Agalychnis callidryas

Red-eyed Treefrog

Lowland wet-forest / seasonal-rainfall default for the currently recognized Central American-to-northwestern Colombian species. Arboreal adults; leaf-laid aerial eggs; aquatic tadpoles.

Core profile	Seasonal cue	Egg biology	Hatching
Nocturnal arboreal leaf frog. Prioritize vertical foliage, clean water, cool-to-warm humid air, excellent ventilation and minimal handling. There is no brumation.	Breeding is prolonged through the rainy season, commonly May-November, with a strong initial peak after the first heavy rains.	Females place gelatinous clutches on leaves over water. Mean clutch size in one comparative study was about 41 eggs; broader field reports span roughly 11-104.	Embryos are hatching-competent early and normally leave the egg around day 5-8, dropping into water. Heat, flooding, predators and dehydration can trigger earlier hatching.

Annual keeper schedule

Month	Day air	Night	Warm perch	UVI*	Light	RH day/night	Rain / misting	Adult food	Seasonal management
January	24-27 C	20-22 C	26-28 C	0.5-1.0	11.8 h	55-70 / 75-88%	Dry phase; light PM mist 3x/wk	2-3	Adult maintenance / recovery
February	24-27 C	20-22 C	26-28 C	0.5-1.0	11.9 h	55-70 / 75-88%	Dry phase; light PM mist 3x/wk	2-3	Adult maintenance
March	24-27 C	20-22 C	26-28 C	0.5-1.0	12.0 h	55-70 / 75-88%	Dry phase; light PM mist 3x/wk	2-3	Condition breeders
April	24-27 C	20-22 C	26-28 C	0.5-1.0	12.1 h	50-65 / 72-85%	4-5 wk relative dry cue; never dehydrate	2-3	Pre-breeding conditioning
May	24-27 C	21-23 C	26-28 C	0.5-1.0	12.2 h	65-80 / 85-95%	Abrupt heavy evening rain / rain chamber	3-4	Breeding starts after first strong rains
June	24-27 C	21-23 C	26-28 C	0.5-1.0	12.2 h	65-80 / 85-95%	Wet phase; nightly rain pulses	3-4	Courtship / spawning / eggs
July	24-27 C	21-23 C	26-28 C	0.5-1.0	12.2 h	65-82 / 85-95%	Wet phase; nightly rain pulses	3-4	Peak breeding / tadpoles
August	24-27 C	21-23 C	26-28 C	0.5-1.0	12.1 h	65-82 / 85-95%	Wet phase; frequent evening rain	3-4	Breeding / tadpole growth
September	24-27 C	21-23 C	26-28 C	0.5-1.0	12.0 h	65-82 / 85-95%	Wet phase; frequent evening rain	3-4	Breeding / metamorphs
October	24-27 C	21-23 C	26-28 C	0.5-1.0	11.9 h	65-80 / 85-95%	Wet phase; rain gradually easing	3	Late breeding / juvenile growth
November	24-27 C	20-22 C	26-28 C	0.5-1.0	11.8 h	60-75 / 80-92%	Rain taper; retain nightly humidity	2-3	Breeding winds down
December	24-27 C	20-22 C	26-28 C	0.5-1.0	11.8 h	55-70 / 75-88%	Drier phase begins	2-3	Recovery / maintenance

Do not interpret the wet season as permanently saturated air. Mist or rain mainly in the evening/night and allow foliage and enclosure surfaces to dry partially during the day. UVI values are conservative operational targets, not a measured species-specific requirement.

Housing, climate and daily care

Taxonomy and range

Agalychnis callidryas is the currently accepted red-eyed treefrog. Modern taxonomic work separates A. taylori to the north; the accepted A. callidryas range includes northeastern Honduras and eastern Nicaragua through Costa Rica and Panama into northwestern Colombia, from sea level to about 1325 m.

Enclosure

For a single adult, 45 x 45 x 60 cm is a practical minimum starting point; 60 x 45 x 90 cm or larger is better for a pair or small breeding group. Use a vertical, densely planted enclosure with broad leaves, horizontal and diagonal perches, visual barriers and strong cross-ventilation. Avoid abrasive decor.

Temperature

Maintain roughly 24-27 C daytime air with an upper warm perch around 26-28 C and shaded lower zones around 22-24 C. Nights around 20-23 C are appropriate for the lowland default. Avoid sustained temperatures above about 29-30 C and never create a hot reptile-style basking spot.

Humidity and ventilation

A useful operational range is about 55-80% RH by day depending on season, rising to 75-95% overnight after misting. Ventilation is essential: persistent wet surfaces and stagnant saturated air increase skin, bacterial and fungal problems. Night-biased misting better matches activity.

