herpy

AGAMAS

North-African Mastigure

Uromastyx acanthinura

Uromastyx acanthinura is a robust spiny-tailed lizard from the stony and gravelly parts of the northern Sahara. It grows to 30-43 cm and weighs about 450 g, digs deep burrows and feeds mostly on plants. It needs a large, hot and dry enclosure with a deep substrate and powerful UVB, and it can live for more than 20 years. The species is territorial and is kept alone.

Family: Agamidae

KEY FACTS

THE ANIMAL

Adult size	**30-43 cm** total length incl. tail
Lifespan	**15-24 years**
Active	**By day**
Lifestyle	**Rock-dwelling, terrestrial and burrowing**
Habitat	**Desert, semi-desert and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**120 × 60 × 60 cm** L × W × H for 1 adult
Temperature, day	**27-32 °C**
Basking spot	**50-55 °C**
Temperature, night	**18-22 °C**
Humidity	**20-30%**
Water	**Water dish**
UVB	**Essential** Ferguson zone 3
Winter rest	**16-22 °C** 8-12 weeks
Diet	**Plants**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**48 months**
Clutch size	**6-23 eggs**
Clutches per year	**1**
Incubation	**56-84 days** at 33-34 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Near Threatened (NT)**

About the species

Uromastyx acanthinura is a broadly built agamid with a short, thick body, short, sturdy legs and a flat tail covered in whorls of pointed scales. The name comes from the Greek akantha, thorn, and oura, tail. The tail is 50-75 % as long as the body.

The ground colour is grey with darker spots and marbling, and adults take on more colour when they are warm after the morning basking. Young are grey with brown or darker spots. The species is far less colourful than the closely related *Uromastyx nigriventris* and lacks its red, green and lemon-yellow colours. Brightly coloured animals sold under the name *U. acanthinura* are therefore often other species.

The animal grows to 30-40 cm including the tail, the largest up to 43 cm. Adults typically weigh about 450 g, but weight varies greatly with the season, and large males can weigh considerably more.

The species was described in 1825, and its circumscription has changed a great deal since. *U. dispar*, *U. geyri* and *U. nigriventris* have all been treated as subspecies of *U. acanthinura*, but are now regarded as separate species, and populations from northern Chad and Sudan that were formerly counted as *U. acanthinura* belong to *U. dispar*. Older information about the species, including about care, may therefore concern other species.

The animal is shy, territorial and lightning-fast into its burrow when disturbed. It needs space, a large and very hot enclosure, a deep substrate and powerful UVB, and it lives for many years.

Read more: Lighting and UVB

Distribution and habitat

Uromastyx acanthinura lives in the northern Sahara in Algeria, Tunisia and north-western Libya. The core area lies south of the Saharan Atlas, and a form described as *U. a. nigerrimus* is known from the southern part of the Algerian Sahara.

The limits are not settled. Older records from Egypt, Western Sahara, Mauritania, Mali, Niger, Chad and Sudan are based on the old, broad circumscription; the populations in Chad and Sudan belong to *U. dispar*. The populations in Morocco and western Algeria are now counted as *U. nigriventris*, and by the newer view the species does not occur in Morocco.

> **Native range:** Algeria, Tunisia and Libya.

HABITAT

Uromastyx acanthinura lives first and foremost in stony desert (hamada) and gravel desert (reg) and is rare in pure sand desert. The species prefers slopes and banks at dry riverbeds, where it digs burrows in earth banks in full sun, often at the foot of a shrub such as *Ziziphus lotus*, or uses crevices and holes in the rock. The burrow entrance is about 15 cm wide and 8 cm high, and the burrow goes down up to 80 cm. One shrub can hide several entrances. Young do not dig themselves, but live under stones and in shallow depressions.

The climate is harsh: the temperature ranges from -7 °C in winter to 60 °C in summer, and daily swings can be 35 °C. Rainfall is typically under 135 mm a year and falls from September to March. In the burrow the temperature stays at 20-25 °C, and humidity is 50-90 %. The animals emerge when it is above about 20 °C outside, bask from the morning and are most active around midday. They rest for 2-5 months in winter and may aestivate in dry periods.

