herpy

AGAMAS

Sudan Mastigure

Uromastyx dispar

Uromastyx dispar is a spiny-tailed lizard from the Sahara and Sahel with four subspecies, including the large *U. d. flavifasciata* and the frequently kept *U. d. maliensis* from Mali. The species grows to 28-50 cm depending on form, is herbivorous and digs down into a deep substrate. It needs a large, hot and dry enclosure with powerful UVB and is more an animal to watch than to handle.

Family: Agamidae Former name: *Uromastyx flavifasciata; Uromastyx maliensis*

KEY FACTS

THE ANIMAL

Adult size	**28-50 cm** total length incl. tail
Weight	**200-400 g**
Lifespan	**15-25 years**
Active	**By day**
Lifestyle	**Rock-dwelling, terrestrial and burrowing**
Habitat	**Desert and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**120 × 60 × 60 cm** L × W × H for 1 adult
Temperature, day	**29-35 °C**
Basking spot	**45-50 °C**
Temperature, night	**20-22 °C**
Humidity	**20-30%**
Water	**No water dish**
UVB	**Essential** Ferguson zone 3
Winter rest	**18-21 °C** 8-12 weeks
Diet	**Plants**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**36 months**
Clutch size	**10-20 eggs**
Clutches per year	**1**
Incubation	**60-80 days** at 33 °C

PROTECTION AND PAPERWORK

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

About the species

Uromastyx dispar is a robust spiny-tailed lizard with a short, broad body, short legs and a flat tail covered in whorls of pointed scales. The tail is used both for defence and to block the burrow entrance.

Size depends on the subspecies. The nominate form and *U. d. maliensis* grow to about 38 cm including the tail and weigh 200-400 g, while *U. d. flavifasciata* can reach nearly 50 cm. The young are grey with charcoal-grey spots. Wild females keep this camouflage pattern, while the males gain more colour. In captive-bred *U. d. maliensis* both sexes have a black head, black legs, black tail and black sides as adults. The back and belly vary: the back is most often black with yellow dots, more rarely yellow with black spots, and the belly can be white, black, yellow or tiger-striped.

The species was described in 1827. The name *dispar* means unlike and probably alludes to the fact that the colours distinguish it from *Uromastyx acanthinura*, of which it was long regarded as a subspecies. Four subspecies are distinguished: the nominate form *U. d. dispar*, *U. d. flavifasciata*, *U. d. maliensis* and *U. d. hodhensis*. *flavifasciata* and *maliensis* have previously been treated as separate species, *Uromastyx flavifasciata* and *U. maliensis*, and the names are still seen in the trade. The relationships are not finally settled: animals from the eastern and western ends of the range are genetically very similar, while *maliensis* and *hodhensis* are too poorly studied for their status to be decided. When buying animals, therefore, ask about form and origin, and keep only animals of the same form together.

U. d. maliensis is one of the hardier spiny-tailed lizards and is calm and trusting towards its keeper. The species rarely becomes truly tame, however, and is best as an animal to watch, not one to handle. The care itself is relatively simple once temperature, UVB and diet are right.

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

Distribution and habitat

Uromastyx dispar has a large range in the southern and central Sahara and the Sahel. The nominate form lives in Sudan and Chad (including the Tibesti and Ennedi mountains) and is also reported from Mauritania, *U. d. flavifasciata* in Western Sahara south of 28° north, Mauritania and south-western Algeria, *U. d. maliensis* in north-western Mali and south-western Algeria and *U. d. hodhensis* in Mauritania. An occurrence in Morocco has been reported, but is uncertain, and in northern Sudan the species is found close to the border with Egypt.

The species is not regarded as threatened worldwide.

> **Native range:** Algeria, Western Sahara, Mali, Mauritania, Sudan and Chad.

HABITAT

Uromastyx dispar lives in hot, dry rocky desert and scrub. In Mali, where *U. d. maliensis* belongs, the landscape is broken by rocks that rise through a cover of stones, clay and sand. In summer the ground surface exceeds 49 °C, and on the coldest winter nights the temperature falls to about freezing. The animals avoid the extremes by digging burrows in the hard ground, often about 30 cm deep and up to 90 cm long.

The species is diurnal and lives almost exclusively on plants. How long the winter rest lasts in the wild is not documented.

Care

THE ENCLOSURE

An adult of the nominate form or *U. d. maliensis* needs an enclosure of at least 120 × 60 × 60 cm (length × width × height), and bigger is better. The larger *U. d. flavifasciata* needs at least 150 × 60 × 60 cm. That is larger than ordinary glass terrariums offer, so choose an enclosure of wood, PVC or plastic with a glass front. Three solid sides give calm, especially for newly acquired animals.

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, for example cave-shaped hides of ceramic or stone at the cool end, large enough for the animal to lie slightly curled up inside. Heat lamps are shielded so that the animal cannot touch them. 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 45-50 °C, measured with an infrared thermometer directly under the lamp. The middle of the enclosure is at 35-38 °C and the cool end at 29-35 °C. Heat must come from above, for example from a halogen spot or a powerful UVB lamp that also gives heat, 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.

At night the light is switched off, and the temperature is kept at 20-22 °C. The animal must be able to withdraw from the heat at all times.

Animals that are not to breed can have a 12-hour day all year. For breeding a cool winter rest is given: the day length is cut by one to two hours a week until there are only 4-6 hours of light, and at the same time the temperature is lowered so that it is about 30 °C under the lamp while it is on, and 18-21 °C for the rest of the day. Feed every second or third day at first, and stop altogether when the day is down to 6 hours. The rest itself then lasts about 60 days, after which light and heat are increased step by step again. Give a winter rest only to healthy, well-nourished animals, and weigh them before and during the rest.

