Recommended Annual Husbandry Schedule

Basiliscus basiliscus - Common basilisk / Brown basilisk / Jesus lizard

Identity and habitat	*Basiliscus basiliscus* is the accepted species name. It occurs from southwestern Nicaragua through Costa Rica and Panama into northern South America, especially in tropical lowland dry and moist forest close to rivers, streams and other water.
Seasonal biology	A diurnal, territorial, semi-arboreal riparian lizard. It does not require cold brumation. The useful captive seasonal cue is a drier, slightly milder December-February phase followed by rising rain/humidity from March-April and a long wet-season breeding window.
Breeding and incubation	Field summaries report breeding beginning around March, repeated clutches of about 2-18 eggs, and roughly 55-90 days to hatching depending on conditions. Multiple clutches can heavily deplete females, so calcium, body mass and nest access require close monitoring.

MONTH	DAY AMBIENT	NIGHT	BASKING	UVI*	PHOTOPERIOD	RH DAY / NIGHT*	SPRAY / WATER	FOOD*	SEASONAL MANAGEMENT
January	26-29 C	22-24 C	36-39 C	2-3	11 h 35 m	60-75 / 80-90%	Light mist daily; pool always	3-4	Dry season / low laying
February	26-29 C	22-24 C	36-39 C	2-3	11 h 45 m	60-75 / 80-90%	Light mist daily; pool always	3-4	Conditioning
March	27-30 C	22-24 C	37-40 C	3	12 h	65-80 / 85-95%	Mist 1-2x/day; moist nest	4-5	Breeding begins
April	27-30 C	23-24 C	38-40 C	3	12 h 15 m	65-80 / 85-95%	Mist 1-2x/day; moist nest	4-5	Courtship / mating
May	28-31 C	23-25 C	38-41 C	3-4	12 h 30 m	70-85 / 90-95%	Daily rain/mist; pool always	4-5	Wet season / laying
June	28-31 C	24-25 C	38-41 C	3-4	12 h 40 m	70-85 / 90-95%	Daily rain/mist; moist nest	4-5	Laying / incubation
July	28-31 C	24-25 C	38-41 C	3-4	12 h 35 m	70-85 / 90-95%	Daily rain/mist; moist nest	4-5	Laying / incubation
August	28-31 C	24-25 C	38-41 C	3-4	12 h 25 m	70-85 / 90-95%	Daily rain/mist; pool always	4-5	Incubation / hatching
September	28-31 C	23-25 C	38-41 C	3-4	12 h 10 m	70-85 / 90-95%	Daily rain/mist; moist nest	4-5	Laying / hatching
October	27-30 C	23-24 C	37-40 C	3	11 h 55 m	70-85 / 85-95%	Mist 1-2x/day; pool always	4	Late laying / recovery
November	27-30 C	22-24 C	37-40 C	2-3	11 h 40 m	65-80 / 85-95%	Mist daily; pool always	3-4	Wet-to-dry transition
December	26-29 C	22-24 C	36-39 C	2-3	11 h 30 m	60-75 / 80-90%	Light mist daily; pool always	3-4	Dry season / recovery

Calendar: Northern Hemisphere translation for captive management. *UVI, RH and feeding frequency are operational starting points, not measured field constants. No cold brumation is recommended. Keep permanent clean swimming water and dry basking/perching surfaces even when humidity is high. Juveniles should remain warm and feed more frequently.

Practical Husbandry and Daily Management

A fast, territorial tropical basilisk: vertical escape routes, clean water, strong ventilation and visual security are as important as heat and humidity.

Enclosure and security

A large, highly active lizard. For one adult use about **180 x 90 x 180 cm** or larger; breeding groups need substantially more room, ideally **240 x 120 x 200 cm** or larger. Provide strong vertical and diagonal branches, dense visual barriers and multiple escape routes. Flighty animals can injure the snout on glass, so cover sightlines where needed.

Swimming water

Provide a permanent water area large enough for full submersion, turning and short swimming, with broad easy exits and branches over the water. Keep it exceptionally clean: filter strongly, remove faeces promptly and perform frequent water changes. Water around room temperature to roughly 24-27 C is suitable; avoid hot stagnant pools.

Heat and UVB

Maintain a broad tropical gradient. Active-season ambient air around 27-31 C works well with cooler shaded lower zones and a strictly local **36-41 C basking surface**. Use a measured linear UVB source; an operational basking target around **UVI 2-3** (up to about 4 in a broad open perch) with shade below UVI 1 is a conservative starting point.

Humidity and rainfall

Aim roughly 65-85% daytime RH through much of the year, rising overnight, but allow exposed branches and basking surfaces to dry. In the dry-season phase, daytime RH can fall nearer 60-70% while the pool and humid retreats remain available. High humidity must be paired with strong ventilation.

No winter brumation

Do not give a European-style winter rest. December-February can be a slightly drier, marginally cooler phase, but adults remain active, warm and feeding. Prolonged temperatures below about 20-21 C are unnecessary for normal husbandry and can increase risk in compromised animals.

