

Brachylophus vitiensis

Fiji Crested Iguana - Western / Northwestern Fiji dry forest

This protocol is anchored to the best-studied wild population on Yadua Tabu. *B. vitiensis* is a strongly arboreal, herbivorous specialist of Fijian tropical dry forest. Its reproductive biology is exceptional among iguanas: few large eggs, frequent non-annual reproduction, shaded cool nests, and an extremely long incubation that carries embryos through the dry season until wet-season hatching.

Habitat anchor Yadua Tabu wild cycle: wet Nov-Apr; dry May-Oct. Northern keeper cycle: wet May-Oct; dry Nov-Apr. Six-month shift for the Netherlands; retain drinking water.	Reproduction Only ~52% of adult females reproduced in a given year in the nesting study, supporting a largely biennial strategy under resource limitation.	Nest anchor Forest-floor burrows in shaded sites. Mean nest temperature 24.5 C; mean egg mass 17.9 g; mean clutch 2.9 eggs.	Incubation anchor Wild incubation averaged 256 days (range 225-285). Do not copy the warmer incubation strategy used for banded <i>Brachylophus</i> .
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Annual keeper schedule - Northern Hemisphere (Netherlands)

Month	Day air	Night	Bask	UVI*	Light	RH day/night*	Rain / mist	Food d/wk	Seasonal management
January	25-27 C	19-22 C	34-38 C	3-5	11.2 h	58-72 / 74-87%	Coolest/driest phase; restrained misting	6	Deep dry season; no brumation, avoid chronic chilling
February	25-28 C	19-22 C	34-38 C	3-5	11.4 h	58-72 / 74-88%	Dry; hydration via foliage and drinking droplets	6	Dry-season maintenance; monitor weight and hydration
March	26-28 C	20-23 C	35-38 C	3-5	11.8 h	60-74 / 76-89%	Mid-late dry; few rain pulses	6-7	Conditioning; slowly increase food diversity
April	26-29 C	21-23 C	35-39 C	3-5	12.2 h	63-78 / 79-91%	Dry-to-wet transition; rain increases late month	7	Pre-breeding; gradual hydration and feeding increase
May	27-30 C	22-24 C	36-39 C	3-5	12.6 h	68-82 / 82-93%	Wet season begins; frequent showers	7	Reproductive conditioning; courtship may begin
June	27-30 C	23-25 C	36-40 C	3-5	12.9 h	72-85 / 85-95%	Early wet; frequent rain with drying intervals	7	Courtship / mating; hatch watch; nest zone ready
July	27-30 C	23-25 C	36-40 C	3-5	12.8 h	72-85 / 85-95%	Wet season; frequent showers with airflow	7	Courtship / mating; abundant browse and hydration
August	27-30 C	23-25 C	36-40 C	3-5	12.5 h	73-86 / 86-95%	Mid-wet; frequent rain pulses	7	Mating / early nesting; nest area fully prepared
September	27-30 C	23-25 C	36-39 C	3-5	12.2 h	72-85 / 85-94%	Wet easing; regular rain and leaf wetting	7	Peak nesting; monitor females closely
October	26-29 C	22-24 C	35-39 C	3-5	11.9 h	70-83 / 83-93%	Late wet; rain gradually declines	7	Late nesting / female recovery; dry-season incubation
November	26-28 C	21-23 C	35-38 C	3-5	11.6 h	65-78 / 78-90%	Dry-season transition; lighter misting	6-7	Recovery; reduce rain, not drinking access
December	25-28 C	20-22 C	34-38 C	3-5	11.3 h	60-74 / 75-88%	Dry; light evening mist 3-5x/week	6	Dry-season maintenance; maintain leafy refuges

* Captive working targets. Wild Yadua Tabu air temperatures have been reported from about 16 C in Jul-Aug to 31 C in Jan-Feb, but enclosure targets should avoid forcing those extremes. Provide a strong thermal and humidity gradient with bright basking branches, deep leafy shade, excellent ventilation and drinking droplets year-round.

Calendar correction: all monthly climate and management cues shifted six months; target ranges retained. Wild observation dates are labelled separately.

Housing, climate and nutrition

Species and provenance

B. vitiensis is a distinct Fiji Crested Iguana, not a banded *Brachylophus*. It occurs naturally in dry-forest landscapes of western/northwestern Fiji; Yadua Taba is the best-studied stronghold. Maintain exact provenance and legal documentation, and do not mix island lineages without a conservation-genetic rationale.

Enclosure

Strongly arboreal. Prioritize height, continuous branch networks, leafy cover and multiple elevated sleep sites. Wild animals were commonly recorded several metres above ground. Use many horizontal/diagonal branches, live or safe artificial foliage, visual barriers, and enough complexity that animals can avoid one another.

Temperature

Use a warm but not overheated canopy. Wet-season daytime air around 27-30 C with 36-40 C basking; dry-season daytime air around 25-28 C with 34-38 C basking. Dry-season nights can fall to roughly 19-22 C in captivity, but always retain warmer refuges and avoid chronic cold stress.

UVB and light

Provide bright full-spectrum illumination and linear UVB. A practical basking target is around UVI 3-5, with immediate access to UVI 0-1 shade. Photoperiod varies only modestly in Fiji, so about 11.2-12.9 hours across the year is sufficient.

Humidity and rainfall

This tropical dry-forest iguana needs a reduction in rainfall, not zero humidity. Maintain moderate daytime RH, higher night peaks and strong ventilation. In the Northern keeper dry season, November-April, reduce rain frequency and volume. Continue leaf wetting, drinking opportunities and humid leafy refuges throughout the year.

