herpy

IGUANAS

Cuban Rock Iguana

Cyclura nubila

Cyclura nubila is a large, powerful rock iguana from the sandy and rocky coasts and small islands around Cuba and from the Cayman Islands. It is diurnal, eats almost only plants and is the rock iguana most often bred in captivity. It needs a very large enclosure, strong heat and UVB and lives for many decades.

Family: Iguanidae Former name: *Cyclura caymanensis; Cyclura harlani; Cyclura macleayii; Iguana nubila*

KEY FACTS

THE ANIMAL

Adult size	**90-120 cm** total length incl. tail
Lifespan	**20-48 years**
Active	**By day**
Lifestyle	**Rock-dwelling, terrestrial and burrowing**
Habitat	**Semi-desert, dry forest and rocky terrain**
Difficulty	**Experienced**

CARE

Min. enclosure	**250 × 120 × 150 cm** L × W × H for 1 adult
Temperature, day	**27-34 °C**
Basking spot	**49 °C**
Temperature, night	**20-25 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 3
Diet	**Insects, fruit and plants**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**48-72 months**
Clutch size	**4-18 eggs**
Clutches per year	**1**
Incubation	**60-95 days** at 29-32 °C

PROTECTION AND PAPERWORK

CITES	**Appendix I**
EU annex	**Annex A**
IUCN	**Vulnerable (VU)**

About the species

Cyclura nubila is a large, heavily built iguana with powerful legs, a massive head and a thick tail. The male is clearly larger than the female and has large hemipenal bulges at the base of the tail and large femoral pores, which give off a waxy secretion in the breeding season. The female's femoral pores are much smaller. The colour is greyish to brown, often with irregular pale spots, and many animals acquire a distinct brick-red tinge. The species name is Latin for "cloudy" and refers to the irregular pale spots on the back. The eyes have a golden iris and a red sclera.

The animals are 90-120 cm long in total when they become sexually mature after 4-6 years, and the males go on growing. The weight is not documented. Juveniles are about 30 cm long at hatching.

The species is the largest in the genus and is regarded as the most adaptable. It was described in 1831 by John Edward Gray. The population on Little Cayman and Cayman Brac is a subspecies of its own, *C. n. caymanensis*. The closely related *Cyclura lewisi* from Grand Cayman is today a separate species, but sits inside *C. nubila* in the family tree. The animals in the hobby

come mainly from a population on the island of Isla Magueyes off Puerto Rico, which descends from animals released in the 1960s. The population's head-bobbing and other signals have changed noticeably compared with the animals on Cuba.

In the enclosure *C. nubila* is calm and trusting, but males can bite hard in the breeding season, when testosterone levels are high. The bite is strong enough to take a finger, and the claws on the hind legs can cause serious wounds. The species is not suited to beginners, because the space requirement is large and the animal lives for many decades.

Distribution and habitat

Cyclura nubila lives on Cuba, Isla de la Juventud and the many small islands and reefs around Cuba, including the Archipiélago de los Canarreos and the Cayos de San Felipe. The subspecies *C. n. caymanensis* lives on Little Cayman and Cayman Brac and has been introduced to Grand Cayman. The species has also been introduced to Isla Magueyes off Puerto Rico. The map shows only the native range.

The species is regarded as vulnerable (VU). It is still common in many places on Cuba, but the populations are declining.

> **Native range:** Cuba and Cayman Islands.

HABITAT

The species lives along the coasts on sandy and rocky beaches, in dry scrub and on small islands and reefs, where there are crevices and caves between rocks. The climate is hot and dry with strong sun. The animal is diurnal, basks for long periods from early morning and seeks cover in caves and crevices at night.

The food consists of large amounts of fibre-rich plants and leaves, fruits and flowers. Near the coast mangrove leaves are also eaten. The species gets most of its water from its food and rarely drinks. Excess salt is excreted through the nostrils, and the white crust that can be seen around the nostrils is normal. The female digs a nest in sunny sand, and the nesting season falls in June.