Diet

Wild diet is animal-biased omnivory. Panama data summarized by Animal Diversity Web report about **78% animal material and 22% plant material**. Use gut-loaded crickets, roaches, locusts, silkworms, earthworms and occasional snails as the main foods; adults can also receive edible flowers and modest soft fruit. Juveniles are more insectivorous.

Feeding and supplementation

Feed growing juveniles small appropriate prey most days; healthy adults generally 3-5 feeding days per week depending on season, sex and body condition. Dust most insect meals lightly with plain calcium, provide a balanced multivitamin periodically, and avoid chronic overfeeding of gravid females between clutches.

Social management

Adult males are territorial and should not be housed together. A male with multiple females may work only in a genuinely large enclosure with duplicate basking, feeding, water and hiding resources. Separate immediately for persistent chasing, bite wounds, weight loss or exclusion from basking and food.

Nesting

Provide females a deep, private, slightly moist digging zone from before the breeding season onward. A practical nest box/deep substrate zone should offer at least **20-30 cm** of diggable soil/sand mix even though natural nest funnels can be shallower. Moisture should hold a tunnel without becoming wet or airless.

Daily checks

Check water quality, eyes/snout, toes, crest, shedding, appetite and faeces every day. Confirm both basking-surface temperature and shaded air temperature with separate instruments. Weigh breeding females regularly; repeated clutches can cause rapid calcium and body-condition loss.

Breeding, Incubation and Evidence Notes

Use the seasonal schedule as a controlled captive framework; locality, individual condition and enclosure microclimate remain more important than calendar dates.

Breeding season

Costa Rican summaries report breeding beginning around **March**, followed by repeated laying over much of the next ten months, with distinctly lower laying in January-March. Older locality-specific reports describe much shorter breeding windows, so reproductive timing is best treated as population- and climate-dependent rather than universal.

Clutch size

Published summaries give approximately **2-18 eggs per clutch**. Larger females generally lay more eggs. Captive females may lay several clutches in a season, making body-mass tracking, dietary calcium and recovery periods especially important.

Incubation

A conservative incubation starting point is about **28-29.5 C** in evenly moist, well-aerated vermiculite/perlite. Published ranges are roughly **55-90 days** depending on temperature and study. Avoid trying to accelerate hatching with excessive heat; use stable temperatures and record mass/moisture changes in each box.

Hatchlings

House hatchlings in well-planted or visually broken enclosures with abundant fine branches and secure water access that cannot trap them. Keep them warm year-round, mist daily, offer small gut-loaded insects frequently and supply reliable UVB/calcium. Adults may prey on young, so do not mix size classes.

Taxonomy and range - High

The Reptile Database recognizes *Basiliscus basiliscus* (Linnaeus, 1758), with two named subspecies. Its native range includes Costa Rica and Panama and extends into northern South America; it is a lowland species strongly associated with water.

Habitat and behaviour - High

Animal Diversity Web summarizes common basilisks as abundant in Pacific lowland dry and moist forests, often immediately beside rivers and other waterways. They are diurnal, territorial, strong swimmers and climbers, and may sleep high in trees at night.

Diet - Moderate/High

The classic Costa Rican/Panamanian literature describes broad omnivory with a strong animal bias. Arthropods dominate, but small vertebrates, fish, freshwater shrimp, fruit and flowers are also recorded. Captive diets should mirror the animal bias without relying on fatty mammal prey.

Reproduction - Moderate/High

Animal Diversity Web, drawing on Lieberman and Van Devender, reports breeding from March, 2-18 eggs per clutch and about 60-90 days development. Lieberman described the nest and shorter incubation near 55-60 days under natural conditions.

Captive thermal/humidity targets - Moderate

Specialist basilisk husbandry literature commonly uses ambient temperatures around 28-30 C, basking near 40 C, nights around 20-25 C and high humidity, often 70-90%. The present sheet deliberately preserves a cooler shaded gradient and seasonal dry-period reduction rather than keeping the entire enclosure uniformly hot and wet.

Keeper warning

Common basilisks are fast, easily startled and capable of severe collision injuries in transparent enclosures. Do not house adult males together. Do not impose cold brumation. Dirty water, stagnant saturated air, poor UVB/calcium and lack of visual cover are among the most avoidable husbandry failures.

Key references: The Reptile Database (accessed 2026); Animal Diversity Web, *Basiliscus basiliscus*; Lieberman 1980, Journal of Herpetology 14:103-105; Van Devender 1978, Ecology 59:1031-1038; Fleet & Fitch 1974, Journal of Herpetology 8:260-262; Lang 1989, Basiliscus monograph; specialist long-term captive husbandry accounts used only for operational temperature/humidity cross-checking.

UVI beneath the optional T5 tube

Basiliscus basiliscus

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	2-3
March	3
April	3
May	3-4
June	3-4
July	3-4
August	3-4
September	3-4
October	3
November	2-3
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.