

Recommended Annual Husbandry Schedule

Saara loricata - Iraqi spiny-tailed lizard

Habitat basis Mesopotamian plains, Zagros foothills and Persian Gulf coastal country in Iraq and south-western Iran. Field sites include hills, desert and agricultural margins where compact soil permits permanent burrows.	Natural history A measured wild burrow was 2.4 m long, about 70 cm deep, multi-bend and terminated in a chamber used for rest and egg laying. The species is primarily herbivorous, with occasional insects recorded.	Legal status IUCN Least Concern; CITES Appendix II. Keep acquisition, transfer and breeding records. Confirm current national and local requirements before movement or sale.
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Month	Day ambient	Night	Basking surface	UVI	Photoperiod	Lamp hours	Day / night RH	Feeding	Seasonal management
Jan	20-22 C	12-14 C	38-42 C	2-3	9 h	4 h	35 / 45%	1-2 light feeds	Cool maintenance
Feb	21-23 C	13-15 C	40-44 C	3	9.5 h	5 h	35 / 45%	1-2 light feeds	Staged increase
Mar	24-27 C	16-18 C	45-48 C	4	10.5 h	7 h	30 / 40%	3-4 feeds	Warm-up / conditioning
Apr	27-30 C	18-21 C	48-52 C	4-5	12 h	9 h	30 / 40%	5-6 feeds	Courtship
May	29-32 C	21-23 C	50-55 C	5-6	13 h	10 h	25-30 / 35-40%	Daily	Mating / follicles
Jun	30-33 C	22-24 C	50-55 C	5-6	14 h	11 h	25-30 / 35-40%	Daily	Gravid / laying watch
Jul	31-34 C	23-25 C	50-55 C	5-6	14 h	11 h	25-30 / 35-40%	Daily	Laying / recovery
Aug	31-34 C	23-25 C	50-55 C	5-6	13.5 h	10 h	25-30 / 35-40%	Daily	Peak heat
Sep	29-32 C	21-23 C	48-52 C	4-5	12.5 h	9 h	30 / 40%	5-6 feeds	Late summer
Oct	26-29 C	18-20 C	45-48 C	4	11 h	7 h	30-35 / 40-45%	3-4 feeds	Autumn transition
Nov	23-26 C	15-17 C	42-45 C	3	10 h	5 h	35 / 45%	2-3 feeds	Taper
Dec	20-22 C	12-14 C	38-42 C	2-3	9 h	4 h	35 / 45%	1-2 light feeds	Cool maintenance

Operating note: this is a captive-facility starting schedule, not a published species standard. Adjust gradually from measured enclosure temperatures, UVI, body mass, appetite, faecal output and behaviour. The hotspot must always be escapable.

Winter note: retain a short daily basking opportunity during mild cooling. Feed only when animals are active, fully warmed and digesting normally; do not combine substantial meals with low temperatures.

Practical Husbandry and Daily Management

A large, plant-dominant burrower requiring deep compactable substrate, broad radiant heat and secure solitary retreats.

Enclosure, burrow and substrate

Use approximately **180 x 90 x 90 cm or larger for one adult**; more floor area is preferable. Provide at least **30 cm of compactable substrate**, and 40-60 cm where construction permits. A practical mix is coarse sand with clay-rich soil and a smaller topsoil fraction; it must hold a tunnel without becoming dusty or waterlogged.

Support long sloping tunnels with engineered buried pipes or chambers where a true self-dug burrow cannot be safely maintained. Provide more than one cool retreat. Anchor all stone and slate from the enclosure floor before adding substrate so excavation cannot cause collapse.

Heat, light and UVB

During full activity provide warm-side air around **29-34 C**, a cooler retreat and a broad measured surface around **48-55 C**. Use a lamp bank rather than one narrow beam. The animal must be able to move directly into shade or the burrow.

Target **UVI 4-6** at the principal active-season basking position, with complete shade in the burrow and additional areas below UVI 1. Measure UVI at animal height and replace lamps according to meter readings rather than calendar age alone.

Water and humidity

Keep a stable shallow dish of fresh water available and change it daily. Maintain a generally dry surface but a slightly more humid deep retreat. Lightly dampen one protected corner or deep chamber as needed; avoid routine misting of the animal or persistently wet substrate.

Diet and feeding

Base the diet on varied high-fibre leaves, safe weeds and flowers: dandelion, plantain, clover, mulberry, hibiscus, chicory, endive, escarole, collard and similar items. Field animals consume leaves, twigs and agricultural wheat or barley; occasional grasshoppers and other insects have been recorded.

Offer fresh plant food daily during full activity and reduce volume with the seasonal taper. Seeds and soaked pulses can be small supplements rather than the base. Adults do not require routine animal protein. Use plain calcium as appropriate to the diet and measured UVB; avoid indiscriminate high-dose supplementation.

Social management

Treat adults as individually managed unless a stable pair or group has demonstrated compatibility. Provide duplicate basking, feeding and refuge resources. Separate for biting, persistent chasing, burrow exclusion, suppressed feeding or basking, or declining mass.

Daily keeper checks

Check	Record
Activity	Emergence, basking, digging, retreat use and abnormal hiding
Feeding	Items offered, intake and any food exclusion
Condition	Mass trend, jaw, eyes, skin, tail, feet and faeces
Environment	Hotspot surface, warm/cool air, UVI, burrow stability and water

Veterinary triggers

Seek reptile-veterinary assessment for persistent anorexia, marked weight loss, jaw swelling, weakness, abnormal breathing, repeated unproductive digging, retained eggs, wounds or failure to use heat normally. Quarantine and faecal screening are prudent for new animals.

Breeding, Nesting and Evidence Review

Species-specific captive husbandry has been published, but accessible quantitative breeding data remain limited; record outcomes rather than converting genus norms into facts.

