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LACERTIDS

Northern Caiman Lizard

Dracaena guianensis

Dracaena guianensis is a large, powerfully built, semi-aquatic lizard from the Amazon with a green body, a reddish-orange head and a broad, laterally compressed swimming tail. It grows to nearly 125 cm and feeds almost exclusively on snails and mussels, which it crushes with flat molar-like teeth. The species needs a very large, warm and humid vivarium with a large water section and an experienced keeper.

Family: Teiidae Former name: *Teius crocodilurus*

KEY FACTS

THE ANIMAL

Adult size	**100-125 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**By day**
Lifestyle	**Arboreal and semi-aquatic**
Habitat	**Rainforest and wetland**
Difficulty	**Experienced**

CARE

Min. enclosure	**180 × 90 × 120 cm** L × W × H for 1 adult
Temperature, day	**27-32 °C**
Basking spot	**38-41 °C**
Temperature, night	**24-27 °C**
Humidity	**60-80%**
Water	**Water section** depth 30-40 cm
Water temperature	**24-29 °C**
UVB	**Recommended** Ferguson zone 3
Diet	**Insects, vertebrates and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**4-7 eggs**
Incubation	**160-180 days** at 28-30 °C

PROTECTION AND PAPERWORK

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

About the species

Dracaena guianensis is a heavy, powerfully built lizard in the family Teiidae, which also includes the tegus. The body is olive to bright green, the head is red to orange, and the back is covered with large, keeled scales arranged in four to six irregular rows along the body. The tail is thick, slightly compressed from the sides and brown to black, often with yellow crossbars. It has two bony dorsal ridges that run almost to the tip and meet there. The skin resembles that of a caiman.

The species is built for a life beside and in water. The tail drives the animal through the water with snake-like sideways movements while the limbs are held against the body. A transparent third eyelid closes over the eye underwater, and the limbs with their sharp claws make it a skilled climber. The teeth at the back of the mouth are broad and flat like molars and are used to crush shells. The tail can be used as a whip, and the jaws are so strong that a bite hurts, but the species is not aggressive by nature.

Adults grow to nearly 100 cm in total length, the largest up to 125 cm, of which the body from snout to vent is about 40 cm. Weight is up to about 4.5 kg. The male has a broader, more powerful red head than the female. Sex can be determined from four to seven scales behind the vent: the male has three equal, raised scales in a row behind each thigh (the so-called postcloacal tubercles), whereas the female has one or two large scales surrounded by several smaller, non-raised scales in a rounded pattern. The pattern is visible straight after hatching and does not change with age. Lifespan in captivity is not documented; 10-15 years in the box is an estimate borrowed from the tegus. Size, on the other hand, is not a reliable guide: among young animals the females are slightly longer and heavier than the males, but in adults no difference has been shown.

The genus *Dracaena* differs from all other Teiidae in its keeled belly scales with small lens-shaped scale organs and in its compressed tail. The other species in the genus is *Dracaena paraguayensis*.

Distribution and habitat

Dracaena guianensis occurs in the Amazon Basin in northern South America: Brazil (including Amazonas, Acre, Amapá and Maranhão), Colombia, Ecuador and Peru. French Guiana is the type locality, but records from there are uncertain, and no animals have been found in Guyana. Occurrence in Suriname and Bolivia is unconfirmed.

In Ecuador and Peru it is common in the lowlands east of the Andes, especially along rivers and tributaries of the Napo and Marañón. The size of the wild population has not been studied, but the species is widespread, occurs in large protected areas and is not regarded as threatened.

> **Native range:** Brazil, Colombia, Ecuador, Peru and French Guiana.

HABITAT

Dracaena guianensis lives in flooded rainforest, swamps, lagoons and along the banks of rivers and streams. In the Amazon this includes both whitewater forest, flooded by muddy rivers (várzea), and blackwater forest (igapó). It is diurnal and semi-arboreal: most of the day is spent lying and basking on low branches and roots hanging out over the water, and when danger threatens the animal drops into the water and dives to the bottom or runs into a hole in the bank. At night it sleeps on branches two to five metres above the water or in burrows. The daytime temperature in the forest is about 29 °C, and the climate is tropical with high humidity all year.

