Recommended Annual Husbandry Schedule

Ctenosaura clarki - Balsas spiny-tailed iguana

Identity and habitat

Accepted name: Ctenosaura clarki (not clarkii). A small, semi-arboreal iguana endemic to the Balsas-Tepalcatepec region of western Mexico. It inhabits tropical deciduous/thorn forest and open arid scrub, often sheltering in hollow cactus stems, dry branches, tree cavities and fence posts.

Climate and microhabitat

Its range is exceptionally hot and dry: mean annual temperatures exceed 26 C in much of the range, the dry season lasts about 6-8 months, and annual rain is generally below 700-1000 mm. However, field work found preferred refuges/microhabitats to be moderately shaded and below about 30 C.

Reproduction and diet

Oviparous. Field observations place hatching in early-to-mid June; captive-breeding reviews report about 5-7 eggs per clutch, with eggs roughly 33-36 x 19-20 mm. Diet is reported as both herbivorous and insectivorous; adults should be plant-dominant with occasional invertebrates.

MONTH	DAY AMBIENT	NIGHT	BASKING	UVI*	PHOTO	RH DAY / NIGHT*	SPRAY / RAIN	FOOD*	STATUS / BREEDING
January	24-28 C	17-20 C	37-40 C	3	11 h 10 m	30-45 / 45-60%	Very light local spray 1x/wk	3-4	Dry-season conditioning
February	25-29 C	18-21 C	38-40 C	3-4	11 h 30 m	30-45 / 45-60%	Very light local spray 1x/wk	3-4	Courtship / mating likely
March	27-31 C	19-22 C	39-41 C	3-4	12 h	30-45 / 45-60%	Minimal; water always	4	Gravid / nest preparation
April	29-32 C	20-23 C	39-41 C	3-4	12 h 30 m	30-45 / 45-60%	Minimal + moist lay chamber	4	Probable oviposition
May	30-33 C	21-24 C	40-42 C	4	13 h	35-50 / 50-65%	Light local spray 1-2x/wk	4	Late dry season / incubation
June	29-32 C	21-24 C	39-41 C	4	13 h 15 m	50-65 / 65-80%	2-3 rain/mist events/wk	4-5	Hatching early-mid month
July	28-31 C	21-24 C	39-41 C	3-4	13 h	55-70 / 70-85%	2-3 rain/mist events/wk	4-5	Short wet season
August	28-31 C	21-24 C	39-41 C	3-4	12 h 40 m	55-70 / 70-85%	2-3 rain/mist events/wk	4-5	Short wet season
September	27-30 C	20-23 C	38-40 C	3	12 h 10 m	50-65 / 65-80%	2-3 rain/mist events/wk	4	Late rains
October	26-29 C	19-22 C	38-40 C	3	11 h 40 m	40-55 / 55-70%	Light local spray 1-2x/wk	3-4	Dry-down begins
November	24-28 C	18-21 C	37-39 C	2-3	11 h 15 m	35-50 / 50-65%	Very light local spray 1x/wk	3	Dry season
December	23-27 C	17-20 C	37-39 C	2-3	11 h	30-45 / 45-60%	Very light local spray 1x/wk	3	Dry season / pre-breeding

Key husbandry point: despite living in one of Mexico's hottest dry regions, C. clarki uses shaded hollow refuges and should not be kept in uniformly hot air. Provide a warm basking site but a genuine shaded retreat below 30 C.

* RH, UVI and spray values are captive working targets. The wild dry season is prolonged; the brief rainy season is mainly June-September. Exposed surfaces should dry rapidly between events.

Taxonomy: major current authorities use Ctenosaura clarki. The spelling 'clarkii' is a common but incorrect variant.

Practical Husbandry and Daily Management

Hot dry-forest husbandry: hollow elevated refuges, strong ventilation, moderate local basking, long dry season and a short summer rain pulse.

Enclosure and structure

This is a compact, semi-arboreal species. For one adult, about 120 x 70 x 90 cm or larger is a practical starting point. Provide vertical and diagonal branches, hollow cork/log tubes, dry cactus-like hollow refuges, elevated basking shelves and shaded retreat cavities. Tight cavities are functionally important because the species wedges in head-first and blocks the entrance with its spiny tail.

Heat, gradient and UVB

Use a local basking surface around 37-41 C for most of the year, slightly higher only in the hottest pre-rain months. Keep most air below about 30 C whenever possible, with a cooler shaded zone around 24-27 C. A measured basking UVI around 3-4 is a reasonable working target, with refuge interiors below UVI 1.

