

Recommended Annual Husbandry Schedule

Ctenosaura palearis - Motagua spiny-tailed iguana

Identity and habitat

A small-to-medium arboreal spiny-tailed iguana endemic to the seasonally dry Motagua Valley of southeastern Guatemala. It is strongly associated with dry forest, thorn scrub, columnar cacti such as *Stenocereus pruinosus*, and tree cavities used for shelter.

Seasonal climate

The Motagua Valley is hot and semi-arid. The dry season runs mainly November-April and the wet season May-October. Nearby long-term climate data indicate mean annual RH around the mid-60s, with roughly 61% in the driest month and low-70s in wetter months.

Reproduction and diet

Females reproduce annually. Courtship and mating occur in January-February; gravid females occur February-March; 6-12 eggs are laid from late March to late April in sandy burrows; hatchlings emerge around late May as rains begin. Adults eat both plant matter and insects.

MONTH	DAY AMBIENT	NIGHT	BASKING	UVI*	PHOTO	RH DAY / NIGHT*	SPRAY / RAIN	FOOD*	STATUS / BREEDING
January	25-29 C	18-21 C	40-42 C	3-4	11 h 20 m	45-60 / 55-70%	Light local spray 1-2x/wk	4	Courtship / mating
February	26-30 C	19-22 C	41-43 C	4	11 h 40 m	45-60 / 55-70%	Light local spray 1-2x/wk	4	Mating / females gravid
March	28-32 C	20-23 C	42-44 C	4-5	12 h 00 m	40-55 / 50-65%	Minimal; water always	4-5	Gravid / nest preparation
April	29-33 C	21-24 C	42-44 C	4-5	12 h 25 m	40-55 / 50-65%	Minimal + moist lay chamber	4-5	Main oviposition window
May	29-32 C	21-24 C	42-44 C	4	12 h 45 m	55-70 / 70-85%	2-3 rain/mist events/wk	4-5	Hatching late month / rains begin
June	28-31 C	21-24 C	41-43 C	4	13 h 00 m	60-75 / 75-90%	3-5 rain/mist events/wk	4-5	Wet-season activity
July	28-31 C	21-24 C	41-43 C	4	12 h 55 m	60-75 / 75-90%	3-5 rain/mist events/wk	4-5	Peak wet-season feeding
August	28-31 C	21-24 C	41-43 C	4	12 h 35 m	60-75 / 75-90%	3-5 rain/mist events/wk	4-5	Wet-season maintenance
September	27-30 C	20-23 C	40-42 C	3-4	12 h 10 m	60-75 / 75-90%	3-5 rain/mist events/wk	4-5	Late wet season
October	26-29 C	20-22 C	40-42 C	3-4	11 h 45 m	55-70 / 70-85%	2-3 rain/mist events/wk	3-4	Rains taper
November	25-28 C	18-21 C	39-41 C	3	11 h 25 m	50-65 / 60-75%	Light local spray 1-2x/wk	3-4	Dry-season conditioning
December	24-28 C	18-20 C	39-41 C	3	11 h 15 m	45-60 / 55-70%	Light local spray 1-2x/wk	3-4	Pre-breeding conditioning

Seasonality: this species stays warm year-round; reproduction is synchronized with the late dry season and the first rains, not with a cold winter cycle.

* RH, UVI and spray values are captive working targets. The Motagua Valley is semi-arid but not 'desert-dry' in atmospheric humidity; strong airflow and surface drying are essential.

Diet note: adult field feces contained approximately 47.8% insects, 26.9% leaves, 15.4% flowers and 7.7% fruits in one study, so adults should not be treated as purely herbivorous.

Practical Husbandry and Daily Management

Hot seasonal-dry-forest husbandry: arboreal refuges, intense local basking, strong ventilation, mixed diet, deep nesting sand and a true rainy season.

Enclosure and structure

This species is smaller than *C. pectinata* but highly active and arboreal. For one adult, about 120 x 70 x 100 cm or larger is a practical starting point; breeding pairs benefit from substantially more room.

Provide upright branches, hollow logs/cork tubes, elevated basking shelves and several tight cavities.

Vertical complexity is more important than bare floor area alone.