The diet is almost exclusively snails and mussels. The animal takes the snail in its mouth, lifts its head so the prey slides back into the throat, crushes the shell with the teeth at the back of the mouth, swallows the soft parts and spits out the shell remains. In the dry season it also eats crayfish, crabs, fish, amphibians, insects from the trees and eggs, and large animals can crush the shell of a river turtle. Jaguars, snakes and crocodilians take adults, but predators are few.

The female lays her eggs in a burrow in the river bank or in a termite mound by the water and covers them. The young are independent from hatching. In the middle of the 1900s the species was hunted heavily for its skin, and populations declined. After protection in the 1970s, hunting for skins has fallen, and skins now come from farms. Today the greatest threats are deforestation, pollution and loss of flooded forest.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Only limited knowledge exists about the care of *Dracaena guianensis*, and the species is a demanding animal. In the past almost all animals in the trade were wild-caught and difficult to keep alive, because they would only eat snails. Today the animals in the trade are mostly captive-bred or from farms and accept food and surroundings more easily.

An adult needs a vivarium of at least 180 × 90 × 120 cm (length × width × height), and larger is better. A young animal can live in a vivarium of about 120 × 30 × 60 cm, but quickly outgrows it, so the adult vivarium must be planned from the start. Such a vivarium is usually custom-built, preferably as a paludarium with a mesh or grille top that can withstand moisture. The lid must be firmly fixed, because the animal is strong.

Furnish it with a large water section, a large land section and plenty of height. The water section is described in the section on water. Fit sturdy branches at several heights and especially over the water, so the animal can lie basking with the option of diving; the branches must be firmly fixed, because the animal climbs and digs and knocks over loose items. The substrate in the land section can be a mixture of cypress bark, coconut fibre and clean sand, which retains moisture and allows digging.

Robust plants give cover and higher humidity, but the animal may tear at them, and artificial plants work just as well. The animal needs a hide it can go completely inside: about 25 × 15 × 10 cm for young animals and at least 45 × 30 × 20 cm for adults.

Keep a single animal as a rule. A pair needs an even larger vivarium with several basking spots and several hides, so the animals do not compete for the warm places.

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

TEMPERATURE

During the day the air should be 27-32 °C. The basking spot is a strong basking branch over the water with a surface temperature of 38-41 °C, measured with an infrared thermometer. At night the temperature must not fall below 24 °C, so heat is needed around the clock. The animal is tropical and must not be given a winter rest.

Use a halogen spot or a powerful heat lamp over the basking branch, and supplement if necessary with a ceramic heat emitter that gives no light. All lamps must be protected from splashes, because the animal swims and splashes water about, and a mesh guard must keep the animal away from the bulbs. Thermometers should be placed at several heights and at the basking spot.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-80%. The water section and plants retain moisture, and a damp substrate helps. A misting system or a rain system that runs a couple of times a day for 10 minutes gives an even humidity in a large vivarium. The vivarium must not be completely closed, because stagnant, humid air causes respiratory infections; ventilate with mesh at the top.

WATER AND WATER QUALITY

The animal must be able to lie in water and dive completely under, so the water section is a permanent part of the vivarium and not just a bowl. The water depth should be at least 30 cm over as much of the floor as possible, and the water should be 24-29 °C, maintained by a submersible water heater.

The animal eats and defecates in the water, so it quickly becomes dirty. Use a large, powerful filter, but the filter does not replace water changes: change the water at least once a week, preferably two or three times. Without a filter the water must be changed once or twice a day. No gravel in the water, which can be swallowed and cause blockages; a bare bottom is safest and easiest to clean. Large river stones that cannot fit in the mouth can be used, but waste collects between them.

LIGHTING AND UVB

Dracaena guianensis is diurnal and basks a great deal, so it needs light, UVA and UVB for 12 hours a day. The species lives in shaded forest and not in open country, but in captivity UVB is recommended, and a powerful T5 HO tube with a reflector over the basking branch provides UVA, UVB and daylight. Which Ferguson zone the species belongs to is not documented; zone 3 is borrowed from the tegus (*Tupinambis teguixin*, *Salvator merianae*), which also bask daily, and used to choose the lamp and distance. Follow the lamp's instructions, check with a UV meter if you can, and replace the tubes according to the manufacturer's instructions, typically every year.

