herpy

IGUANAS

Rhinoceros Iguana

Cyclura cornuta

Cyclura cornuta is a heavy, powerful rock iguana from the dry regions of Hispaniola in the Caribbean. It has horn-like bumps on the snout, grows to 60-136 cm and weighs 4.5-9 kg. The species is threatened in the wild. Captive-bred animals are usually calm, but the species needs a small room of its own, strong heat and UVB, a plant-based diet and care for 20 years or more.

Family: Iguanidae Former name: *Aloponotus cornutus; Iguana cornuta; Lacerta cornuta; Metopoceros cornutus*

KEY FACTS

THE ANIMAL

Adult size	**60-136 cm** total length incl. tail
Weight	**4,500-9,000 g**
Lifespan	**15-25 years**
Active	**By day**
Lifestyle	**Rock-dwelling, terrestrial and burrowing**
Habitat	**Semi-desert, dry forest and rocky terrain**
Difficulty	**Experienced**

CARE

Min. enclosure	**400 × 250 × 200 cm** L × W × H for 2 adults
Temperature, day	**27-33 °C**
Basking spot	**36-42 °C**
Temperature, night	**20-24 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 3
Diet	**Fruit and plants**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**24-108 months**
Clutch size	**5-24 eggs**
Clutches per year	**1**
Incubation	**85-92 days** at 30 °C

PROTECTION AND PAPERWORK

CITES	**Appendix I**
EU annex	**Annex A**
IUCN	**Endangered (EN)**

About the species

Cyclura cornuta is a large, heavy iguana with powerful legs, a heavy head and a thick, laterally compressed tail. A crest of pointed, horny scales runs from the nape to the tip of the tail. The species name *cornuta* is Latin for "horned" and refers to the enlarged, bony bumps on the snout, which resemble a horn. The male has a large fat pad on the back of the head, a large dewlap, larger femoral pores and more distinct horns and crest. The female also has horns and a dewlap, and the difference between the sexes is smaller than in most other iguanas.

The animal grows to 60-136 cm in total, and most adults weigh 4.5-9 kg. Males are the largest. The colour is uniform grey to brown, in some animals steel grey or dark green. Hatchlings weigh about 43 g and are about 18 cm long, of which just under 10 cm is body.

The species was described in 1789 by Pierre Joseph Bonnaterre. Besides the nominate form, a subspecies lived on Navassa, *C. c. onchiopsis*, which is extinct; some regard it as a separate species. *Cyclura stejnegeri* from Mona, near Puerto Rico, was formerly regarded as a subspecies. On Hispaniola the species lives alongside *Cyclura ricordii*, and it is the only place where two *Cyclura* species share a habitat.

Captive-bred animals are generally calm and tolerate people well, and some even seek contact. Temperament varies from animal to animal, with the season and from day to day. If cornered, the animal prefers to flee, but if it cannot get away, it bites and lashes out with its powerful tail. The bite is serious, and the long claws can tear the skin, even when a tame animal is being handled.

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

Distribution and habitat

Cyclura cornuta is found only on Hispaniola (Haiti and the Dominican Republic) and the islands around it. Populations are scattered and stable only on Isla Beata and at the far end of the Barahona Peninsula in Jaragua National Park. There are fairly dense populations in south-eastern Haiti and on the islands off the coast, at the brackish lake Étang Saumâtre in Haiti and at the salt lake Lago Enriquillo in the Dominican Republic, including on Isla Cabritos. A record from Île de Limbe in northern Haiti shows that the species also lives further north.

The subspecies on Navassa has disappeared. The population on Hispaniola has shrunk, especially in Haiti, where deforestation, hunting and introduced predators have taken a heavy toll, and the species is classed as Endangered (EN).

> **Native range:** Haiti and Dominican Republic.

HABITAT

The species lives mostly in dry scrub and dry forest, where very little rain falls. The landscape is stony, with eroded limestone, few trees and bushes, cacti and coastal terraces. The animal stays near large boulders and rock faces, where it basks, and has crevices and burrows to retreat into. It flees straight in among the rocks when it spots people, birds of prey or feral dogs and cats.