Populations number 10-100 animals per km², and each animal has a territory of 1-5 hectares, which both males and females defend.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An adult needs an enclosure of at least 120 × 60 × 60 cm (length × width × height), and bigger is better, for example 150 × 60 × 60 cm for a large animal. Ordinary glass terrariums are too small. Choose an enclosure of wood, PVC or plastic with three solid sides and glass only at the front; this gives calm. Young can also live in 120 × 60 cm, because they need the same temperature gradient as the adults.

The substrate is dug and must therefore be deep: at least 10 cm, preferably more, of fine sand or sandy soil. A mixture of half sand, 30 % soil without fertiliser and 20 % clay keeps the tunnels up. Keep the top couple of centimetres dry, and moisten only a little at depth. Avoid calcium sand and crushed walnut shells, which can cause impaction. Droppings and urates are removed daily, and the substrate is replaced completely every 3-4 months. Sick or injured animals are temporarily moved onto kitchen paper.

The enclosure must open at the front and have good ventilation, preferably with a mesh lid. Build the basking spot of flat stones or slate under the heat lamp, preferably as a stack with gaps, so that the animal can creep in and choose its temperature. Fix the stones so that they do not topple when the animal digs under them. Provide at least three hides per animal, spread between the hot and the cool side. Heat lamps are shielded so that the animal cannot touch them. Keep one animal in each enclosure, and never keep different species of *Uromastyx* together.

Read more: Heat and temperature Read more: Calcium, vitamins and supplements

TEMPERATURE

The basking spot must have a surface temperature of 50-55 °C, measured with an infrared thermometer directly under the lamp. The cool side must be 27-32 °C. Heat must come from above, for example from a halogen spot, never from a heat mat under the floor: the animal does not move away from a floor that is too hot in time and can be burned. Adjust the basking spot with a dimmer or by raising or lowering the stones.

At night the heat is switched off, and the temperature may fall to room temperature, about 18-22 °C. In the wild the burrow is at 20-25 °C, and in the enclosure too the animal must be able to dig down to a cooler and more stable place.

In the wild the species rests for 2-5 months in winter. In the enclosure a cool period of 8-12 weeks is suitable: the day length is cut to 6-8 hours, the room temperature is lowered to 16-22 °C, and the basking spot is kept at about 30 °C so that the animal can warm up and empty its gut. Give a winter rest only to healthy, well-nourished animals, and weigh them before and during the rest.

HUMIDITY AND WATER

Humidity in the enclosure must be low: about 20-30 %, measured at the substrate on the cool side. Persistently high humidity makes the animal ill, so do not mist the enclosure. The burrow in the wild is far more humid than the surface, so moisten the substrate slightly at depth, where the tunnels run, and keep the top few centimetres dry.

The animal gets almost all its water through its food and rarely drinks. A small dish of fresh water does no harm in a well-ventilated enclosure, and thin or newly acquired animals may benefit from it. Change the water daily.

LIGHTING AND UVB

The species is diurnal and requires strong light. Use an LED lamp or a fluorescent tube of about 6500 K as daylight in addition to the heat lamp. UVB is necessary: the species belongs to Ferguson zone 3, and a T5 HO tube of 12-14 % over about half the length of the enclosure on the hot side must give a UV index of 4.5-6 at the basking spot. Check with a UV meter, and replace the tubes after 6-12 months or as the manufacturer directs. The day is 12 hours in summer and shorter in winter. Direct sunlight in a safe outdoor enclosure is valuable, but never through glass.

FEEDING

Adults are almost pure herbivores. In the wild the food consists mostly of thorny, drought-tolerant and fibre-rich desert plants, including salt-tolerant species of *Atriplex* and plants of the goosefoot family, and after rain the short spring plants. The nose has a salt gland that excretes excess salt. Ants and beetles are also eaten, especially by young.

About 90 % of the food in the enclosure must be leafy greens and flowers, about 5 % hard vegetables and about 5 % dry food. Vary between salad mixes, rocket, dandelion leaves, endive, pak choi and radicchio, and give flowers such as dandelion and hibiscus free of pesticides. Dried, crushed lentils, peas and white millet are given in small amounts at most once a week, because otherwise they cause obesity. Fruit is a rare treat. Young can be given a mealworm or superworm at most once a week and adults at most every other week.

Young are fed every day with as much as they can eat, and adults 4-5 times a week. Dust the food with calcium and a vitamin supplement twice a week. Bee pollen is often given in far too large amounts; let the flowers cover the need instead.

