Recommended Annual Husbandry Schedule

Lacerta trilineata - Balkan green lizard / three-lined lizard

Identity and range

Large Balkan lacertid occurring from the eastern Adriatic and western Balkans through much of Greece and associated islands, including Crete. Four subspecies are currently recognized. Some former eastern populations are now treated as separate species.

Climate and annual cycle

Warm-temperate to Mediterranean, but strongly seasonal. Large green lizards are most active in spring and early summer; hot midsummer can reduce surface activity. Continental and upland animals undergo a pronounced winter rest, while island/coastal stock may have a milder one.

Diet and reproduction

Primarily insectivorous/opportunistic. Greek diet data are dominated by beetles and orthopterans, with other invertebrates and some plant material. Spring reproduction is followed by June laying; warmer populations can produce a second clutch.

MONTH	DAY AMBIENT	NIGHT	BASKING	UVI*	PHOTOPERIOD	RH DAY / NIGHT*	SPRAY / RAIN	FOOD*	SEASONAL MANAGEMENT
January	7-11 C	5-8 C	Off	Off	9 h	60-70 / 70-80%	Refuge moisture only	None	Winter rest
February	8-12 C	5-9 C	Off / late month limited	Off / 1-2 late	10 h	55-70 / 70-80%	Refuge moisture only	None	Winter rest; staged wake late
March	18-22 C	10-13 C	34-38 C	2-3	11 h 30 m	45-60 / 60-75%	Light mist 2-3x/wk	2-3	Warm-up / conditioning
April	21-25 C	12-15 C	36-40 C	3-4	13 h	40-55 / 55-70%	Light mist 2x/wk	3-4	Courtship / mating
May	23-27 C	14-17 C	37-42 C	3-4	14 h	40-55 / 55-70%	Light mist; moist nest	4-5	Mating / vitellogenesis
June	25-29 C	16-19 C	38-43 C	3-4	15 h	35-50 / 50-65%	Drier surface; moist nest	4-5	Main laying period
July	26-30 C	17-20 C	38-43 C	3-4	15 h	35-50 / 50-65%	Dry surface; moist retreat	4	Incubation / possible 2nd clutch
August	25-29 C	17-20 C	37-42 C	3-4	14 h 15 m	35-50 / 50-65%	Light mist 1-2x/wk	3-4	Incubation / early hatching
September	22-26 C	14-17 C	35-40 C	2-3	12 h 30 m	40-55 / 55-70%	Light mist 2x/wk	3	Hatching / recovery
October	18-22 C	11-14 C	32-37 C limited	1-2	11 h	45-60 / 60-75%	Local moisture	2 then taper	Autumn taper
November	12-16 C	7-10 C	30-34 C brief / early	Off / 1	9 h 45 m	50-65 / 65-80%	Refuge moisture only	Stop when cooling	Gut clearance / cooling
December	7-11 C	5-8 C	Off	Off	9 h	60-70 / 70-80%	Refuge moisture only	None	Winter rest

Calendar: Northern Hemisphere month sequence. *UVI, RH and feeding frequency are operational captive starting points, not universal field measurements. Provenance matters greatly: mainland/northern or upland animals can require colder and longer winter rest than low-elevation Greek island/coastal stock. Winter cooling is for healthy conditioned adults only.

Practical Husbandry and Daily Management

A large Mediterranean lacertid: bright basking, extensive cover, seasonal moisture, strong territorial management and a real cool season.

Enclosure and structure

This is a large, fast and powerful green lizard. For one adult, about 180 x 80 x 100 cm or larger is a practical starting point; a compatible pair benefits from about 200 x 100 x 120 cm or more. Use branches, cork, stable rocks, dense shrubs/visual barriers, several secure retreats and 15-25 cm of diggable soil/sand/leaf substrate, with a deeper nest area for females.

Heat, gradient and UVB

Field body temperatures are commonly around 31-32 C, with measured individuals ranging into the upper 30s. Provide a peak basking surface around 38-43 C so the animal can reach its preferred body temperature behaviourally, but keep a large shaded retreat much cooler. A measured UVI around 3-4 at the main basking zone is a practical captive target, with deep shade below UVI 1.

Humidity and seasonal rainfall

Hot-season field measurements can be quite dry, but the species uses vegetation, burrows, stone margins and other buffered microhabitats. Keep exposed summer surfaces relatively dry while maintaining a slightly moist deep retreat. Increase local moisture in spring/autumn and keep the nest zone reliably moist but never waterlogged. Fresh drinking water should always be available.

Winter rest

For healthy breeding adults of unknown provenance, a frost-free 6-10 C winter rest for roughly 8-12 weeks is a conservative starting point. Cooler continental/upland stock may need somewhat colder or longer cooling; lowland island/coastal stock may need a milder rest. Taper feeding first, allow complete gut clearance, then reduce heat and photoperiod gradually.

