Recommended Annual Husbandry Schedule

Phymaturus palluma - high-mountain lizard / matuasto

Range and identity
The best modern species-specific field data come from Punta de Vacas in Aconcagua Provincial Park, Mendoza, Argentina, at about 2500 m. Historic use of the name was much broader and some published captive and San Juan animals were labelled P. cf. palluma; confirm provenance when possible.

Climate and habitat
Cold semiarid high Andes with bare soil, large rock outcrops, sparse shrubs and grasses. At Punta de Vacas, reported climatic limits are about -4 to 28 C with roughly 150 mm annual precipitation. Wild lizards are active mainly mid-October to mid-March and brumate in deep rock crevices during the long cold season.

Thermal and reproduction
Preferred body-temperature set point is 34.24-36.11 C; small sunlit rocks near 39 C approach the reported 41.18 C critical maximum, so cooler large rocks and deep crevices are essential. The species is viviparous; comparable P. cf. palluma studies report 1-3 young and very low reproductive output.

Month	Day ambient	Night	Basking surface	UVI*	Photoperiod	Spray / water	Adult food offers*	Seasonal management
Jan	7-10 C	4-8 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation
Feb	7-10 C	4-8 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation
Mar	10-14 C	5-8 C	Off; 34-36 late	Off / 1	8-9 h	No spray; water check	None / restart late	Staged emergence
Apr	15-20 C	7-10 C	36-38 C	2-3	10.5 h	Light spray every 10-14 d	2-3	Emergence / mating
May	20-23 C	8-12 C	37-40 C	3-4	12 h	Occasional local spray	5-6	Full activity
Jun	22-25 C	10-13 C	37-40 C	3-4	14 h	Occasional local spray	6-7	Peak activity / gravidity
Jul	22-25 C	10-13 C	37-40 C	3-4	14.5 h	Occasional local spray	6-7	Peak activity / gestation
Aug	20-24 C	9-12 C	37-39 C	3-4	13.5 h	Light spray every 10-14 d	5-6	Late gestation; births may begin
Sep	18-22 C	8-11 C	36-38 C	2-3	12 h	Light spray every 10-14 d	4-5	Main birth / recovery window
Oct	14-18 C	6-9 C	34-36 C limited	1-2	10 h	Minimal local spray	1-2 then stop	Births may continue; taper
Nov	8-12 C	4-8 C	Off	Off	8 h	No spray; water check	None	Brumation
Dec	7-10 C	4-8 C	Off	Off	0-8 h	No spray; water check	None	Deep brumation

Climate translation: this northern-hemisphere programme shifts the confirmed Punta de Vacas activity window (mid-October to mid-March) by six months. Field climate is cold semiarid, but the -4 C outdoor minimum is context only: captive brumation is conservatively held 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 high-Andean, rock-dwelling herbivore: deep secure crevices, low ambient air, high local radiant heat and strong nightly cooling are central to 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. Field animals selected high, large basking rocks near deep, long crevices and forage. Duplicate these resources so one dominant animal cannot monopolize heat, shelter or food.

Heat, light and UVB

Species-specific measurements place the preferred body-temperature set point at **34.24-36.11 C**, with a mean around 35.15 C. Small rocks averaged 38.91 C and approached the reported **41.18 C critical maximum**; animals increasingly sheltered when sun-exposed rocks exceeded 40 C. Use a broad, escapable **37-40 C basking surface**, never a uniformly hot enclosure.

Published successful husbandry used active-season air of about **20-25 C** with localized hotspots above 35 C and a night drop of at least 10 C. Provide bright visible light and measured **UVI 3-4** only as a cautious facility starting point; keep complete shade below UVI 1 in deep crevices.

Water, spray and air quality

Keep shallow fresh water available, including during cooling. Maintain exceptional ventilation and a predominantly dry surface. Punta de Vacas receives only about 150 mm precipitation annually. Use occasional localized wetting and let all exposed surfaces dry completely; no evidence supports a fixed enclosure humidity target.

Diet and feeding

Base the active-season diet on pesticide-free fibrous leaves, edible weeds, browse and flowers. Field records include Tetraglochin, Ephedra, Acaena, bindweed, alfalfa and dandelion. In captivity rotate dandelion, plantain, sow-thistle, endive, escarole, safe browse and flowers.

Successful long-term captive animals accepted a wide plant diet; animal food was taken only occasionally by some individuals. Keep invertebrates optional and rare, never a staple. 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

Field groups may contain one territorial male, one or more females and juveniles sharing resources. 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 and extremely low-output. Published P. cf. palluma studies report one to three young, with females commonly completing a reproductive cycle over two years.

Seasonal breeding management

Cool only healthy, well-conditioned adults. The confirmed Aconcagua activity period runs from mid-October to mid-March locally, equivalent to mid-April through mid-September in this northern schedule. Comparative captive matings have been observed after emergence, while a San Juan study suggested late-summer to early-autumn mating; provenance may explain some disagreement.

Use visual contact through a divider before direct introduction and duplicate heat, feeding and crevice access. Supervise introductions and separate for biting, sustained pursuit, pinning, crevice blocking or food exclusion. Record courtship and confirmed mating separately.

Gestation and maternal care

Provide gravid females 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.

The San Juan P. cf. palluma population exhibited a biennial female cycle and mean annual output of only 0.75 offspring per female per year. Do not force annual breeding. Separate a female if the male interferes with basking or feeding and prepare a quiet neonatal-safe enclosure before August.

Births and neonates

Field-linked P. cf. palluma data support **one or two offspring**, including a 4 March birth, while long-term captive cf. palluma females produced **one and three young**. Most imported gravid females gave birth February-April locally, roughly August-October after the six-month shift.

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 humid refuges, a broad gradient, measured low-to-moderate UVB and finely cut leafy forage.

Evidence confidence

Topic	Confidence and application
Range / activity	High for Aconcagua/Punta de Vacas population; historic name usage was broader
Habitat / social	High-moderate: species-specific field studies; some listed foods were unpublished observations
Climate / thermal	High: site climate plus measured preferred, field and rock temperatures
Captive UV / size	Low: operational facility starting points, not experimentally established requirements
Breeding / litter	Moderate: detailed P. cf. palluma field/captive work; exact identity/provenance matters

How climate was translated

Punta de Vacas is cold semiarid, with approximately 150 mm annual precipitation, reported air limits of -4 to 28 C and activity confined to mid-October-mid-March. This sheet shifts that window by six months. The field minimum is not a captive target: successful published husbandry used controlled 4-8 C brumation.

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

1. Vicenzi et al. (2017), Biological Conservation 206: Punta de Vacas climate, distribution, activity season and climate vulnerability.

2. Vicenzi et al. (2019), Herpetological Conservation and Biology 14: activity and thermoregulatory behaviour at Aconcagua.

3. Vicenzi et al. (2021), Anais da Academia Brasileira de Ciencias 93: basking and retreat selection; preferred and critical thermal limits.

4. Cabezas-Cartes et al. (2010), Herpetological Conservation and Biology 5: P. cf. palluma reproduction, biennial females and 1-2 young.

5. Eisenberg & Werning (2012), Salamandra 48: long-term P. cf. palluma husbandry, controlled cooling and captive reproduction.

UVI beneath the optional T5 tube

Phymaturus palluma

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 / 1
April	2-3
May	3-4
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.