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AGAMAS

Egyptian Spiny-tailed Lizard

Uromastyx aegyptia

Uromastyx aegyptia is the largest spiny-tailed lizard: a heavy, herbivorous desert lizard from Egypt, the Middle East and the Arabian Peninsula that can grow to 76 cm and weigh 2.5 kg. It digs deep burrows, basks in intense heat and needs a very large, dry enclosure with powerful UVB. The species is vulnerable in the wild and suits only an experienced keeper with plenty of space.

Family: Agamidae Former name: *Stellio spinipes; Uromastyx leptieni; Uromastyx microlepis*

KEY FACTS

THE ANIMAL

Adult size	**40-76 cm** total length incl. tail
Weight	**1,000-2,500 g**
Lifespan	**15-30 years**
Active	**By day**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Desert and semi-desert**
Difficulty	**Experienced**

CARE

Min. enclosure	**240 × 120 × 120 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 or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**6-23 eggs**
Incubation	**56-84 days** at 33-34 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Vulnerable (VU)**

About the species

Uromastyx aegyptia is the largest species in the genus. Adults are over 40 cm long and weigh about 1 kg, and the largest grow to 76 cm and 2.5 kg. By comparison, most other spiny-tailed lizards reach 25-50 cm. The body is broad and heavy, the legs are short and strong, and the flat tail is covered in whorls of pointed scales. The tail is used as a weapon at the burrow entrance. Adults are often grey to greyish brown, but can turn bright yellow when they are warm.

Three subspecies are distinguished: the nominate form *U. a. aegyptia* from Egypt, *U. a. microlepis* from most of the Arabian Peninsula, Iraq and the coast of Iran, and *U. a. leptieni* from Oman and the United Arab Emirates. The last is smaller than the other two and grows to about 50 cm. The name *U. leptieni* is still seen in the trade and in older literature.

The species was described in 1775. Locally it is called *ḍabb* (dhab), and it has been hunted for meat and skin. Adults are calm and powerful, but defend themselves with the tail if pressed. Its size makes the species a demanding undertaking: it needs an enclosure that takes up the space of a small room, and large amounts of fresh plants every day. *U. aegyptia* therefore suits only an experienced keeper with plenty of space.

Distribution and habitat

Uromastyx aegyptia lives in Egypt east of the Nile and on Sinai, in Israel, Jordan, Syria, Iraq, western Iran, Saudi Arabia, Kuwait, Qatar, the United Arab Emirates, Oman and Yemen. The subspecies *U. a. leptieni* occurs in Oman and the United Arab Emirates, from the area around Muscat across the Batinah coastal plain and the eastern foothills of the Hajar Mountains to the Musandam Peninsula. *U. a. microlepis* lives in deserts and semi-deserts on the Arabian Peninsula and in the neighbouring countries.

The distribution is patchy, and the species is rare in large parts of its range. It is regarded as vulnerable (VU), and the population is declining because of habitat loss and hunting.

> **Native range:** Egypt, Israel, Jordan, Syria, Iraq, Iran, Saudi Arabia, Kuwait, Qatar, United Arab Emirates, Oman and Yemen.

HABITAT

Uromastyx aegyptia lives in flat to gently undulating deserts and semi-deserts with coarse sand, gravel or stones and scattered shrubs, for example saltbush, boxthorn and the odd acacia tree, up to about 1,500 m above sea level. The animals prefer places with little but not entirely absent plant cover. They dig burrows that can be over 10 m long and up to 1.8 m deep. The burrow keeps temperature and humidity stable: 30 cm below the entrance it is on average 6 °C cooler than outside. The animals use it as a refuge from the midday heat, at night and during winter rest.

The species is diurnal and strongly governed by temperature. In summer the air can reach 43-50 °C, and active animals have a body temperature of about 33-42 °C. The critical limit is at 51 °C. In spring the animals look out of the burrow with their head and forelegs for a long time before they bask, and in high summer they withdraw during the hottest part of the day. Most of the year's activity takes place in spring and early summer. From autumn to February the animals are seen only rarely, on clear days with a ground temperature above 35 °C, and in winter they lie in the burrows at 10-14 °C. The food is plants, especially herbs and flowers in the rainy season.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An adult needs an enclosure of at least 240 × 120 × 120 cm (length × width × height). The size follows a simple rule of thumb: the enclosure must be at least three times as long as the animal and at least as wide, so that an animal of 70-76 cm can turn, dig and choose between hot and cool places. The height gives room for a deep substrate and for heat lamps and UVB tubes at the right distance above the basking spot. An enclosure of that size is in practice a self-built piece of furniture of wood, PVC or plastic with glass doors or large open fronts. Smaller animals, for example of the subspecies *U. a. leptieni*, which grows to about 50 cm, can manage with 180 × 60 × 60 cm. Young animals can live in a smaller enclosure for a time if it has the same temperature gradient, but they grow quickly.

The substrate must be diggable and at least 15-20 cm deep, of fine sand mixed with soil without fertiliser and a little clay so that the tunnels hold. 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 have good ventilation, preferably with a mesh lid. Build the basking spot of large, 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 a heavy animal digs under them. Provide at least three large hides, 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: Lighting and UVB 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 is at 27-32 °C. An animal and enclosure this large require several heat lamps, for example two or three 100 W halogen spots, so that the basking spot is large enough for the whole body. Heat must come from above, 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. If the basking spot is too hot or too cold, adjust 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. The animal must be able to withdraw from the heat at all times.

