

Recommended Annual Husbandry Schedule

Physignathus cocincinus - Chinese water dragon / Asian water dragon

Identity and range	<i>Physignathus cocincinus</i> is the accepted name. Native range spans southern China and mainland Southeast Asia, including Vietnam, Laos, Cambodia and Thailand; introduced populations occur elsewhere.
Habitat and annual cycle	A large diurnal, arboreal and semi-aquatic agamid associated with rocky streams in evergreen forest. It is not a true brumator. Use only a mild cool/drier seasonal reduction for healthy adults, while retaining a permanent clean swimming pool and high humidity.
Diet and reproduction	Wild diet data are overwhelmingly invertebrate-based. A 2024 Vietnamese captive study recorded breeding activity from December-January and laying in February and April, with a colony mean of 18.16 eggs and 78.6 days incubation; older clinical literature commonly reports 8-12 eggs and 60-101 days.

MONTH	DAY AMBIENT	NIGHT	BASKING	UVI*	PHOTOPERIOD	RH DAY / NIGHT*	SPRAY / RAIN	FOOD*	SEASONAL MANAGEMENT
January	24-27 C	20-22 C	33-35 C	2-3	11 h	65-80 / 80-90%	Daily mist; pool always	3-4	Courtship / mating
February	25-28 C	21-23 C	34-36 C	3	11 h 30 m	70-85 / 85-95%	Daily rain; moist nest	4-5	Main laying period
March	26-29 C	22-24 C	35-37 C	3-4	12 h	70-85 / 85-95%	1-2 rain events/day	4-5	Recovery / re-mating
April	27-30 C	23-24 C	35-38 C	3-4	12 h 30 m	70-85 / 85-95%	1-2 rain events/day	4-5	Second laying window
May	27-30 C	23-25 C	35-38 C	3-4	13 h	75-85 / 85-95%	Daily rain / mist	4-5	Warm wet season
June	27-31 C	24-25 C	35-38 C	3-4	13 h 15 m	75-85 / 85-95%	Daily rain / mist	4-5	Growth / recovery
July	27-31 C	24-25 C	35-38 C	3-4	13 h	75-85 / 85-95%	Daily rain / mist	4-5	Growth / recovery
August	27-31 C	24-25 C	35-38 C	3-4	12 h 45 m	75-85 / 85-95%	Daily rain / mist	4-5	Wet-season maintenance
September	27-30 C	23-25 C	35-37 C	3-4	12 h 15 m	70-85 / 85-95%	Daily rain / mist	4-5	Conditioning
October	26-29 C	22-24 C	34-37 C	3	11 h 45 m	70-80 / 80-95%	Daily lighter rain	4	Seasonal taper
November	25-28 C	21-23 C	34-36 C	2-3	11 h 15 m	65-80 / 80-90%	Mist 1-2x/day	3-4	Mild cool / drier phase
December	24-27 C	20-22 C	33-35 C	2-3	11 h	65-80 / 80-90%	Mist 1-2x/day	3-4	Breeding condition begins

Calendar: Northern Hemisphere. *UVI, RH and adult feeding frequency are operational captive starting points, not species-wide field measurements. The mild November-January reduction is a breeding cue only - do not cold-brumate. Juveniles should remain warm, humid and feeding year-round. A large clean pool is permanent in every month.

Practical Husbandry and Daily Management

A large tropical riparian agamid: vertical structure, clean swimming water, warm humid air, ventilation and a deep laying site are all essential.

Enclosure and structure

A large arboreal species. For one adult, about **180 x 90 x 180 cm** is a practical minimum starting point; larger is strongly preferred. A breeding pair should have substantially more room, ideally around 240 x 120 x 200 cm or larger. Use robust branches over and beside water, dense visual barriers and opaque side walls to reduce nose-rubbing.

Water and filtration

Provide a permanent pool large enough for the animal to fully submerge, turn and swim. For adults, a deep floor basin with roughly 30-45 cm usable water depth is preferable to a small bowl. Filter aggressively, remove faeces promptly and perform regular water changes; warm, dirty water rapidly becomes a bacterial reservoir.

Heat, gradient and UVB

Maintain warm humid air rather than an extreme hotspot: generally 26-30 C by day, with a broad local basking surface around 35-38 C during the active season. Night temperatures around 23-25 C suit the warm season; a temporary 20-22 C winter night is reserved for conditioned adults. Target UVI about 3-4 at the main basking branch, with dense shade below UVI 1.

Humidity and ventilation

Aim for roughly 70-85% daytime RH and 80-95% overnight during the warm wet phase. Mist or rain daily, but combine this with strong air exchange. Surfaces should not remain stagnant or slimy. Naturalistic planting, deep moisture-retentive substrate and the open water area help stabilize humidity.

Seasonal breeding cue

Do not brumate. A modest late-autumn/winter reduction in day length, ambient temperature and rainfall can be used for healthy adults, followed by renewed warmth and rain. The 2024 Hanoi colony recorded estrus from about December into January and laying in February and April; this is useful captive evidence, not a universal wild calendar.

Adult diet

Use varied gut-loaded invertebrates as the staple: roaches, crickets, locusts, silkworms, fly larvae, earthworms and occasional snails. A field study of 187 animals recovered 3,052 invertebrate food items versus only 14 plant items. Soft fruit/flowers can be offered sparingly, but should not displace the invertebrate-based diet.