Nest provision

From May onward provide at least 20-25 cm of tunnel-holding substrate in a warm but not overheated location. A covered nest box or deep patch with moist soil/sand can be useful. Gravid females in the 2025 Bulgarian study readily used a covered container of moist substrate as a laying site.

Adult diet

Use varied gut-loaded invertebrates as the staple: crickets, locusts/grasshoppers, roaches, beetles/larvae in moderation, spiders, earthworms and snails. Greek stomach-content data found beetles dominant (about 51% of prey items) and orthopterans next (about 11%). Some island populations show greater plant use, so occasional soft fruit can be offered but should not replace the invertebrate base.

Juvenile diet

Feed appropriately sized live prey frequently during growth, with good calcium provision, access to UVB and dense cover. Hatchlings are more vulnerable to dehydration and intimidation than adults; separate them from adults and maintain several feeding sites if juveniles are kept together.

Social management

Adult males are strongly territorial and should not be housed together. A breeding pair still needs extensive visual barriers, duplicate basking/feeding areas and immediate separation capacity. Watch females closely in spring for persistent pursuit, biting, exclusion from heat or food, hiding and weight loss.

Daily keeper checks

Check activity, gait, toes/claws, eyes/nose, mouth, skin, hydration, faeces and body mass. During breeding season monitor female abdominal contour, calcium intake, digging and post-laying recovery. During winter rest use periodic visual and weight checks without repeatedly warming or disturbing the animal.

Seasonal activity

Large Mediterranean green lizards show peak surface activity in spring and early summer, with reduced sightings during the hottest, driest midsummer period. Do not interpret midday summer hiding as a need for still more enclosure heat; provide morning/late-day basking opportunities and substantial cool shelter.

Breeding, Eggs and Evidence Notes

Recent Bulgarian reproductive work plus Greek diet and thermal studies provide unusually strong species-specific anchors.

Breeding timing

Spring is the main reproductive period. In southwestern Bulgaria, gravid females collected in late May laid between 4 and 13 June. Older work from Split and Greece likewise points to June laying. Warmer Mediterranean populations may produce two clutches, commonly separated by about four to five weeks; northern-range animals may produce only one.

Clutch size

The 2025 Bulgarian study recorded 7-13 eggs per clutch, mean 9.5. A larger Greek dataset reported a very similar mean of about 9.4 eggs, while older captive Mediterranean animals averaged about 12.5 eggs once mature. Larger females generally produce larger clutches.

Incubation

In the Bulgarian study, eggs were kept in perlite and lightly humidified every 5-6 days. Mean incubation temperature was 26.1 C (23.9-29.5 C), with hatching after 79-88 days, mean 84 days. A practical starting protocol is therefore about 25.5-27 C in slightly moist perlite/vermiculite with no free water contacting the eggs.

Hatchlings and maturity

Bulgarian hatchlings measured about 33-44 mm SVL. Published work places sexual maturity of both sexes at roughly 80 mm SVL, but captive breeding should be delayed until animals have mature body condition rather than being triggered solely by reaching a minimum length.

Taxonomic caution

Older husbandry and field literature may use Lacerta trilineata for populations now separated taxonomically. Modern references restrict L. trilineata primarily to the Balkans/Adriatic-Greek region, while some former eastern populations are treated as Lacerta diplochondrodes. Match the winter regime to the actual provenance whenever known.

Current taxonomy and range - High

Reptile Database currently recognizes four subspecies: L. t. trilineata, L. t. major, L. t. hansschweizeri and L. t. polylepidota.

June laying; 7-13 eggs, mean 9.5 - High

Direct 2024 observations published in SALAMANDRA in 2025 for L. t. trilineata from southwestern Bulgaria.

26.1 C incubation; 79-88 days - High

Same recent study: mean 84 days at a naturally fluctuating mean of 26.1 C.

Field body temperature about 31-32 C - High

Recent Bulgaria and earlier Greece thermal studies report active field body temperatures around this range, with behavioural thermoregulation.

Insects dominate; beetles ~51%, orthopterans ~11% - High

Diet study of 288 Greek specimens; plant use was greater in some island populations.

Peak spring / early-summer activity - High

Mediterranean activity study found the large green lizards mainly active March-July, with midsummer surface activity reduced by heat/drought.

UVI 3-4 and 38-43 C basking surface - Moderate

Operational captive translation from heliothermy and measured body temperatures; not direct species-wide field UVI or surface-temperature prescriptions.

Key references

Vacheva & Naumov 2025, SALAMANDRA 61(3):338-342; Vacheva et al. 2025, Herpetozoa 38:103-116; Sagonas et al. 2015 feeding ecology; Sagonas et al. 2019 reproduction; Luiselli et al. 2022 seasonal activity; Reptile Database.

UVI beneath the optional T5 tube

Lacerta trilineata

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	Off
February	Off / 1-2 late
March	2-3
April	3-4
May	3-4
June	3-4
July	3-4
August	3-4
September	2-3
October	1-2
November	Off / 1
December	Off

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.