HUMIDITY AND WATER

Humidity must be below 30 %. The species tolerates slightly higher humidity as long as the enclosure is dry and warm enough, but it does not tolerate being cold and damp. Do not mist the enclosure. The substrate is moistened only a little at depth so that the tunnels hold, while the top centimetres are dry.

The animal gets its water through its food, and a water bowl is not necessary; in an indoor enclosure it does more harm than good. Instead give the animal a bath outside the enclosure every 2-3 weeks in lukewarm water of about 38 °C that is under 3 cm deep. Then it can drink if it needs to, and shedding goes more easily.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal and needs 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, or a powerful UVB lamp over the basking spot, must give a UV index of 4.5-6 at the basking spot. Check with a UV meter, and replace tubes and bulbs as the manufacturer directs. The day is 12 hours, shorter during the winter rest.

FEEDING

Uromastyx dispar is herbivorous. The staple is a mix of lettuce and leafy greens, e.g. spring lettuce and chopped endive, supplemented with wild plants such as dandelion, clover, plantain, chickweed and field mustard and with edible flowers such as nasturtium, hibiscus, violets, roses and dandelion, always free of pesticides. At most about 5 % of the food is vegetables such as peas, carrot and green beans. Lightly dampen the food with water and serve it in a shallow dish in the middle of the enclosure.

Dried, crushed lentils, peas and white millet are given in small amounts, no more than once a week, because they otherwise cause obesity. Fruit is a rare treat. Insects are not necessary; a single mealworm or superworm can be given now and then.

Adults are fed 4-5 times a week, juveniles every day. Lightly sprinkle the food with a calcium supplement with a little D3 and with a vitamin supplement every third day.

BEHAVIOUR AND HANDLING

Adults are territorial, especially males towards males, and two males must never be kept together. *U. d. maliensis* can be kept as a permanent pair all year in a roomy enclosure; watch the animals, and separate them if there is biting or weight loss. Young can be kept together until they approach sexual maturity.

A new animal needs peace in the first weeks. Captive-bred animals settle in fastest, while wild-caught ones can take up to six months. If the animal has not eaten after two weeks, a vet must see it. Do not handle the animal during settling in, apart from weighing, and cover any glass sides. Afterwards you can offer food from the hand. Approach slowly and always from below, never from above, because that looks like a bird of prey. Keep the animal outside the enclosure for no more than an hour at a time, because it needs the heat. Weigh the animal once a month, and see a vet if there is major weight loss. Wash your hands after contact, because reptiles can carry salmonella.

Read more: Quarantine and hygiene

Breeding

SEXUAL MATURITY AND SEXING

The sex is difficult to determine. Both sexes have femoral pores, and in captive-bred animals the colour says nothing about sex. The surest method is to bend the tail gently up over the back and look at the underside just behind the vent. In the female the ends of two tendons are seen, forming a small inverted V over each corner of the vent. In the male the hemipenes lie on top of the tendons and cover them, so that instead two parallel stripes are seen pointing towards the tail tip.

U. d. maliensis breeds when the animals are over 25 cm long and weigh more than 150 g, and in captivity this takes about three years. Breed only well-nourished, fully grown animals.

MATING

Breeding is triggered by the winter rest (see Temperature). Mating usually takes place just before the day length is back up to 12 hours. The male nods his head at the female, especially early in the morning, and the mating itself is easy to miss.

EGG-LAYING AND CLUTCHES

The female lays one clutch of 10-20 eggs about four weeks after mating. Replace the ordinary hide at the cool end with a closed laying box, for example a soft plastic tub of about 40 litres with a lid and a 10 cm hole in the side, where a flexible tube leads down to the floor of the enclosure. Fill the box two-thirds full with equal parts washed sand and peat and preferably 10 % clay, and moisten it so that it feels slightly damp. Remove the eggs and laying box as soon as the female has covered the eggs.

After egg-laying the female is clearly thinner. Give her peace and plenty of food.

INCUBATION

Lay the eggs on their sides in a closed box of about 30 × 20 × 10 cm filled two-thirds full with slightly damp vermiculite mixed with 10 % dry perlite, so that only a small part of each egg sticks up. There should be no air holes; instead lift the lid once a week to air out and remove bad eggs: eggs that have sunk in by more than a quarter, leak or have mould or bacterial growth. Handle the eggs as little as possible.

At 33 °C the eggs hatch after 60-80 days.

REARING THE YOUNG

The young are kept like the adults, but on kitchen paper and with a shallow water bowl of about 1 cm for the first two months. 8-10 young can temporarily be together in an enclosure of 120 × 60 × 45 cm; take out two every 2-3 months as they grow. Most young begin to eat within a day of hatching. Give the same food as for the adults twice a day, morning and afternoon. Separate the young before they become sexually mature.

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, especially when the enclosure is also too cold.
- 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.
- Parasites in newly imported animals, including cryptosporidia, which have been found in wild-caught animals with constipation and gastrointestinal problems. Quarantine new animals for 3-6 months.
- Crusted sores on the lips and skin, which may be caused by the bacterium *Devriesea agamarum*. It spreads between agamids and can be combated only with veterinary treatment and thorough disinfection of the enclosure.
- Egg-laying difficulties in females without a suitable laying site.

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

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.

The full guide with map and updates: herpy.org/en/agamas/uromastyx-dispar