Juvenile diet

Feed appropriately sized live prey very frequently during growth, with measured calcium/mineral supplementation and strong UVB. Small prey diversity matters more than simply feeding large quantities of crickets. Track body mass and limb/jaw firmness closely.

Social management

Adult males are strongly territorial, especially in breeding condition. Do not house adult males together. A male-female pair can work only in a very large, structured enclosure with multiple basking/perching routes and immediate separation capacity. Females must be able to avoid the male.

Nest provision

Provide a secure moist-but-not-wet soil/sand laying area at least 20-30 cm deep. The 2024 captive study recorded egg chambers in moist sand about 10-15 cm deep, with females often making test holes for 1-3 days before laying. Keep the nest area private and stable.

Daily keeper checks

Check appetite, basking posture, climbing ability, toes/tail, hydration, eye/nose condition, mouth, body condition, pool hygiene and signs of rostral rubbing every day. Gravid females need daily access to the nest zone. Persistent pacing at glass, nose injury, repeated falls or inability to escape a male require immediate husbandry changes.

Heat and humidity warning

High humidity without ventilation is unsafe, and overheating can be subtle in a tall enclosure. Measure temperatures at several heights and separately measure the basking surface. Never allow the whole upper enclosure to approach hotspot temperature; the animal must be able to retreat downward into cooler humid air.

Breeding, Eggs and Evidence Notes

Species-specific field and captive data are strong for habitat, diet and reproduction; UV and some exact enclosure targets remain operational captive translations.

Breeding timing

The 2024 Hanoi captive study recorded the onset of reproductive condition from early December through January. Mating followed courtship, and eggs were collected from two main laying episodes in February and April. Use this as a reproducible captive-season template, while adjusting to the provenance and long-term rhythm of your own animals.

Clutch size

The same 2024 study reported a mean of **18.16 eggs per female** across 12 nests. Older veterinary literature more commonly describes average clutches of **8-12 eggs**. Female size, age, nutrition and husbandry probably explain much of this variation; monitor calcium status and body condition carefully after laying.

Incubation

A conservative working range is **28-29 C** in evenly moist, aerated medium. The 2024 colony achieved 89.4% hatchability with a mean incubation time of **78.6 days**. Broader clinical literature reports approximately **60-101 days at 28-30 C**. Avoid large temperature swings and water droplets contacting the eggs.

Egg and nest handling

Females dig and then carefully back-fill the nest. If eggs are removed, mark the upper surface and avoid rotation. Use a medium that remains humid but not waterlogged. Do not repeatedly excavate a female that is still test-digging; privacy and security are important for normal laying.

Hatchlings

Rear hatchlings with many small elevated perches, shallow safe water, dense visual cover and frequent small prey. Maintain warm humid conditions with strong ventilation. Do not use the adult winter reduction during the first year.

Accepted name and range - High

The Reptile Database recognizes *Physignathus cocincinus* Cuvier, 1829. The native range includes southern China and mainland Southeast Asia, including Vietnam, Laos, Cambodia and Thailand. The commonly seen spelling *Physignatus* is incorrect.

Rocky riparian evergreen habitat - High

The first population assessment in central Vietnam describes typical habitat as undisturbed rocky streams within evergreen lowland rainforest. This strongly supports an enclosure built around climbing structure plus permanent swimming water, not a generic humid terrestrial setup.

Diet overwhelmingly invertebrate - High

Nguyen et al. examined 187 wild individuals and recovered 3,066 food items: 3,052 invertebrates and only 14 plant items. Spiders, ants, insect larvae, termites, crickets, grasshoppers and earthworms were especially important.

Reproductive dataset - High for colony

Dong Thanh Hai et al. (2024) reported 12 nests, a mean 18.16 eggs per female, 89.4% hatchability and 78.6 days mean incubation. Treat the timing and clutch mean as high-quality captive evidence from one Vietnamese colony rather than a fixed species-wide rule.

Temperature / RH / UVI targets - Moderate

Veterinary and modern specialist husbandry sources broadly converge on tropical air temperatures around 25-35 C and 60-90% humidity. The UVI 3-4 target and 35-38 C basking surface in this protocol are operational captive starting points rather than direct species-wide field measurements.

Parthenogenesis - High

Facultative parthenogenesis has been genetically documented in a captive female. Consequently, apparently isolated females may occasionally lay developing eggs; unusual fertile-looking clutches should not automatically be discarded.

Key references: Reptile Database (accessed 2026); Nguyen et al. 2018, Nature Conservation 26:1-14; Nguyen et al. 2018, Russian Journal of Herpetology 25:189-194; Dong Thanh Hai et al. 2024, Journal of Forestry Science and Technology 13(1):43-52, DOI 10.55250/jo.vnuuf.13.1.2024.043-052; Divers 2002, Journal of Herpetological Medicine and Surgery 12(2):41-44; Miller et al. 2019, PLOS ONE 14:e0217489; Ngo et al. 2024, Salamandra 60:254-262.

UVI beneath the optional T5 tube

Physignathus cocincinus

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	2-3
February	3
March	3-4
April	3-4
May	3-4
June	3-4
July	3-4
August	3-4
September	3-4
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](#).