Heat, gradient and UVB

Provide a local basking surface around 40-44 C during the day, but maintain a genuine cool retreat around 25-28 C. Overnight temperatures should fall into the high teens/low 20s. A measured basking UVI around 3-5 is a practical target, with deep shade and refuge interiors below UVI 1.

RH, rain and ventilation

Dry-season RH can remain moderate, roughly 45-60% by day with a nighttime rise. During May-October increase short rain/mist events and overnight RH, but retain strong ventilation. The key is seasonal rainfall, not permanently wet substrate. Exposed bark, branches and rock should dry between events.

Nest provision

Before March, provide a deep secluded sandy nesting area. Wild females excavate tunnels in sandy banks of dry streams and ravines. A 30-40 cm deep diggable sand/soil area with a lightly moist lower layer and dry upper surface is a practical captive analogue.

Diet

Unlike many larger *Ctenosaura*, adults of this species consume a substantial insect component. Field feces contained insects together with leaves, flowers and fruits; ants and crickets were especially common. Offer a mixed diet: leafy greens, browse, edible flowers and cactus/other fruit in modest amounts, plus regular gut-loaded invertebrates.

Seasonal feeding

During the dry reproductive season, keep breeders well conditioned but not fat. Both sexes can lose mass during reproduction. Increase food quality after breeding and through the rainy season. Dry-season flowers, beetles, crickets and ants are natural seasonal foods; wet-season samples contain more leaves and fiber.

Social management

Males become territorial and more brightly colored during courtship. Adult males should be housed separately. Supervise breeding introductions and ensure multiple elevated refuges. Separate for biting, repeated pursuit, refuge exclusion, suppressed feeding or weight loss.

Daily keeper checks

Check alertness, eyes/nose, toes/tail, grip, climbing, feces, hydration, appetite and body condition. Confirm that hollows/cavities remain clean and dry internally. During the breeding season, record male color/display, female abdominal profile, digging and body mass at least weekly.

Breeding, Eggs and Evidence Notes

One annual clutch synchronized with the late dry season: mate January-February, lay late March-April, hatch as the first rains arrive.

Reproductive timing

Local Guatemalan sources describe a clear annual cycle: copulation during January-February, gravid females in February-March, oviposition from late March to late April, and hatching around late May at the onset of the rainy season.

Clutch size

The best locality-specific reproductive accounts report 6-12 eggs per clutch. Some broader captive-breeding summaries report larger figures, but this protocol prioritizes the Motagua Valley species-specific field literature for working expectations.

Nest management

Wild nests occur in sandy patches on dry-stream banks and ravines. Provide deep, secluded, diggable substrate with a moisture gradient. Once a female begins sustained digging, minimize disturbance. Record laying date, clutch size, egg dimensions and female pre/post-lay mass.

Incubation

Because natural hatchlings emerge around late May after late-March/April laying, development appears relatively rapid in the warm pre-rain period. Published precise incubation temperatures are limited. Use moderate warm incubation rather than extreme heat, maintain a moisture gradient, and record egg mass/appearance regularly.

Evidence confidence

Taxonomy / range - High

Endemic to the Motagua Valley, southeastern Guatemala.

Habitat / refuge use - High

Dry forest/thorn scrub; strong association with columnar cactus and tree cavities.

Mating / gravid timing - High

January-February copulation; gravid females February-March.

Clutch size / laying - High-moderate

6-12 eggs; late March-late April in locality-specific sources.

Hatching timing - High-moderate

Late May, coinciding with onset of rains.

Diet composition - High

Field fecal analysis quantified insect and plant fractions.

RH / spray targets - Moderate

Translated from local semi-arid climate and seasonal rainfall; not direct lizard micro-RH measurements.

Key references

1. Coti (2008), Universidad del Valle de Guatemala: ecology, diet and habitat use in El Arenal, Cabanas, Zacapa.
2. Coti & Ariano (2008), Iguana 15(3): ecology and traditional use in Motagua dry forest.
3. Gil Escobedo (2016): home range, seasonal movement and reproductive summary.
4. Reptile Database: accepted taxonomy and oviparity.
5. Regional climate sources: dry season November-April, wet season May-October; semi-arid Motagua Valley.

UVI beneath the optional T5 tube

Ctenosaura palearis

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	3-4
February	4
March	4-5
April	4-5
May	4
June	4
July	4
August	4
September	3-4
October	3-4
November	3
December	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](#).