UVB light and calcium prevent bone disease. Position the lamps so the animal can always withdraw from the light.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

In the wild *Dracaena guianensis* eats almost nothing but snails and mussels. Give snails as the staple diet: farmed land snails (e.g. *Helix* and *Achatina*) without the shell, thawed or tinned. Vary this with fillets of freshwater fish, prawns, crayfish, mealworms, large crickets and other insects. High-quality meat can be included, but only as a supplement, and a little fruit can be given a couple of times a week. Wild-caught snails can carry parasites and should not be used.

Adults are fed three times a week. The feeding frequency for young animals is not documented. Dust the food with calcium twice a week, and give a multivitamin once a week. The food can be served in a dish or from long tongs; the animal eats willingly, but easily mistakes a hand in the vivarium for food, so use tongs or a stick to lure it to feeding.

Wild-caught animals will often only take snails and refuse everything else. Captive-bred animals are easier to accustom to a varied diet. Animals that refuse food for several weeks must see a vet.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Dracaena guianensis is intelligent, curious and normally calm, but it is a strong animal with a powerful bite and a hard tail. Threatened animals lash with the tail and bite, and the tail can break off if the animal is grabbed by it. Males rarely fight in the wild.

The animals quickly learn feeding times and the feeding dish, and they wait at the door when food arrives. Handling requires training and patience: teach the animal to follow a target stick, and only lift it out of the vivarium when it is calm. Avoid putting a hand into the vivarium at feeding time, because the animal may mistake it for food. Newly acquired animals are given a few weeks in peace, and handling begins when they eat regularly.

Keep the animal alone. Reptiles can carry *Salmonella*, so wash your hands after contact, and do not let small children touch the animal unsupervised.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

Sex is most reliably determined from the scales behind the vent: the male has three equal, raised scales in a row behind each thigh, the female one or two large scales with several small, non-raised scales around them. The pattern is the same from hatching and throughout life. The male also has a broader head with a stronger red colour. Size is not a reliable guide. Age and weight at sexual maturity are not documented; a captive-bred female has laid eggs at two years and four months old.

MATING

Almost no information exists about mating. What triggers it, and whether there is a particular season or a rest period, is not documented. Males are rarely aggressive towards each other in the wild, but two males should not be put together. A pair needs a very large vivarium with several basking spots, so the animals can keep out of each other's way.

EGG-LAYING AND CLUTCHES

The female lays 4-7 eggs. In the wild she buries them in a burrow in the river bank or in a termite mound by the water. The number of clutches a year is not documented. Give a female that is about to lay a deep, moist and warm land section or a large, closed egg-laying box with moist soil she can dig in. Without a suitable place she may retain her eggs, and this can become life-threatening.

INCUBATION

The eggs hatch after about 160-180 days. The incubation temperature and the eggs' moisture requirements are not documented for the species; 28-30 °C in the box is an estimate based on the daytime temperature in the forest. A closed container with moist vermiculite and a small air hole is the usual solution for lizards, and this is borrowed from the tegus. Leave the eggs undisturbed, and keep them moist without making them wet.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched young measure about 15 cm from snout to vent and are independent from the first day. Keep them in a vivarium with heat, UVB and a water section where they can dive and climb out, and offer small snails without shells and other small feeder insects dusted with calcium. No detailed rearing guide exists. Among young animals the females are slightly longer and heavier than the males.

Health and common mistakes

Many problems are caused by mistakes in care: too low a temperature, too little UVB, too one-sided a diet and dirty water. New animals, especially wild-caught ones, often have intestinal worms and are stressed by transport.

- Intestinal worms and other parasites in new animals. Quarantine them, and have a faecal sample examined.
- Respiratory infections from too low a temperature or stagnant humid air.
- Ear infections, shedding difficulties and skin sores, especially with dirty water.

- Metabolic bone disease from too little UVB and calcium.
- Egg-laying difficulties in females without a suitable place to dig.

A healthy animal has clear eyes, a plump tail and firm droppings, and eats willingly. Animals that lose weight, do not eat or breathe with an open mouth must see a vet with reptile experience. A strong animal weighing several kilos is hard to handle, so arrange transport and examination with the vet in advance.

Read more: Common diseases and signs of illness

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.