

Recommended Annual Husbandry Schedule

Phymaturus dorsimaculatus - spotted spiny-tailed lizard / Copahue chuckwalla

Range and identity A highly localized Argentine endemic known from Copahue and Termas de Copahue, Neuquen, at about 2000-2050 m. A past proposal synonymized it with Chilean <i>P. vociferator</i> , but later morphological and molecular work supports treating the Copahue population as distinct; current major databases accept <i>P. dorsimaculatus</i> .	Climate and habitat Volcanic slopes, basalt ledges and scree in high-elevation grass steppe near the Araucaria woodland ecotone. Copahue climate data show mild, cool summers and snowy winters: January averages about 18.9/6.9 C and July about 2.5/-3.0 C, with roughly 805 mm annual precipitation concentrated in winter.	Thermal and reproduction No species-specific preferred-temperature or detailed reproductive study was located. This conservative model uses related palluma-group evidence: local escapable basking rock at 36-40 C, cool air and deep crevices. The species is viviparous; one to two young every two years is a related-clade comparison, not a confirmed species value.
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Month	Day ambient	Night	Basking surface	UVI*	Photoperiod	Spray / water	Adult food offers*	Seasonal management
Jan	5-9 C	4-7 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation
Feb	5-9 C	4-7 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation
Mar	7-11 C	4-7 C	Off	Off	8 h	No spray; water check	None	Deep brumation; assess mass
Apr	10-14 C	5-8 C	Off; 34-36 C late	Off / 1	8-9 h	No spray; water check	None / restart late	Staged emergence late
May	15-19 C	7-10 C	35-37 C	2-3	10.5 h	Light local spray weekly	2-3	Emergence / reconditioning
Jun	18-22 C	8-11 C	36-39 C	3-4	12.5 h	Local spray 1-2x weekly	5-6	Full activity; birth watch
Jul	19-23 C	9-12 C	37-40 C	3-4	14 h	Local spray 1-2x weekly	6-7	Peak activity / births
Aug	19-23 C	9-12 C	37-40 C	3-4	13.5 h	Local spray 1-2x weekly	6-7	Full activity / courtship
Sep	17-21 C	8-11 C	36-39 C	2-3	12 h	Light local spray weekly	4-5	Mating comparison window
Oct	12-16 C	6-9 C	34-36 C limited	1-2	10 h	Minimal local spray	1-2 then stop	Late mating / seasonal taper
Nov	8-12 C	4-8 C	Off	Off	8 h	No spray; water check	None	Cooling / brumation
Dec	5-9 C	4-7 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation

Climate translation: this northern-hemisphere programme shifts the expected Copahue warm-season activity window by six months. Direct species activity dates are not published; November-March is a cautious inference from the local climate and closely related high-Andean taxa. Outdoor frost and deep winter snow are context only: captive brumation is conservatively held above freezing at 4-8 C. Measure air, basking surface and refuge temperatures separately.

* UVI and food frequency are facility starting points, not published species-specific requirements. Adjust food to intake and body condition. No species-specific UV dose study was located; verify UVI with a meter and preserve complete shade inside crevices.

Brumation safety: cool only healthy, well-conditioned adults after feeding has stopped and the gut is clear. Record starting mass, perform planned visual checks, reweigh every 2-4 weeks or sooner if activity is abnormal, and reverse cooling for weight loss, dehydration, respiratory signs or continuing activity.

Practical Husbandry and Daily Management

A cold, snowy high-Andean specialist: stable volcanic-style rockwork, deep secure crevices, cool ambient air, strong local radiant heat and a long controlled winter rest define the model.

Enclosure and rockwork

For one adult, **150 x 75 x 70 cm is a facility minimum starting point, not a research-derived requirement**; 180 x 90 x 90 cm or larger is preferred for a compatible group. Build numerous tight horizontal and angled crevices across warm, intermediate and cool zones, using large stable rock masses that create genuine thermal inertia.

Support every rock and slab directly from the enclosure base; never stack loose stone on compressible substrate. The species occupies cracks, spaces beneath slabs, volcanic scree and basalt ledges. Duplicate basking shelves, deep retreats and feeding stations so one dominant animal cannot monopolize resources.

Heat, light and UVB

No direct preferred-body-temperature study was located for *P. dorsimaculatus*. Related *P. palluma* field animals were most active on 25-28 C substrate and averaged about 29 C body temperature, while a different high-Andean *P. cf. palluma* population selected substantially higher temperatures. This variation makes a broad gradient essential.

Start with a broad, fully escapable **36-40 C local basking surface**, active-season air of about **18-23 C**, strong ventilation and cool deep retreats. Provide bright visible light and measured **UVI 3-4** only as a cautious facility starting point; keep complete shade below UVI 1 inside crevices.

Water, spray and air quality

Keep shallow fresh water available, including during cooling. Copahue receives substantial winter rain and snow, but its active summer is much drier. Maintain a dry, well-ventilated surface, lightly wet one local area once or twice weekly in the active season, and allow exposed stone and substrate to dry completely. No species-specific humidity target is known.