Lighting and UVB

Provide a stable day/night cycle and bright plant-quality visible light. Low-level UVB can be offered conservatively, around UVI 0.5-1.0 at the most exposed upper perch, with abundant zero-UV shade. Species-specific UVI measurements were not located, so avoid intense UVB.

Water

Use only clean dechlorinated water. Provide a shallow, easy-exit water dish for adults and change it daily. Breeding enclosures need a clean aquatic section or rain-chamber basin positioned beneath suitable oviposition leaves. Never use untreated chlorinated tap water.

Diet

Feed appropriately sized, well-gut-loaded invertebrates: crickets, small roaches, flies, moths and similar soft-bodied prey. Adults usually do well on 2-3 feedings weekly, increasing during breeding. Rotate prey, avoid obesity, and dust according to the calcium/UVB program rather than coating every meal heavily.

Handling and biosecurity

Handle only when necessary. Amphibian skin is permeable: use clean, powder-free nitrile gloves moistened with safe water, or thoroughly rinsed wet hands if veterinary protocol allows. Quarantine new frogs and prevent transfer of water, tools or substrate between groups because chytrid fungi and ranaviruses are major biosecurity concerns.

Breeding, eggs, tadpoles and evidence

Breeding trigger

For healthy, well-conditioned adults, a relative dry period of about 4-5 weeks can precede breeding. Keep safe drinking water and overnight humidity available; the goal is reduced rainfall, not dehydration. Then increase evening rain sharply and introduce a rain chamber or flooded breeding basin. Heavy rain is a well-documented reproductive trigger.

Oviposition

Females deposit gelatinous egg masses on leaves above water. Provide broad, clean leaves angled over the aquatic area. Do not force clutches underwater. Published clutches average around 35-41 eggs in several studies, while broader field observations range roughly 11-104 eggs.

Egg care

Leave viable clutches attached to the leaf when possible, suspended above clean water. Keep them humid with good air movement and protect them from direct heat and desiccation. Natural oviposition-site measurements in one field study averaged only about 21.8 C, while laboratory studies have often developed eggs around the mid-20s C. A practical protected-care range is about 22-26 C.

Hatching

Embryos can become hatching-competent around day 4-5 and normally hatch around day 5-8. They may hatch early in response to predators, flooding, dehydration, hypoxia or heat. The clutch should therefore hang directly over safe tadpole water before this window begins.

Tadpoles

Rear tadpoles in clean, dechlorinated water with gentle biological filtration or frequent partial water changes, low current, structure and ample surface access. Around 24-26 C is a sensible starting range. Larval development is often completed in under about 55 days in field/experimental settings, but substantial variation occurs with food, density, temperature and predation cues.

Metamorphs

As forelimbs emerge and the tail is absorbed, provide easy shallow exits, sloping vegetation and extremely secure fine-scale ventilation. Newly metamorphosed froglets dehydrate easily; keep them humid but not stagnant and offer tiny live prey such as fruit flies and pinhead insects.

Keeper warning

Do not equate high humidity with continuously wet frogs. A constantly saturated, poorly ventilated enclosure is not appropriate. Do not overheat eggs: modern experiments show embryos can trigger heat-induced hatching around 38 C, which is a stress-escape response, not a husbandry target.

Evidence anchors

- Amphibian Species of the World (accessed 3 October 2026): accepted taxonomy and current distribution; A. taylori is treated separately from northern populations formerly included in A. callidryas.
- Gagliardo, Amphibian Ark phyllomedusine husbandry guidance: common Agalychnis can be maintained around 75-85 F with a night drop; general misting, daytime drying and roughly 50-75% RH are suitable operational principles; breeding commonly follows 4-5 weeks drier conditions and an abrupt rain event.
- Warkentin (2000) and subsequent red-eyed treefrog embryo studies: arboreal clutches over water; typical undisturbed hatching about 5-8 days; environmentally cued early hatching is a major feature of the species.
- Comparative Agalychnis reproductive work: rainy-season breeding (roughly May-November) and mean clutch size about 40.9 eggs in one 20-clutch sample; other field work reports 11-104 eggs per clutch.
- Sanchez-Ochoa et al. (2020): A. callidryas clutch abundance closely followed heavy rainfall; measured clutch-site temperature averaged 21.75 C (20.52-23.61 C).
- Recent heat-hatching work (2025/2026): embryos can initiate escape hatching under rapid warming; about 38 C is a behavioral stress threshold, not an incubation recommendation.

Review date: 3 October 2026. Exact seasonal timing should be shifted if the breeder knows the geographic origin of the colony.

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	0.5-1.0
February	0.5-1.0
March	0.5-1.0
April	0.5-1.0
May	0.5-1.0
June	0.5-1.0
July	0.5-1.0
August	0.5-1.0
September	0.5-1.0
October	0.5-1.0
November	0.5-1.0
December	0.5-1.0

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.