Recommended Annual Breeding Schedule

Egernia kingii - King's skink

Habitat basis	Climate basis	Breeding anchor
South-western Western Australia and adjacent islands. Recorded in coastal heath, jarrah forest, rocky slopes, watercourses, caves and dense ground cover.	Perth-region climate is Mediterranean: hot, dry summers and cool, wet winters. Swanbourne normals range from about 30/19 C in February to 18/10 C in July.	Penguin Island females ovulated in late November and gave birth in mid-late April after 20-22 weeks. Shifted six months, target late-May ovulation and October births.

Month	Day ambient	Night	Basking surface	UVI at bask	Photoperiod	Heat / UV hours	Feeding	Seasonal management
Jan	16-19 C	10-13 C	30-34 C	1-2	9 h 30 m	5 h	1-2 small feeds	Cool wet season; active choice retained
Feb	17-20 C	10-13 C	32-35 C	1-2	10 h	5-6 h	2 small feeds	Late winter; begin staged increase
Mar	20-23 C	12-15 C	34-37 C	2-3	11 h	7 h	3 feeds weekly	Spring emergence / conditioning
Apr	23-26 C	14-17 C	36-39 C	3-4	12 h	9 h	4-5 feeds weekly	Courtship and mating watch
May	25-28 C	16-18 C	38-42 C	3-4	13 h	10 h	5-6 feeds weekly	Mating; ovulation expected late
Jun	26-29 C	17-20 C	39-43 C	3-5	14 h	11 h	5-6 feeds weekly	Early gestation
Jul	27-30 C	18-21 C	40-44 C	4-5	14 h	11 h	5-6 feeds weekly	Gestation
Aug	27-30 C	18-21 C	40-44 C	4-5	13 h 30 m	10-11 h	5-6 feeds weekly	Gestation
Sep	25-28 C	16-19 C	38-42 C	3-4	12 h 30 m	9 h	4-5 feeds weekly	Late gestation / birth watch
Oct	22-25 C	14-17 C	36-40 C	2-3	11 h 30 m	7 h	3-4 feeds weekly	Principal birth / recovery period
Nov	19-22 C	12-15 C	34-37 C	1-2	10 h 30 m	6 h	2-3 feeds weekly	Post-birth recovery; taper
Dec	16-19 C	10-13 C	30-34 C	1-2	9 h 30 m	5 h	1-2 small feeds	Cool wet season; monitor condition

Humidity and water: use a ventilated seasonal cycle rather than a fixed number. A practical start is 40-60% RH by day in the active season with normal overnight rises, increasing toward 55-75% during the cool wet phase. Retain one lightly moist refuge year-round, allow exposed surfaces to dry, and keep fresh water available.

Calendar note: the field data are from the Southern Hemisphere and are shifted six months here for a Netherlands facility. The species remained active throughout the year on Penguin Island, so the cool phase retains a daily basking opportunity rather than forced deep brumation.

Practical Husbandry and Social Management

A large, robust, mainly terrestrial skink. Priorities are floor area, secure low retreats, broad measured gradients, a plant-majority diet and cautious family-group management.

Enclosure and group management

A conservative working minimum is about **180 x 90 x 90 cm for one adult**. An established compatible pair or family unit needs at least **240 x 120 x 100 cm**, preferably larger, with duplicate basking sites, feeding stations and secure shelters. Adults may reach about 220-360 g and 244 mm snout-vent length.

A ten-year field observation documented a stable adult pair and successive offspring sharing a central shelter, but it concerned one family. It does not establish that unrelated captive adults are compatible. Introduce cautiously and separate for persistent pursuit, refuge or basking exclusion, bite injury, suppressed feeding or declining mass.

Substrate, shelters and structure

Provide a deep, well-drained soil-sand-leaf-litter substrate with several tight ground-level retreats beneath securely anchored logs, cork, stone slabs or artificial caves. Use visual barriers, dense cover and more entrances than animals. