

Diploglossus lessonae

Brazilian Galliwasp

Northeastern Brazil - Caatinga / agreste default. A terrestrial, diurnal and semi-fossorial active forager that uses rock-ground interfaces, leaf litter, fallen wood and crevices.

Core profile	Field climate	Breeding anchor	Reproduction caution
Secretive ground-dwelling diploglossid from northeastern Brazil. Build around deep diggable substrate, heavy cover, rock crevices and a warm surface gradient rather than an open desert display.	At Exu, Pernambuco, temperatures were seasonally equable; rainfall ranged from under 400 to over 1000 mm/year, with a dry season usually May-November.	Classic field work found reproductive activity in March, reproductive females in July-August and likely hatchling appearance in September-October.	Older work calls the species oviparous with 1-7 eggs, but a 2024 female produced three live young with no eggshells seen. Treat parity mode as unresolved.

Annual keeper schedule

Month	Day	Night	Bask	UVI	Light	RH day/night	Rain / substrate	Food	Seasonal management
January	25-28 C	20-23 C	34-37 C	1-2	12.3 h	65-78 / 78-90%	Wet phase; 3-5 light rains/wk	3-4	Juveniles visible / adult recovery
February	25-28 C	20-23 C	34-37 C	1-2	12.2 h	65-78 / 78-90%	Wet phase; 3-5 light rains/wk	3-4	Conditioning toward mating
March	25-29 C	21-23 C	35-38 C	1-2	12.1 h	62-75 / 75-88%	Wet-to-drier transition	4	Main mating / vitellogenesis
April	25-29 C	21-23 C	35-38 C	1-2	12.0 h	58-72 / 72-85%	Rain easing; moist refuges	3-4	Post-mating / early gravidity
May	26-29 C	20-23 C	35-38 C	1-2	11.9 h	50-65 / 68-82%	Dry phase starts; refuge moist	3	Gravid monitoring
June	26-30 C	20-23 C	35-38 C	1-2	11.8 h	48-62 / 65-80%	Dry; mist refuge 1-2x/wk	3	Dry-season gravidity
July	26-30 C	20-23 C	35-38 C	1-2	11.8 h	45-60 / 65-78%	Dry; deep substrate stays moist	3	Historic laying / birth window
August	26-30 C	20-23 C	35-38 C	1-2	11.9 h	45-60 / 65-78%	Dry; deep substrate stays moist	3	Late gravid / birth-laying window
September	26-30 C	20-23 C	35-38 C	1-2	12.0 h	45-62 / 65-80%	Dry; limited surface mist	2-3	Likely neonate emergence
October	26-30 C	20-23 C	35-38 C	1-2	12.2 h	48-64 / 68-82%	Dry; maintain moist refuges	2-3	Neonate emergence / recovery
November	26-29 C	20-23 C	34-37 C	1-2	12.3 h	52-68 / 70-84%	Dry ending; rain pulses rise	3	Recovery / conditioning
December	25-28 C	20-23 C	34-37 C	1-2	12.4 h	62-76 / 76-90%	Wet season returns	3-4	Feeding / body condition

Basking values are local surface temperatures, not whole-enclosure air temperatures. The dry-season surface can be dry, but deep substrate, burrows and tight cover refuges must retain moisture. Clean drinking water remains available all year.

Housing, climate and nutrition

Identity and natural history

Diploglossus lessonae is currently recognized as a valid species endemic to northeastern Brazil. It occurs in Caatinga, agreste, Atlantic Forest remnants and higher-altitude humid enclaves. It is diurnal, terrestrial and semi-fossorial, spending much of its time under rocks, leaf litter, fallen trunks and within crevices.

Enclosure and substrate

For one adult, about 90 x 50 x 50 cm is a practical minimum starting point; 120 x 60 x 50-60 cm or larger is preferable. Floor area and substrate depth matter more than height. Provide 12-20 cm of compactable soil/sand/leaf-mould mix, deep leaf litter, cork, flat rocks and narrow hides. Support heavy rocks from the enclosure base so burrowing cannot undermine them.

Heat and basking

Wild active animals have been reported around 32.3 C body temperature. Use roughly 25-30 C daytime air with a cooler 22-25 C end and a local 34-38 C basking surface. Nights around 20-23 C suit the Caatinga default. Do not run the entire enclosure hot; semi-fossorial refuges should remain distinctly cooler.

UVB and light

Species-specific UVB measurements were not located. Because the species is diurnal but spends extensive time under cover, a conservative measured UVI about 1-2 at the open warm zone is a sensible starting point, with most cover below UVI 1. Provide a bright full-spectrum day cycle close to 12 hours year-round.