Care

THE ENCLOSURE

Space is the decisive factor in keeping *Cyclura nubila*. A single adult needs an enclosure of at least 250 × 120 × 150 cm (length × width × height). A pair needs at least 250 × 250 cm of floor space, preferably 180 cm in height, and several basking spots and visual barriers. Breeding rarely succeeds in less. An enclosure of that size is in practice a room built for the purpose.

Provide a deep layer of sand and soil, preferably 35-60 cm in a sunny part of the enclosure, so that the animal can dig. Set up boulders, shelves and stable surfaces as basking spots and visual barriers, so that the animals can keep out of each other's way. A hide of at least 120 × 60 × 60 cm with an entrance slightly larger than the animal serves as both a night shelter and a nesting box. Juveniles can have a substrate of alfalfa pellets, which do not cause constipation if swallowed.

The enclosure must have good ventilation and a solid, secure closure. A summer stay outdoors in a secured enclosure is a great advantage on warm, sunny days, if there is a heated hide to go into.

TEMPERATURE

The air should be 27-34 °C during the day. The basking spot should have at least 49 °C on the surface, for juveniles as well as adults, and the whole animal must be able to be warmed evenly, so there must be several heat lamps side by side. If only one lamp is used, the animal may lie under it and get a burn in a circle on its back, because the heat is not felt until the damage is done. Heat lamps must be protected against contact, and heat rocks must not be used as the main heat source.

The cool end must not be warmer than about 27 °C, so that the animal can cool down. Longer periods above 35 °C lower fertility. At night there must be 20-25 °C. The species tolerates cooler nights and briefly temperatures below 10 °C if it has a heated, dry hide to sleep in.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from a dry climate, and the air should be moderately dry, about 40-60 %. The substrate must be dry at the surface and slightly moist deeper down, so that the tunnels do not collapse.

The animals rarely drink, because the food meets most of the water requirement, and they should not be bathed. A water bowl can be left out, and juveniles can be misted now and then. Females must always have fresh water in the days before laying, because they dehydrate easily.

LIGHTING AND UVB

Cyclura nubila is diurnal and needs heat, strong light and UVB. UVB stimulates the appetite and makes it possible to absorb calcium from the plant diet. Use a panel of T5 tubes over the basking spot, preferably together with metal halide lamps; Ferguson zone 3 is an estimate based on the strong sun of the habitat. Check the UV index with a meter and replace tubes according to the manufacturer's instructions.

Sexual activity follows day length: longer days in summer and shorter ones in winter are the most important trigger for breeding activity, so the light must follow the seasons. Natural sunlight is the best supplement, but glass and most types of plastic do not let UV through. Several hours of direct sun a day for three to four summer months give the animal a store of D3. A mesh window instead of glass or an outdoor enclosure makes this possible.

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

FEEDING

The species is almost exclusively herbivorous. The diet consists of about 30-40 % leafy greens (romaine lettuce, collard greens, dandelion, Belgian endive, hibiscus leaves), 30-40 % vegetables (green beans, squash, peas, yellow vegetables) and up to 30 % fruit and flowers, in small pieces. Cabbage and spinach bind calcium and are given no more than once a week. Animal protein is at most 2-7 % of the diet. Adults are given insects or small rodents no more than once a month, juveniles once a week, because too much protein damages the kidneys.

Feed daily as much as the animals can eat; the amount is larger in summer than in winter. A special iguana food can supplement the salad, but must not replace the fresh diet. Food must be free of pesticides. Give calcium once a week, and twice a week to gravid females and after laying. If there are several animals, there must be two food bowls, so that the weakest also get to eat. Juveniles are given the same as adults, but finely chopped.