RH, rain and ventilation

The long dry season should be genuinely dry: roughly 30-45% daytime RH with a modest overnight rise. Use only minimal localized spray for drinking/shedding. From June-September, increase short rain/mist events and overnight RH, but retain strong ventilation and rapid drying of exposed wood/rock.

Nesting

Because hatchlings appear in early-mid June and older literature suggests April laying, provide a nest site by March. Use a secluded 25-35 cm deep mineral soil/sand area with a lightly moist lower layer and dry upper layer. Avoid broad wetting of the main enclosure just because the nest requires moisture.

Diet

Published ecological summaries list both herbivory and insectivory, while zoo husbandry summaries describe adults as mainly vegetarian with occasional insects. Use a plant-dominant adult diet based on leafy greens, edible weeds, flowers and browse, with small invertebrate offerings periodically rather than as the staple.

Juveniles

Direct age-specific diet data are sparse. A cautious working approach is to offer juveniles a somewhat higher invertebrate proportion than adults while still presenting greens and flowers from the start. Gradually shift toward plant dominance as they grow and monitor body condition closely.

Social management

Detailed social biology is limited. Individual housing is safest for adult males. If breeding pairs are kept together, provide multiple hollow refuges and visual barriers. Separate for repeated chasing, biting, refuge exclusion, suppressed feeding or weight loss.

Daily keeper checks

Check alertness, posture, climbing/grip, eyes/nose, toes/tail, appetite, feces, hydration and body condition. Confirm that shaded cavities remain cooler than exposed basking surfaces. During breeding months, track female abdominal profile, digging and mass weekly.

Breeding, Eggs and Evidence Notes

Oviparity and June hatching are well supported; exact mating and laying dates are less well documented and should be treated as working estimates.

Reproductive timing

Field series collected in April contained no juveniles, whereas very young animals with open or prominent umbilical scars were collected in late June. This strongly supports early-to-mid June hatching. Older authors suggested egg laying around April by comparison with related Mexican Ctenosaura, but direct observations of laying were lacking.

Clutch and egg size

A CITES captive-breeding review summarizes C. clarki at approximately 5-7 eggs per clutch. Reported egg dimensions are about 33-36 mm by 19-20 mm. Very young hatchlings measured about 55-57 mm snout-vent length.

Incubation

Precise species-specific incubation temperature and duration were not located in the primary literature reviewed. Because hatch occurs in June after likely April laying, development may be relatively rapid under warm late-dry-season conditions. Start with moderate iguanid incubation temperatures rather than extreme heat and record development carefully.

Nest management

Provide a stable moisture gradient: dry at the surface, lightly moist deeper down. If eggs are recovered, record clutch size, dimensions, mass and laying date. Avoid over-wetting because the wild nesting season still occurs in a predominantly dry landscape.

Evidence confidence

Taxonomy / range - High

Current authorities use Ctenosaura clarki; Balsas-Tepalcatepec dry-forest endemic.

Habitat / microhabitat - High

Hollow cactus/branches, trees, posts and rocky sites; semi-arboreal.

Climate seasonality - High

Very hot, 6-8 month drought; short June-September rainy period.

Hatching timing - High

Very young hatchlings recorded early-mid June.

Clutch size / egg size - Moderate

Captive-breeding review: about 5-7 eggs; eggs 33-36 x 19-20 mm.

Mating / laying timing - Low-moderate

April laying is a historical inference rather than direct field observation.

RH / spray targets - Moderate

Captive translation of regional rainfall and microhabitat, not direct refuge RH logging.

Key references

1. Duellman & Duellman (1959), Occasional Papers of the Museum of Zoology: distribution, ecology and June hatchling evidence. 2. Perez-Ramos & Saldana de la Riva (2002), UNAM: dry-forest habitat, microhabitat, climate, rainfall and June hatching. 3. Captive-breeding potential review for CITES taxa (2021): about 5-7 eggs, egg dimensions and hatchling size. 4. Michoacan microhabitat work: moderately shaded refuges with temperatures below about 30 C. 5. Reptile Database / ITIS / MCZ: accepted spelling Ctenosaura clarki and oviparity.

UVI beneath the optional T5 tube

Ctenosaura clarki

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
February	3-4
March	3-4
April	3-4
May	4
June	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.