The mean annual temperature is at least around 27 °C, and the species needs heat and strong sun. It is diurnal and basks for long periods. Originally it lived mainly near the coasts, but people and introduced predators have pushed it further inland. Males are territorial, and the most aggressive males hold the largest territories. Mating takes place at the start of the first rainy season in May and June, and females lay eggs around the beginning of August. Females fight among themselves over the few good nesting sites.

Care

THE ENCLOSURE

Space is the decisive factor in keeping *Cyclura cornuta*; too little space and too little sunlight are the main reasons the animals do not thrive in captivity. A pair needs at least 9-10 m² of floor, for example 400 × 250 cm, and preferably a ceiling height of 2 m or more. More space, preferably up to 18 m², is always an advantage, and no iguana room is too large. In practice this is a room built for the purpose, ideally with south-facing windows and a large outdoor enclosure for sunny summer days.

The species digs. Leave half of the floor as coarse sand, 45-60 cm deep, and build the rest from large stones, mortared together into several burrows and many basking spots so that nothing can collapse. Boulders and walls act as visual barriers, so that each animal can reach food, a basking spot and shade on its own, and so that a dominant male cannot keep the other away from everything. All basking spots must be usable by all animals, and hiding places where the animals can hide completely reduce nervousness and fights. Keep the area around the food bowls free of sand and soil, so that the animal does not swallow substrate with its food.

A pair is the group that works best. Several animals together form a hierarchy in which size determines rank, and too many animals in too little space cause stress.

Read more: Heat and temperature

TEMPERATURE

The air should be 27-33 °C during the day, and the burrows may be slightly cooler. The basking spot should be 36-42 °C on the surface. At night the temperature should be 20-24 °C and must never stay below 17 °C for any length of time. For an adult animal, the heat and UVB light must cover the whole body: place several lamps side by side over a large, flat stone, and keep 30-60 cm around the basking spot clear so that the animal can move to suit the warmth. Always fit a guard in front of the lamps.

In summer an outdoor enclosure in the sun is the best solution, but there must always be a heated, dry shelter. Long periods above about 35 °C reduce fertility in the closely related *Cyclura nubila*.

Read more: Lighting and UVB

HUMIDITY AND WATER

The species comes from a dry climate, and the humidity in the enclosure should be moderate, around 40-60 %. The figures are not documented for the species but are based on the climate of its habitat. The two short rainy seasons of the year, spring and autumn, can be imitated with a daily shower from a sprinkler system in the late afternoon. The sand should be dry on the surface but may be slightly damp further down, so that the tunnels do not collapse.

Provide a water bowl that cannot be tipped over. Adults get most of their water through their food and rarely drink, but females drink just before laying, when they easily become dehydrated, and must then always have fresh water.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Cyclura cornuta is diurnal and needs heat, strong daylight and UVB. Use a UVB source in Ferguson zone 3 over the basking spot, for example a powerful mercury vapour or metal halide lamp, so that the UV index is around 4-6 at the animal when it basks, and supplement with strong white light over the rest of the room. Check with a UV meter, and replace the lamps according to the manufacturer's instructions. No artificial light is as good as sunlight, so make use of windows and time outdoors, but glass and most types of plastic do not let UV through.

Let the day length follow the season, with 10-14 hours of light. The change in day length through the year is the most important signal that starts breeding in *Cyclura*.

FEEDING

The species is almost purely herbivorous. The basis is leafy greens: dandelion and cabbage leaves such as turnip greens and mustard greens, supplemented with endive, chicory and watercress. To this are added vegetables (green beans, sugar snap peas, okra, parsnip, bell pepper, grated pumpkin and winter squash) and a little fruit, preferably figs, papaya, mango and the leaves and fruit of prickly pear. Spinach, white cabbage, broccoli, Brussels sprouts, sweetcorn, celery leaves and lettuce contain too much oxalate or phosphorus, too little nutrition or substances that inhibit the thyroid gland, and are not given. Chop and mix everything well so that the animal does not pick out only its favourites, and mix in natural iguana pellets or alfalfa powder for the fibre.