BEHAVIOUR AND HANDLING

The species is calm and generally trusting, and adults can be accustomed to the hand. The male bobs and wobbles his head to mark territory and to address the female. In the breeding season, from late spring to early summer, males have raised testosterone and may bite, people included. A bite is serious, and the claws on the hind legs are the greatest risk. If an adult must be held, use heavy leather gloves, take hold behind the head, and hold the hind legs. Juveniles are nervous, but most become calm and trusting when they are 2-3 years old.

The species is more adaptable to new partners than other rock iguanas, but a male can pursue a new female so hard that she must be removed. The enclosure should therefore be so large and well structured that the female can get away from the male. A pair that is allowed to stay together all year round forms a stable pair. Males must not be kept together.

Reptiles can carry *Salmonella*. Wash your hands after contact with the animal, the enclosure and the food.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

The male is clearly larger than the female and has large hemipenal bulges at the base of the tail and large femoral pores, which give off a waxy secretion in the breeding season. The female's femoral pores are much smaller and give off no secretion. In captivity the animals are sexually mature after 4-6 years, when they are 90-120 cm long; in the wild it can happen as early as 2-3 years. Breed only fully grown animals in good condition.

MATING

Mating follows day length. With longer days and rising temperature the animals come into breeding condition around April-May, when both sexes acquire a reddish-brown to orange tinge, and the male wobbles his head. The male grips the female by the neck and twists his hindquarters in under hers. Mating itself lasts 1-3 minutes and can be repeated many times. The male chases the female, and a hide and differences in height give her peace. Breeding most often fails because of too little space.

EGG-LAYING AND CLUTCHES

The female begins to dig about 5-6 weeks after mating, often in June. She looks clearly gravid, loses weight in the tail and pelvis and stops eating 2-10 days before laying. She is restless and walks around, and she must have water. She digs a tunnel 45-90 cm long in sunny sand with an egg chamber at the end, where she can turn around. Without a suitable nest she may hold the eggs back.

The clutch is 4-18 eggs, and older and larger females lay the most. Laying takes 45-96 minutes. The female covers the nest and guards it for anything from a week to three months. A nesting box of 120 × 60 × 60 cm with 45 cm of slightly moist soil and sand can be used instead, and some females make do with a box of 60 × 30 × 20 cm.

INCUBATION

The eggs are carefully lifted out and placed with the same side up as in the nest on slightly moist perlite or vermiculite in a closed container, without touching each other. The temperature is 29-32 °C, and about 30 °C is a safe choice; the eggs tolerate swings between 28 and 34 °C over the day. Moisture that collects on the lid is wiped off, and it is better for the eggs to be too dry than too wet. Good eggs are firm and white, unfertilised eggs are soft and discoloured and must be removed.

At about 30 °C the eggs hatch after 80-95 days, and at 30-32 °C it can go faster, down to 60-67 days. Let the young come out of the egg by themselves, so that they have time to absorb the yolk sac.

REARING THE YOUNG

The young are about 30 cm long at hatching and active from the start. Offer them food after 7-10 days. They have the same requirements for heat, UVB and hides as the adults and get the same diet, just finely chopped. Juveniles can have a substrate of alfalfa pellets. Four juveniles can live together in an enclosure of 120 × 60 × 60 cm, but separate them if some are chased away from food and basking spots or grow more poorly.

Health and common mistakes

Most problems are caused by too little heat, UVB and calcium or a one-sided diet. The typical problems are:

- Brittle bones from too little UVB and calcium.
- Kidney damage from too much animal protein.
- Burns in a circle on the back when the animal lies under a single heat lamp, and on the legs and belly when heat rocks are used.
- Dehydration in gravid females, which must have fresh water.
- Egg-laying difficulties in females without a suitable nest.
- Stress and fights between animals kept too close together.

The white crust around the nostrils is excreted salt and is normal, and so is "sneezing" when the animal blows out salt. The species is very long-lived, and animals of almost 48 years have been recorded in captivity. Find a vet with experience of reptiles before you need one.

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.