Seasonal breeding management

Use mild December-February cooling followed by a staged increase in heat, day length and feeding. The March-April courtship and May-July laying windows in this schedule are working hypotheses for a Northern Hemisphere facility, not fixed biological dates. Record first emergence, display, mating, digging, laying and recovery for each individual.

Nest provision

Provide a private nesting route before a female appears gravid: at least 30 cm of warm, cohesive substrate leading to a horizontal chamber. The field record of a 2.4 m multi-bend burrow ending at 70 cm depth demonstrates that a shallow tray alone does not reproduce the species' normal retreat architecture.

Keep several zones available rather than forcing one moisture level. The laying chamber should be slightly damp enough to hold shape, not wet. Monitor digging remotely where possible and avoid repeated disturbance. After laying, assess the female's hydration and body mass and restore food and heat promptly.

Eggs and incubation

The source file's **6-20 egg** statement is not retained as an established species range because accessible primary sources reviewed for this revision did not verify it. Likewise, no single incubation temperature or duration is presented as proven for *S. loricata*.

For a first documented captive clutch, use an experienced Saara breeder's verified method or a conservative agamid incubation plan agreed with a reptile veterinarian. Weigh eggs and media, avoid direct water contact, log temperature continuously and record fertility, mass change, development and hatch dates.

Key references

1. Nazari-Serenjeh, F. & Torki, F. (2017). Geographical distribution and conservation biology of the Mesopotamian spiny-tailed lizard *Saara loricata* in Bushehr Province, southern Iran. *Herpetological Bulletin* 139.
2. Ghaedi, Z., Qashqaei, A.T. & Mahdavi, A. (2021). Burrow structure and site selection of the Mesopotamian spiny-tailed lizard, *Saara loricata*, in Iran. *Zoology in the Middle East*.
3. Hamers, K. (2019). Haltung und Nachzucht von *Saara loricata*, der Irakischen Dornschwanzagame. *Reptilia* 24(139):22.
4. Wilms, T.M. et al. (2009). On the phylogeny and taxonomy of *Uromastix* - resurrection of the genus *Saara*. *Bonner zoologische Beiträge* 56:55-99.

Important: This is an evidence-informed working protocol, not a controlled experimental standard. Measure heat and UVI directly, change seasonal parameters gradually, and revise the schedule from documented health and breeding outcomes.

Evidence confidence

Topic	Confidence and application
Distribution / habitat	High: peer-reviewed field survey and taxonomic sources
Burrow architecture	High: measured field burrow; use to design deep, stable retreats
Plant-dominant diet	High: field observations; insects are occasional
Captive seasonal table	Moderate-low: facility starting points, to be revised from records
Clutch / incubation	Low in accessible sources: do not state generic values as species facts

Source corrections applied

Peak ambient and night temperatures were reduced from 38/31 C to preserve a usable gradient while retaining a 50-55 C basking surface. UVI 7 is no longer a routine target. Winter feeding was reduced, and clutch size and incubation claims were relabelled as unresolved rather than species-standard facts.

Record set for every breeding attempt

Individual IDs; dates of seasonal changes; weekly mass; feeding; courtship and mating dates; first digging; laying date and clutch data; egg dimensions and mass; incubator and media details; temperature logger export; fertility; hatch dates; neonatal mass; post-lay recovery and complications.

UVI beneath the optional T5 tube

Saara loricata

Your measuring point

Measure UVI at normal back height directly beneath the brightest accessible part of the optional T5 strip. Place the strip toward the middle/back with free access to and away from it; preserve a gradient into fully covered refuges near UVI 0. These numbers describe the exposure area, not the whole enclosure or a daily average.

Measure and adjust

- 1. Use a UV Index meter.** A Solarmeter 6.5/6.5R or equivalent UVI meter is suitable. Broadband UVB readings in microwatts/cm2 cannot be substituted for UVI.
- 2. Measure the installed arrangement.** Warm the tube for about 30 minutes. Keep the reflector, guards and mesh in their normal positions. With the animal elsewhere, hold the sensor at its normal back height, aimed toward the tube.
- 3. Adjust the fixture.** Begin near the lower part of a newly selected working range and adjust gradually. Respect the lamp manufacturer's minimum distance. Recheck after each change and check every higher accessible branch, rock or platform.
- 4. Keep a full gradient.** Provide usable exposure across the animal's body, lower-UVI areas and fully covered refuges near UVI 0. For daytime baskers, overlap the UV area with visible light and appropriate basking warmth while retaining cooler shade.
- 5. Record and recheck.** Log UVI, measuring point, tube-to-back distance, tube age and lamp-on time. Recheck through the year and after changes to the tube, reflector, mesh or furnishings. Exposure duration and behaviour also determine dose.

A T5 range is a working exposure target, not a whole-cage setting, measured wild monthly average, guaranteed optimum or proven safety ceiling. The animal must be able to enter and leave freely.

Monthly target at normal back height

Month	UVI under T5 when on
January	2-3
February	3
March	4
April	4-5
May	5-6
June	5-6
July	5-6
August	5-6
September	4-5
October	4
November	3
December	2-3

Retain numbers; clarify measurement

The retained range remains a provisional captive working target. No new species-specific result was found that clearly requires a numerical change. Retaining it is not certification of an experimentally established optimum.

Evidence level: Provisional retention. The seasonal schedule is a captive operating plan; it is not measured wild monthly UV. Off means the existing planned UVB-off/rest phase is preserved. Any staged Off/1 entry still means gradual reintroduction.

UV references: Baines et al. (2016), UV-Tool; Muryn, Baines and Dishman (2026), Reptile Lighting Guide V10. Full rationale and monthly comparison: [UVI_Audit_Report.html](#).