Animal food is not part of the regular diet. Too much protein causes obesity, fatty liver and permanent kidney damage. Adults are fed about five days a week. The food is dusted with calcium 1-2 times a week and with vitamins every other week; juveniles get calcium 2-3 times and vitamins once a week. Gravid females need extra calcium during the breeding season. Keep an eye on weight, and give the animal the chance to move around.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Captive-bred animals are mostly calm and tolerant, and some seek attention. Mood can vary, and an otherwise friendly animal may have periods when it wants to be left alone. Head-bobbing is the main signal: males bob at each other to mark territory, and the animal may bob at people as a warning or a greeting. A bite is serious, and the claws cause deep lacerations, so wear heavy leather gloves when handling.

Males are territorial and cannot be kept together. A pair that has been together for several years works best. The male does not readily accept a new female and may chase her so hard that she has to be removed. Females also fight among themselves over nesting sites. Always keep the room large enough for the animals to keep out of each other's way, and have an extra enclosure ready.

Like all reptiles, iguanas can carry salmonella. Wash your hands after contact with animals, enclosure and food.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

The male is larger than the female and has larger horns, a taller crest, a fat pad on the back of the head, a large dewlap and large femoral pores. The difference between the sexes is smaller than in most iguanas, because the female also has horns and a dewlap. Sexual maturity comes late: females may be mature after 2-3 years and males after 4-5 years, but many animals are not mature until 5-9 years. Only breed animals that are fully grown and in good condition.

MATING

Mating follows day length and the rainy season. Males are most ready to mate in April and May, and mating takes place in May or June and lasts two to three weeks; courtship may begin as early as March, when the male chases the female. The male bobs vigorously and grips the female by the nape. Watch whether the female is chased too hard, and separate the animals if she gets wounds. A pair that has been together for several years gives the best results, and breeding most often fails because of too little space.

EGG-LAYING AND CLUTCHES

The female lays her eggs about 40 days after mating, most often in late July or early August. The clutch is normally 5-24 eggs, on average 12-17, and exceptionally up to 34. The eggs are about 7 × 4 cm and weigh about 60 g. In the weeks beforehand the female digs trial holes, her abdomen becomes clearly distended, and she eats less. She needs a sunny area with sand or soil 35-60 cm deep, a large box filled with soil or a nest box with a lid and an entrance hole. Without a suitable nest she may retain the eggs. The female guards the nest for days to weeks.

INCUBATION

The eggs are carefully lifted out and placed in a closed container on slightly damp vermiculite or perlite, for example two parts vermiculite to one part water by weight, with the same side up as they lay, and without touching each other. Incubate at about 30 °C; 28-29 °C produces sluggish hatchlings with large yolk sacs, which often die. Condensation on the lid is wiped off, and it is better to have the eggs too dry than too wet. Weigh the eggs regularly to follow development. Infertile eggs are soft and discoloured and are removed.

The eggs hatch after 85-92 days.

REARING THE YOUNG

The hatchlings weigh about 43 g, are about 18 cm long and are active from the start. Give them an enclosure with heat, UVB, hiding places of stacked cork bark and a substrate that will not be swallowed with the food. The air should be 27-32 °C during the day and about 24 °C at night. The hatchlings are fed every other day with finely chopped plant food, dusted with calcium and vitamins. Juveniles must be separated if some are chased from food and basking spots.

Health and common mistakes

Most problems are caused by too little space, heat, UVB and calcium, or by an incorrect diet. The typical problems are:

- Metabolic bone disease from too little UVB and calcium.
- Obesity, fatty liver and kidney damage from too much protein.
- Burns from lamps, if the animal lies under a single lamp or if the lamp is unguarded.
- Stress when many animals are kept together in too little space.
- Constipation from sand or other substrate swallowed with the food.
- Egg binding in females without a suitable nesting site.
- Bites and tail wounds between animals that cannot be kept together.

Without space and sunlight the animals seldom grow old, while with good care they live 20 years or more. Have a vet examine faecal samples regularly, and find a vet with reptile experience before one is needed.

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.