Diet and feeding

The species is documented as herbivorous. Base the active-season diet on pesticide-free fibrous leaves, edible weeds, browse and flowers. Its habitat includes high-steppe grasses and shrubs such as *Festuca*, *Stipa*, *Poa*, *Berberis*, *Discaria* and *Maytenus*, but a species-specific feeding study was not located.

In captivity rotate dandelion, plantain, sow-thistle, endive, escarole, safe browse, herbs and flowers. Do not assume a need for animal protein. Offer calcium-rich forage daily during peak activity, taper with intake and stop only after the gut has cleared before brumation.

Social management and handling

No species-specific social study was located. Related palluma-group lizards may form one-male groups, but captive compatibility is not guaranteed. Use one adult male only, duplicate basking rocks, feeding points and crevices, and retain immediate separation capacity for sustained pursuit, biting, refuge exclusion or reduced feeding.

Daily keeper checks

Check	Record
Activity	Emergence, basking duration, crevice choice and locomotion
Feeding	Plant mix offered, selection, intake, water and faeces
Condition	Mass trend, jaw, eyes, skin, toes, abdomen and wounds
Environment	Basking surface, warm/cool air, UVI and crevice temperature

Veterinary triggers

Seek reptile-veterinary assessment for persistent weight loss, jaw or limb swelling, weakness, abnormal breathing, bite wounds, failure to bask after warm-up, continuing activity during deep cooling, or a gravid female with declining condition. Quarantine and faecal screening are prudent for all new animals.

Breeding, Viviparity and Evidence Review

The species is viviparous, but no detailed species-specific reproductive cycle was located. Closely related *P. vociferator* is used only as a conservative comparison and must not be treated as confirmed *P. dorsimaculatus* biology.

Seasonal breeding management

Cool only healthy, well-conditioned adults. The expected Copahue warm-season activity period is approximately November-March locally, translated to May-September here. This is inferred from site climate and related high-Andean species because direct annual activity data for *P. dorsimaculatus* were not located.

Closely related *P. vociferator* reportedly mates in February to early March locally, equivalent to August to early September in this northern schedule. Use visual contact through a divider before direct introduction, supervise every introduction and record courtship and confirmed mating separately.

Gestation and maternal care

Provide a potentially gravid female unrestricted access to the full thermal gradient, abundant calcium-rich forage and multiple secure crevices. Avoid forced handling and chronic disturbance. Use mass trend, abdominal contour, appetite and reptile-veterinary ultrasound to follow development.

Related *P. vociferator* females produce one or two offspring every two years; Argentine assessments note that many *Phymaturus* mature only after seven to nine years and typically produce two young biennially. These are genus/clade comparisons, not direct measurements for this species. Never force annual breeding.

Births and neonates

The related reproductive model places mating near the end of one active season, gestation through the intervening winter and birth in the next spring or summer. In this northern schedule, maintain birth watch from June through August, especially for females bred the previous August-September. Do not interpret absence of birth in the same year as failure.

Record birth date, litter size, neonatal mass and length, stillbirths, placental material and maternal recovery. Neonates are sensitive to excessive heat; provide simple secure units with narrow refuges, a broad gradient, measured low-to-moderate UVB and finely cut leafy forage.

Evidence confidence

Topic	Confidence and application
Identity / range	High: type series and current databases; historic synonym proposal is disclosed
Habitat / diet	Moderate-high: Argentine national biodiversity account; detailed diet composition unknown
Climate	Moderate-high: 1994-2023 Copahue reanalysis; local crevices create finer microclimates
Thermal / UV / size	Low-moderate: related-species physiology plus operational facility starting points
Breeding / litter	Low-moderate: viviparity confirmed; timing and litter guidance is related-clade inference

How climate was translated

Copahue at about 2050 m has average January highs/lows near 18.9/6.9 C and July values near 2.5/-3.0 C. Approximately 805 mm annual precipitation is strongly winter-weighted, much of it snow. This sheet shifts the inferred November-March activity season by six months. Outdoor frost is not a captive target; deep refuges buffer extremes, so controlled brumation remains above freezing.

Record set for every breeding attempt

Individual IDs and provenance; dates of temperature and light changes; mass trend; food intake; basking and crevice use; introductions and aggression; courtship and confirmed mating; ultrasound findings; gestational mass trend; birth date; litter size; neonatal measurements; stillbirths and maternal recovery.

Key references

- Lobo & Quinteros (2005), *Papeis Avulsos de Zoologia* 45: original description, Copahue type locality and diagnostic characters.
- Sistema de Informacion de Biodiversidad, Argentina: high-steppe volcanic habitat, herbivory, viviparity and national status.
- Morando et al. (2013) and Troncoso-Palacios & Lobo (2012): molecular/morphological evidence supporting separation from *P. vociferator*.
- Copahue 1994-2023 ERA5/NASA POWER climate normals: monthly temperature and precipitation context.
- Vidal et al. (2010) and Habit & Ortiz (1996): related palluma-group thermal activity and *P. vociferator* reproductive comparison.

UVI beneath the optional T5 tube

Phymaturus dorsimaculatus

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	Off
February	Off
March	Off
April	Off / 1
May	2-3
June	3-4
July	3-4
August	3-4
September	2-3
October	1-2
November	Off
December	Off

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](#).