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IGUANAS

Green Anole

Anolis carolinensis

Anolis carolinensis is a slender, climbing lizard from the south-eastern USA that shifts between green and brown depending on temperature, light and mood. It grows to 12-20 cm including the tail, is active by day and feeds on small insects. It needs a tall, bright, humid enclosure with UVB and a warm basking spot, and the male is kept alone or with a couple of females.

Family: Dactyloidae Former name: *Ameiua bullaris; Anolis baccatus; Anolis podargicus; Anolius carolinensis; Norops baccatus*

KEY FACTS

THE ANIMAL

Adult size	**12-20 cm** total length incl. tail
Weight	**2-6 g**
Lifespan	**4-8 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Temperate woodland and meadow**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 60 × 60 cm** L × W × H for 1 adult
Temperature, day	**22-28 °C**
Basking spot	**30-35 °C**
Temperature, night	**18-24 °C**
Humidity	**60-70%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 2
Diet	**Insects**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**4-12 months**
Clutch size	**1-2 eggs**
Clutches per year	**6-10**
Incubation	**35-49 days** at 28-30 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Anolis carolinensis is a small, slender lizard with a narrow, tapering head, a long thin tail and toe pads that make it easy to climb smooth surfaces. The scales are small and velvety. The colour shifts between green and brown: green is seen in a calm, warm animal, while brown and almost black go with cold, stress and fighting. The change is controlled by three types of pigment cells in the skin and takes place within a few minutes. The underside and lower jaw are pale.

The animal grows to 12-20 cm including the tail, and the tail makes up more than half of the length. The body alone (snout to vent) reaches up to 7-8 cm. Adults weigh 2-6 g. Males are larger than females and have a pink to orange dewlap under the throat, which they extend to impress a female or warn a rival. In females the dewlap is rarely seen. Females and juveniles often have a pale stripe down the back.

The subspecies *A. c. seminolus* lives in south-western Florida. *Anolis porcatus* from Cuba was formerly considered part of the same species. The name of the family is disputed: both Dactyloidae and Anolidae are used. Many animals in the trade are wild-caught in the south-eastern USA.

The species is easily stressed by handling and is better suited to being watched than to being picked up daily.

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

Distribution and habitat

Anolis carolinensis lives in the south-eastern USA: from eastern Texas, south-eastern Oklahoma and southern Arkansas through Louisiana, Mississippi, Alabama and Georgia to Florida, and up through South Carolina and North Carolina to south-eastern Virginia and south-eastern Tennessee. The species is also found in the Bahamas, the Cayman Islands and Anguilla, but it is unclear whether those populations are native, and they are not included in the map. The type locality is Charleston in South Carolina.

The species has been introduced to Hawaii, California, Mexico, the Ogasawara Islands and Okinawa in Japan, Guam and Saipan, among other places. In Florida it has been pushed back in several areas by the introduced *Anolis sagrei*.

> **Native range:** United States.

HABITAT

The species is arboreal: it lives on trunks, branches and bushes, most often on shaded branches where there are insects to catch. It is also seen in tall grass and is one of the commonest lizards in towns and suburbs, where it sits on fence posts and house walls.

The climate is warm temperate to subtropical, with hot, humid summers and cool winters. In winter the animals are less active and go into a light brumation. Active animals have a body temperature of 22-34 °C. They bask in the morning and seek shade when it gets too hot. The breeding season runs from April to August, and the animals drink dew and raindrops from the leaves.

Read more: Brumation and the seasons

Care

THE ENCLOSURE

A single anole needs an enclosure of at least 60 × 60 × 60 cm (length × width × height). Larger is better, especially in height, because the species climbs and uses the whole space. The enclosure should preferably open at the front, be opaque on the sides and have good ventilation, so that the air does not stand still and mould is avoided.

Furnish it with many climbing branches at all heights, cork, lianas and dense foliage from live plants, e.g. *Epipremnum*, *Philodendron*, *Ficus* and bromeliads. The substrate is 5-10 cm of coconut fibre or a mix of garden soil and coconut fibre with dead leaves on top. Remove droppings daily, and replace the substrate every 3-4 months.

Preferably keep only one anole in each enclosure, as several animals easily lead to conflict. If you want to keep more, it only works with one male and two or three females in a correspondingly larger enclosure with many basking spots and hides, so that the females can get out of sight. Two males must never live together.

TEMPERATURE

The basking spot should be 30-35 °C, measured on the branch just below the heat lamp. The rest of the enclosure is kept at 22-28 °C during the day, and at night 18-24 °C is suitable. The warmest place is at the top and the coolest at the bottom, so that the animal can choose for itself, and there must therefore be branches at all heights.

In winter the daytime temperature can be lowered to 18-21 °C and the night temperature to about 15 °C for a few weeks, while the day length is shortened. The cool period imitates winter in the range and is necessary if the animals are to breed. Only healthy animals in good condition should be given a brumation.