In the wild the species rests from autumn to early spring. In captivity a cool winter rest can be given: 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. The rest lasts 8-12 weeks; the figures for the rest are borrowed from the genus's smaller species. Give a winter rest only to healthy, well-nourished animals, and weigh them before and during the rest.

HUMIDITY AND WATER

Humidity must be low, about 20-30 %, measured at the floor on the cool side. Persistently high humidity makes the animal ill, so do not mist the enclosure. The substrate is moistened only a little at depth so that the tunnels hold and the burrows get a damper microclimate than the surface, while the top centimetres are dry.

The animal gets almost all its water through its food and rarely drinks. A large, stable bowl of fresh water does no harm in a well-ventilated enclosure and can help thin or newly acquired animals. Change the water daily.

LIGHTING AND UVB

The species is diurnal and needs strong light. Use a large LED lamp or several fluorescent tubes of about 6500 K as daylight, separate from the heat; the animals are more active and eat better with it. UVB is necessary: the species belongs to Ferguson zone 3, and T5 HO tubes 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. The distance of the tube depends on whether it sits above or below the mesh; check with a UV meter. Replace the tubes after 6-12 months or as the manufacturer directs. The day is 12 hours in summer and shorter in winter.

FEEDING

Uromastyx aegyptia is herbivorous. About 90 % of the diet should be leafy greens and flowers, about 5 % hard vegetables and about 5 % dry food. An adult eats large amounts: give a big bowl of varied salad mixes, rocket, dandelion leaves, endive, pak choi, turnip greens and a little kale, and edible flowers such as dandelion, hibiscus, rose petals and nasturtium, preferably from your own garden and always free of pesticides. Hay and grass are also eaten. Hard vegetables such as squash, carrot and peas are grated finely.

Seeds and pulses are a natural part of the diet: dried, crushed lentils and white millet provide protein and fat. Give them in small amounts and no more than once a week, otherwise they lead to obesity. Juveniles under six months get no seeds. Fruit is a rare treat, at most a small piece once a month. Insects are not necessary; a single dusted mealworm or superworm can be given now and then.

Juveniles are fed every day with as much as they can eat, and adults are fed 4-5 times a week. Sprinkle 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

Adults are calm and stationary, but territorial towards their own kind, especially males towards males. Keep them singly. A pair can be kept together only in an enclosure at least twice the minimum size, and even then it is no guarantee. Young are less territorial and 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. 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. An adult weighs 1-2.5 kg and can lash with its powerful tail if it feels pressed; lift it from below and support the whole body. 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 Read more: Buying animals: captive-bred, wild-caught and transport

Breeding

SEXUAL MATURITY AND SEXING

The male is usually slimmer than the female, has a broader head and stronger colour. Adult females are pear-shaped. The differences between the sexes are most distinct in sexually mature animals; in young animals the sex is difficult to see.

Age and size at sexual maturity are not documented for the species. Breed only well-nourished, fully grown animals.

MATING

Breeding is only sparsely described for the species, and the figures in this and the following sections are borrowed from the genus's smaller species, especially *U. acanthinura*. Breeding follows a cool winter rest, which triggers the animals. After the rest the light and temperature are increased again, and only then are the female and male put together. Both must be in good condition.

Mating is violent. The male circles the female, nods his head and bites onto her nape fold. The mating itself lasts a few minutes. The enclosure must be large enough for the female to evade him. Make sure the female is not injured, and separate the animals if it goes too far.

EGG-LAYING AND CLUTCHES

The female lays her eggs 4-6 weeks after a successful mating. The clutch is about 6-23 eggs depending on the female's size, age and health; so large a female is probably at the high end. Put a large laying box with a mixture of sand and soil into the cool side in good time so that the female gets used to it. If she does not use it, move it to the warm side. The soil must be damp enough for the tunnel to hold.

After egg-laying the female is clearly thinner. Give her peace, plenty of food and, if you like, an unflavoured electrolyte solution. She usually regains most of the weight and eats and basks normally within 1-2 weeks.

INCUBATION

Carefully dig up the eggs wearing gloves and place them in the same orientation as they lay in a closed container with damp perlite that is just damp enough to clump when squeezed. Place them a couple of centimetres apart. After 1-2 days there should be condensation on the sides of the container; otherwise add a little water. Weigh the containers once a week to follow evaporation.

At 33-34 °C the eggs hatch after 56-84 days; a higher temperature gives a shorter incubation.

Read more: Incubating eggs

REARING THE YOUNG

The young are kept singly or in small groups in large enclosures with the same basking spot and temperature gradient as the adults, or in large plastic boxes. Give them many hiding places. The substrate is kitchen paper, tiles or bare floor until the young are at least a year old.

The young are given the same green plants and flowers as the adults, chopped finely, and are fed every day. Seeds and dried pulses are given only from six months of age. Thin or dehydrated young can be offered water. Separate the young before they become sexually mature; they grow quickly and soon require a lot of space.

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, and from too little space to move.
- Impaction from calcium sand, walnut shells and too low a temperature.
- Burns from heat mats and unshielded lamps.
- Parasites in newly imported animals. Quarantine new animals for 3-6 months.
- Crusted sores on the lips and skin, which in spiny-tailed lizards may be caused by the bacterium *Devriesea agamarum*. It spreads between agamids and requires 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.