Dry-season cue

Northern keeper dry season: November-April; use reduced misting and cooler nights, not dehydration. Wild Yadua Taba dates are May-October; the 2006 study recorded an exceptionally dry year with less than 100 mm rainfall over nine months, including eight consecutive months March-October in Fiji. Retain the natural seasonal sequence but shift keeper cues six months; do not reproduce severe wild drought.

Diet - wild evidence

Field scat analysis identified 26 plant species. Leaves from 21 species, fruits from 14 and flowers from 6 were consumed. Leaves were the most consistent dietary component; fruit use fell in the mid-late dry season while flower use peaked around May.

Diet - captive translation

Feed daily in the wet/reproductive season and 6 days/week through the leaner dry period. Base the diet on diverse calcium-rich leafy browse and edible flowers, with seasonal fruit as a smaller component. Rotate plant families and avoid a fruit-heavy zoo diet.

Useful browse pattern

Replicate the structure of wild feeding rather than exact Fijian species: tender tree/shrub leaves, hibiscus leaves and flowers, mulberry, grape leaves, dandelion/chicory/endive-type greens, nasturtium and other safe edible flowers. Use fruit mainly for seasonal variety and appetite support.

Water

Fresh water should always be available, but many individuals preferentially drink droplets from leaves and branches. Mist foliage in the evening/early morning and allow surfaces to dry between events to reduce bacterial and fungal problems.

Social management

Adult males are territorial and field studies report frequent injuries from aggressive encounters. Multiple males should not share an enclosure. Pair housing requires abundant visual barriers and duplicate resources; separate immediately if chasing, biting, persistent darkening or feeding suppression occurs.

Monitoring

Record body mass monthly and increase frequency around reproduction. Watch hydration, fecal output, shedding, feet/toes, femoral pores, jaw firmness, appetite and social injuries. Dry-season weight loss should be modest, not progressive.

Breeding, nesting, incubation and juveniles

Breeding window - Northern keeper and wild dates

Northern keeper equivalents: mating broadly June-September, gravid females July-October and main laying August-October, with laying potentially starting in late August. These windows shift the Fiji seasonal sequence six months. Fiji wild observations: mating December-March, gravid females January-April, laying from late February and commonly February-April. Keep those wild dates separate from the Netherlands keeper calendar.

Non-annual reproduction

Do not expect every mature female to lay every year. Only about 52% of adult females reproduced in a given year in the Yadua Taba study, and researchers suggested a largely biennial strategy driven by resource limitation. Do not push lean females into annual reproduction.

Nest site

Provide the nest zone before July in the Northern keeper calendar. Wild nests were excavated on shaded forest-floor sites. Use a large private box or ground zone with deep cohesive soil/sand/organic substrate, moist enough to hold a burrow but never saturated.

Clutch

Wild data show small clutches of unusually large eggs. IUCN summaries commonly give 2-4 eggs; field reports include 3-5, and the nesting study found a mean clutch size of 2.9 with mean egg mass 17.9 g. Larger clutch claims should be treated cautiously unless provenance is certain.

Female management

Gravid females need uninterrupted access to suitable soil and privacy. Restlessness, repeated descent to the ground and digging can precede laying. Persistent digging without laying, sudden weakness, straining or collapse requires urgent reptile-veterinary assessment.

Natural incubation benchmark

Mean wild nest temperature was 24.5 C and mean incubation 256 days (range 225-285). Wild hatching occurred mainly from early December into the wet season. The shifted Northern keeper equivalent is from early June into the wet season, after eggs have developed through the drier period; actual timing will depend on laying dates and incubation conditions. Preserve the unusually cool, long incubation strategy.

Practical artificial incubation

Use the wild data as the primary anchor. A conservative starting range is about 24.5-26 C, avoiding prolonged overheating. Expect roughly 7.5-9.5 months rather than trying to accelerate development. If your established lineage has documented successful settings, retain them and record outcomes carefully.

Do not copy banded-iguana temperatures

B. bulabula and B. fasciatus captive records often use about 27-29 C. That should not automatically be transferred to B. vitiensis. Its wild eggs develop in substantially cooler shaded nests for much longer periods. Avoid 29-31 C unless there is robust lineage-specific evidence.

Incubation moisture

Use a stable moist-not-wet medium and sealed or lightly ventilated containers that resist rapid water loss. Because natural nests span the dry season, avoid large moisture swings. Monitor egg appearance and mass where practical; do not rotate eggs after development begins.

Hatching and neonates

Hatchlings emerge with the wet season. House them in secure, finely branched arboreal enclosures with abundant foliage, gentle airflow, frequent drinking droplets, moderate UVB and a smaller thermal gradient than adults. Provide easy escape from the basking zone.

Juvenile feeding

Offer finely chopped leafy browse and edible flowers daily, with small portions of soft fruit. Maintain excellent calcium/mineral balance and strong visible light/UVB. Track growth monthly rather than maximizing growth rate.

Record keeping

For this highly protected species, maintain complete records: provenance, permits, pairing dates, courtship/copulation, female weights, nest digging, lay date, clutch size, egg mass, incubator temperature/humidity, hatch date, hatchling mass/length and parentage. These records are valuable for conservation management.

UVI beneath the optional T5 tube

Brachylophus vitiensis

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	3-5
February	3-5
March	3-5
April	3-5
May	3-5
June	3-5
July	3-5
August	3-5
September	3-5
October	3-5
November	3-5
December	3-5

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](#).