A spot bulb in a ceramic fitting is normally enough in a smaller enclosure. If the basking spot gets too hot, raise the lamp or swap the bulb for one with a lower wattage. The species readily climbs on the mesh in the ceiling, so the lamp must hang outside the enclosure or be shielded. Measure with two digital probes: one at the basking spot and one in the shade at the

bottom. Never use heat rocks.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-70 % on average, lower in the middle of the day and higher at night. Mist the plants morning and evening so that the animal can drink the droplets from the leaves. This is the most important source of water, because many animals do not understand how to drink from a bowl. A drip system that drips into a small dish can teach them.

In dry rooms a fogger with distilled water helps keep humidity up at night. Do not use it during the day, and clean the equipment regularly. Too little humidity causes shedding problems and dehydration, but poor ventilation causes disease, so the two must be kept in balance.

Read more: Humidity, misting and ventilation Read more: Common diseases and signs of illness

LIGHTING AND UVB

The species is diurnal and needs strong light and UVB every day. It basks in partial shade, and the UVB lamp should give Ferguson zone 2, i.e. a UV index of no more than about 3 at the basking spot. A 6 % T5 tube or a lamp for forest species is suitable if the distance to the branch matches the strength of the lamp, so follow the manufacturer's instructions and measure if you can. Replace the tube according to the manufacturer's instructions.

The light is on for 14 hours in summer and 10 hours in winter, with a gradual transition. The UVB tube alone gives too little ordinary light, so supplement with a bright lamp of about 6500 K that covers most of the enclosure, especially if there are live plants.

Read more: Lighting and UVB

FEEDING

Anolis carolinensis is insectivorous and takes live prey that moves. Offer small insects that are no more than half the size of the animal's head: crickets, small cockroaches, grasshoppers, flightless fruit flies and larvae of soldier flies and mealworms. Variety is the most important thing in the diet. Avoid woodlice and beetles, and never offer fireflies.

Juveniles are fed daily and may eat as much as they can. Adults are fed every other day with 2-3 feeder insects at a time. Lightly dust all feeder insects with a 50/50 mix of calcium and multivitamin at every meal, and gut-load the feeder insects for 24-48 hours before they are fed to the lizard. Feeding with tweezers is a good way to get to know the animal.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Males are territorial and display by bobbing the head, extending the dewlap and puffing themselves up. Two males in the same enclosure fight, and the weaker one is injured or succumbs to stress. Females are less aggressive, but they too can come into conflict.

The species is shy and is best suited as a display animal. Leave a new animal in peace for about 2 weeks so that it can settle in. Handling stresses the species, and an animal that bites should be put down so that it can get a foothold, rather than being pulled off, because the jaw can break. An animal that is constantly brown is stressed; with several animals in the same enclosure this is often due to a dominant animal, and the stressed animal must then be moved.

The tail can be shed and grows back with a different colour and shape, so never grab the animal by the tail.

Breeding

SEXUAL MATURITY AND SEXING

The male is larger and has a clear, pink to orange dewlap under the throat and enlarged pores below the vent. The female rarely has a dewlap and often has a pale longitudinal stripe along the back. The animals become sexually mature from the age of 4 months and by 12 months at the latest, most often at 6-9 months. A male and a female should be fully grown and in good condition before they are put together.

MATING

The breeding season follows the brumation and lasts 4-5 months, from April to August. The male bobs his head and displays the dewlap, and a willing female lowers her head. The male then grips her by the neck and mates within a few minutes, most often in the afternoon or evening. The female can store sperm for several months, so a single mating can produce several fertilised eggs. Longer days and higher temperatures start the season.

EGG-LAYING AND CLUTCHES

The female lays one egg, more rarely two, at intervals of about 2 weeks throughout the season, 6-10 eggs in all. She buries the egg in moist, loose soil and covers it. Give her a layer of moist, loose soil or coconut fibre, at least 5 cm deep, in a tray or under the plants. The eggs are small and oval, about 6 × 5 mm.

INCUBATION

The eggs can hatch in the enclosure, but it is safer to move them carefully, with the same side up, to a closed container with lightly moist vermiculite or sand. The temperature should be 28-30 °C. The eggs hatch after 5-7 weeks, at 29-30 °C after 35-40 days. Check weekly that the substrate is moist and that no eggs are going mouldy.

REARING THE YOUNG

The young are about 6 cm long at hatching and weigh about 0.3 g. They eat a great deal and need small feeder insects such as flightless fruit flies and newly hatched crickets every day, dusted with calcium and vitamins. Mist the enclosure daily so that they can drink. Keep the young in an enclosure furnished like the adults', but smaller, and separate the males as soon as the sex can be seen, so that they do not fight.

Health and common mistakes

Most problems are caused by faults in the set-up. The typical ones are:

- Metabolic bone disease from too little UVB or too little calcium. Provide UVB and dusted feeder insects.
- Dry or retained shed when humidity is too low, especially on the toes and tail.
- Respiratory infection from poor ventilation or conditions that are too cool.
- Burns on the back if the animal touches a heat lamp hanging inside the enclosure.
- Dehydration, emaciation and stress in newly bought, wild-caught animals. An animal with sunken eyes or skin folds is dehydrated.
- Internal parasites and mites, which are common in wild-caught animals and can be detected by a reptile vet.

See a vet if the animal does not eat for more than a week, is lethargic, has swellings or stays dark for no reason.

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.