BEHAVIOUR AND HANDLING

The species is markedly territorial: both sexes defend their territory, and in fights the animals bite each other on the sides, so that white scars can develop. Even littermates attack each other if they are kept together too long. Females become especially aggressive in the breeding season. Keep the animal alone. If disturbed, it dashes into its burrow and may stay out of sight for hours, and if caught, it clings to the burrow walls with its claws and lashes with its spiny tail.

A new animal needs a couple of weeks in peace. If it has not eaten after two weeks, a vet must see it. Do not handle the animal during settling in, apart from weighing. Afterwards you can offer food from the hand. Approach slowly and from below, never from above. Keep the animal outside the enclosure for no more than an hour at a time, because it needs the heat. Wash your hands after contact, because reptiles can carry salmonella.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

The sex cannot always be determined from the outside, and the sexes are about equal in size. The male usually has a broader vent and tail base and a relatively larger head, and is on average more colourful. If the tail is gently bent upwards, hemipenial bulges at the base of the tail and a V-shaped row of scales under the vent can point to a male. The female is pear-shaped as an adult. Sexually mature males mark their territory with secretion from the femoral and cloacal glands.

The species becomes sexually mature at about four years old, and the colours are then strongest. Breed only fully grown, well-nourished animals.

MATING

In the wild the mating season runs from March to July with most matings in April. The male swings his head from side to side and does push-ups in front of the female. Then he grips her by the neck or side with his jaws and holds on during mating. The female can be aggressive, so watch the animals, and be ready to separate them.

In the enclosure breeding follows a cool winter rest. Afterwards day length and temperature are increased step by step, and only then are the female and male put together.

EGG-LAYING AND CLUTCHES

The female lays her eggs about a month after mating, in the wild in June and July, and probably only one clutch a year. The clutch is 6-23 eggs, typically 10-12, and the largest females lay the most. The eggs are oval, about 35 mm long and 20 mm wide, with a leathery shell. In the wild they are laid in the female's burrow, which she guards.

The female needs a deep laying box with a damp mixture of sand and soil so that the tunnel holds and she can dig down. If she finds no suitable spot, she may retain the eggs. Give her peace and plenty of food after laying.

INCUBATION

Carefully dig up the eggs and place them, without turning them, in a closed container with damp perlite that clumps when squeezed. Weigh the container once a week to follow evaporation.

Incubate the eggs at 33-34 °C; the temperature is borrowed from other *Uromastyx* species. In the wild the eggs hatch after 8-12 weeks, and a higher temperature gives a shorter incubation. In the wild the young stay in the burrow for a few weeks to a couple of months.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched young are about 5 cm from snout to vent and weigh 4-6 g. Keep them in enclosures of 120 × 60 cm with the same basking spot and temperature gradient as the adults, or in large plastic boxes, on kitchen paper or tiles until one year of age. Give them many hiding places, because young seek cover under stones.

Give finely chopped green plants and flowers every day and at most a single small insect a week. Seeds and dried pulses are given only from six months of age. The colours begin to show at about one year of age. Young from the same clutch become aggressive towards each other and must be separated well before they approach sexual maturity.

Health and common mistakes

Most problems are caused by too little heat or UVB, too high humidity and the wrong diet:

- Metabolic bone disease (secondary nutritional hyperparathyroidism) from too little UVB, calcium and D3.
- Respiratory infection and mucus at constantly high humidity.
- Obesity from too many seeds and too much protein.
- Impaction from calcium sand, walnut shells and too low a temperature.
- Burns from heat mats and unshielded lamps.
- Bites and scars when animals are kept together.
- Crusted, thickened lips and skin sores, which may be caused by the bacterium *Devriesea agamarum*. It spreads between agamids, including from animals without symptoms, and easily returns. Treatment requires a vet, often a long course of antibiotics, and thorough disinfection of the enclosure.
- Intestinal worms and other parasites, especially in wild-caught animals. Quarantine new animals for 3-6 months.
- Egg-laying difficulties in females without a suitable laying site.

A healthy animal is round and firm and has clear eyes. Weight loss, lack of appetite and lethargy require a vet with reptile experience.

Read more: Common diseases and signs of illness 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.