

Basiliscus plumifrons

Green crested basilisk / Plumed basilisk

Tropical Central American riparian forest - Honduras, Nicaragua, Costa Rica and Panama

Core profile	Active season	Breeding	Winter
Large, fast, semi-arboreal and semi-aquatic rainforest basilisk.	26-30 C air; 36-40 C local basking; permanent water; 70-90% RH.	Rainfall-driven; multiple clutches possible; deep moist nest always available.	No cold brumation. Maintain warm tropical conditions all year.

Annual keeper schedule

Month	Day	Night	Bask	UVI	Light	RH day/night	Spray / water	Food	Management
January	26-29 C	22-24 C	36-39 C	2-3	11 h 40 m	75-90 / 90-100%	Mist 2x/day; pool always	4	High-rain recovery / conditioning
February	26-29 C	22-24 C	36-39 C	2-3	11 h 50 m	70-85 / 85-95%	Mist 1-2x/day; pool always	4	Conditioning / courtship
March	27-30 C	23-24 C	37-40 C	3	12 h 05 m	70-85 / 85-95%	Mist 1-2x/day; moist nest	4-5	Courtship / early laying
April	27-30 C	23-24 C	37-40 C	3	12 h 20 m	70-85 / 85-95%	Mist 1-2x/day; moist nest	4-5	Mating / laying
May	27-30 C	23-25 C	37-40 C	3-4	12 h 35 m	75-90 / 90-100%	Mist 2-3x/day; moist nest	4-5	Rain rising / laying
June	28-30 C	24-25 C	38-40 C	3-4	12 h 40 m	75-90 / 90-100%	Mist 2-3x/day; moist nest	4-5	Main laying / incubation
July	28-30 C	24-25 C	38-40 C	3-4	12 h 35 m	75-90 / 90-100%	Mist 2-3x/day; moist nest	4-5	Laying / incubation
August	27-30 C	23-25 C	37-40 C	3-4	12 h 25 m	75-90 / 90-100%	Mist 2x/day; moist nest	4-5	Laying / hatching
September	27-30 C	23-24 C	37-40 C	3	12 h 10 m	70-85 / 85-95%	Mist 1-2x/day; pool always	4	Late 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	Recovery / rainfall shift
November	26-29 C	22-24 C	36-39 C	2-3	11 h 40 m	75-90 / 90-100%	Mist 2x/day; pool always	3-4	High-rain recovery
December	26-29 C	22-24 C	36-39 C	2-3	11 h 35 m	75-90 / 90-100%	Mist 2x/day; pool always	3-4	High-rain recovery

* Food = adult feeding opportunities per week; adjust quantity to body condition and prey size. UVI values are operational captive targets, not direct field measurements.

Core husbandry

The green crested basilisk should be managed as a warm, humid, riparian forest lizard with extensive vertical structure and permanent access to clean water.

Habitat and enclosure	Large, fast, semi-arboreal and semi-aquatic basilisk of tropical moist and wet forest, especially intact stream corridors. For one adult use about 180 x 90 x 180 cm or larger; a breeding pair/group benefits from about 240 x 120 x 200 cm or more. Provide strong branches, dense foliage/visual barriers, multiple elevated perches and a large open water section. Never house adult males together.
Swimming water	Permanent clean water is essential. Provide a basin large enough for full submersion, turning and short swimming, with broad easy exits and branches over the water. Filter strongly and remove faeces promptly. Water around 24-27 C is suitable; avoid stagnant warm water.
Heat and UVB	Maintain daytime air around 26-30 C with substantial shaded areas and a strictly local 36-40 C basking surface. Nights can fall to about 22-25 C. Use measured linear UVB; UVI about 2-3 at the principal basking perch, with access toward 4 for large adults, is a conservative captive starting target rather than a species-specific field measurement.
Humidity and rainfall	Keep humidity high year-round but ventilated: typically 70-90% by day with stronger night peaks. Mist once or twice daily in lighter-rain phases and two to three times during wetter breeding phases. Branches should periodically dry between misting events to prevent chronically stagnant surfaces.
Seasonality	Do not brumate. Use rainfall and feeding intensity as the main annual cues. A modestly lighter-rain February-April phase can transition into heavier May-August rains, with renewed high humidity toward November-January. Exact rainfall should be adjusted to known locality because Caribbean lowland sites may remain wet through much of the year.

Daily operational targets

Air temperature	26-30 C by day; 22-25 C at night	Keep substantial shaded zones cooler than the basking perch.
Basking	36-40 C surface	Strictly local. Do not heat the whole enclosure to basking temperature.
Humidity	70-90% day; 85-100% night peaks	High humidity requires equally strong ventilation and periodic surface drying.
Water	Permanent, filtered swimming basin	Large enough for full submersion and short swimming; multiple easy exits.
UVB	UVI 2-3 main perch; optional zone toward 4	Measure with a UV meter; retain dense shade below UVI 1.
Substrate	Deep, moisture-buffering soil mix	Keep a lower layer slightly moist; provide a separate deep nesting zone for females.

Feeding, reproduction and evidence notes

Breeding females can decline quickly if calcium, hydration, nesting access or recovery time is inadequate. Repeated clutches make body-condition monitoring especially important.

Diet	Animal-biased omnivore. Use gut-loaded roaches, crickets, locusts, silkworms, earthworms and snails as the core diet, with occasional small fish or other appropriate whole prey. Offer modest amounts of soft fruit, edible flowers and leafy plant material rather than making fruit the staple.
Breeding and incubation	Females may produce multiple clutches in a season. Captive specialist records report about 4-17 eggs, with most clutches from February-September; Smithsonian records 15-17 eggs in well-grown females and multiple clutches. Use a deep, lightly moist nesting zone. A conservative incubation starting point is 27-28 C in evenly moist, aerated medium; specialist records give roughly 65-75 days at this temperature.
Keeper warning	Green basilisks are fast, flighty and collision-prone. Maintain visual cover, avoid narrow transparent escape lines, prevent persistent male harassment and never combine high humidity with poor ventilation. Check water quality daily. Gravid females must always have deep, diggable, slightly moist nesting substrate.

Incubation working range

Parameter	Working target	Keeper note
Temperature	27-28 C	Specialist records report about 65-75 days here; avoid chasing faster development with excessive heat.
Medium	Evenly moist, airy perlite/vermiculite	Eggs should remain turgid without sitting in free water; avoid repeated turning after placement.
Clutch expectations	Often 4-17 eggs; large females may exceed 15	Multiple clutches can occur in one season; monitor female mass, calcium and hydration closely.

Evidence anchors

- IUCN Red List: diurnal, semiaquatic, semiarboreal; intact stream courses in tropical moist/wet forest.
 - Smithsonian National Zoo: Costa Rica, Honduras, Nicaragua and Panama; near water; up to ~90 cm; multiple clutches and 15-17 eggs reported.
 - Reptile Database: accepted species *Basiliscus plumifrons* Cope, 1875; range Honduras, Nicaragua, Costa Rica and Panama.
 - Long-term specialist captive records (plumifrons.com / plumifrons.nl): 4-17 eggs; most clutches February-September; ~65-75 days at 27-28 C.
- Review date:** 2 October 2026. This protocol is a husbandry working document, not a substitute for veterinary diagnosis or known-locality climate data.

UVI beneath the optional T5 tube

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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
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](#).