine. The animals can breed from their second year, but most reach sexual maturity at 3-4 years and by 5 years at the latest.

### MATING

Mating takes place once a year in a fixed season, in the wild in the dry season. The male bobs his head, shows his dewlap and follows the female, and he holds her fast with a bite on the nape, which can cause wounds. Males can be aggressive during this period, and a pair may only be kept together under supervision and with plenty of escape routes and hiding places. The female can store sperm for several years.

### EGG-LAYING AND CLUTCHES

The female lays her eggs about 65 days after mating. She lays one clutch a year, 10-70 eggs, over a couple of days, and the number rises with her size. She digs the nest in moist, loose soil or sand, and the enclosure must therefore have a large laying box with a layer of soil at least 45 cm deep, so the female does not retain the eggs. Females can produce eggs without a male. If the female cannot find a place to lay, she can suffer egg binding, and that requires a vet immediately. The signs are loss of appetite, digging without laying and a swollen belly.

Read more: Common diseases and signs of illness

### INCUBATION

The eggs are moved carefully, with the same side up, to an incubator with damp vermiculite (about 1:1 by weight with water). The temperature should be 29-32 °C. The eggs hatch after 70-120 days, most after 10-15 weeks. The young cut their way out with an egg tooth, which falls off shortly afterwards.

Read more: Incubating eggs

### REARING THE YOUNG

The young are 17-25 cm long at hatching, look like small females and lack dorsal spines. They live on the yolk for the first week or two. After that they need heat, UVB, calcium and finely chopped leafy greens twice a day. Juveniles kept together must be the same size and have many basking spots and hiding places, and they must be separated as soon as there are signs of bullying. The young grow fast and can weigh 1 kg after three years, so plan for larger enclosures along the way.

## Health and common mistakes

Most illnesses in captivity are caused by wrong diet, too little UVB and too low a temperature:

- Metabolic bone disease from too little UVB, calcium and D3. The signs are swollen limbs, a soft or swollen lower jaw, tremors, seizures and paralysis. It is the most common reason for vet visits.
- Kidney failure and gout from animal protein and too little water.
- Obesity from too little exercise and too much fruit.

- Egg binding in females without a suitable laying site, also in females that live alone. The signs are loss of appetite, digging and a swollen belly.
- Injuries to the tail, toes and jaw from fights, falls or unshielded heat lamps.
- Rubbing the snout against the walls and constant digging, which are signs of stress.
- Internal and external parasites, especially in wild-caught animals.
- Respiratory infection from cold, stagnant, wet air.
- *Salmonella* without symptoms, which can infect humans.

Visit a vet experienced in reptiles shortly after acquisition and then every year. Weight loss, changed appetite, swollen joints, discharge from the eyes or nose and abnormal droppings require a vet immediately.

Read more: Buying animals: captive-bred, wild-caught and transport

### Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.