Humidity and rainfall

Do not interpret Caatinga as uniformly dry. At the classic Exu site, the long dry season lasted about May-November, but rock fissures retained water and refuge humidity. During the wet phase allow 60-80% daytime RH with higher nights. During the dry phase exposed air may fall around 45-65%, while deeper substrate and enclosed hides remain distinctly moist.

Diet

Field stomachs contained scarab pupae, tenebrionid larvae, carabid beetles, earwigs, spiders including theraphosids, harvestmen and a scorpion. In captivity use safer analogues: gut-loaded roaches, crickets, locust nymphs, beetle larvae in moderation, silkworms, earthworms and occasional snails. Do not deliberately offer dangerous wild spiders or scorpions.

Feeding and hydration

Healthy adults generally need modest feeding rather than daily large meals: about 2-4 insect meals/week depending on season and body condition. Juveniles can be fed 4-5 smaller meals/week. Dust prey appropriately with calcium, maintain clean drinking water, and keep a damp retreat available even during the dry-season phase.

Social management

Field observations occasionally found male-female pairs and raised the possibility of a social association, but captive compatibility cannot be assumed. Use visual barriers and duplicate hides; separate immediately for persistent pursuit, biting, refuge exclusion or weight loss.

Breeding, reproductive uncertainty and evidence notes

Field reproductive cycle

The classic northeastern Brazil study found slightly enlarged vitellogenic follicles in March while males had enlarged testes, suggesting mating around March. Females with reproductive eggs/follicles were recorded in July and August. The author inferred one clutch per year during the dry season, with hatching probably around September-October; juvenile-sized animals were collected in January.

Clutch / brood size

Vitt (1985) reported 1-7 oviductal eggs or vitellogenic follicles. That remains the classic clutch-size dataset. However, a 2024 report documented three live neonates from a captured gravid female, so the biologically correct term may ultimately prove to be brood rather than clutch for at least some populations.

Reproductive mode is unresolved

The Reptile Database still lists the species as oviparous, but the 2024 Herpetological Bulletin report monitored a gravid female continuously for 58 days at an average soil temperature of 28 C and recorded three live young; no eggs or eggshells were seen. The authors suggested viviparity or ovoviviparity. A 2026 conference abstract has also claimed diagnostic evidence of viviparity. Until this is formally resolved, do not assume every female will lay eggs.

Gravid female management

Provide deep, stable substrate and multiple moist, warm retreats from May through October. A gravid female should have access to a refuge/substrate zone around 26-29 C while retaining cooler choices. Avoid repeated handling or digging up a resting female. Falling body condition, prolonged anorexia with weakness, straining, cloacal discharge or collapse warrants reptile-veterinary assessment.

If eggs are actually laid

Do not use a generic lizard incubation recipe as if it were species-proven. A published 2019 captive-breeding account exists, but accessible summaries do not provide enough numeric details to establish a reliable universal incubation target. Record the successful line, egg mass, medium moisture and temperatures precisely. If no line-specific protocol exists, veterinary/zoo consultation is preferable to experimental high-temperature incubation.

Neonates

The 2024 live-born neonates averaged about 55.7 mm SVL and 2.7 g. Juveniles show striking pale/dark transverse bands that differ strongly from adult coloration. House neonates with abundant tight cover, smaller prey and a shallow water source; avoid overly dry substrate because their surface-area-to-volume ratio increases dehydration risk.

Keeper warning

The combination of a long dry season and semi-fossorial behaviour makes dehydration easy to miss. A dry top layer is acceptable, but never let the entire substrate column or all hides become dry. Also avoid overheating secretive animals that do not always bask openly.

Evidence anchors

- Vitt, L.J. (1985), Papeis Avulsos de Zoologia 36:69-76: Caatinga ecology; dry season May-November; terrestrial/semi-fossorial habits; diet; March reproductive activity; July-August reproductive females; 1-7 eggs; inferred September-October hatching.
- Ribeiro Junior et al. (2024), Herpetological Bulletin 168:23-24: a gravid female kept on soil/leaf litter at mean soil temperature 28 C produced three live neonates after 58 days, with no eggshells observed.
- Caldas et al. (2016), Check List 12: distribution records confirming wide occurrence in northeastern Brazilian Caatinga; later records also include Atlantic Forest and humid highland enclaves.
- Reptile Database (accessed 2 October 2026): valid species; northeastern Brazil distribution; reproductive mode currently still listed as oviparous.
- Thermal-trait compilations report a mean active body temperature around 32.3 C; captive basking-surface settings in this protocol are conservative husbandry translations, not direct field substrate measurements.

Review date: 2 October 2026. Reproductive mode is specifically flagged for future revision as new evidence appears.

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	1-2
February	1-2
March	1-2
April	1-2
May	1-2
June	1-2
July	1-2
August	1-2
September	1-2
October	1-2
November	1-2
December	1-2

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](#).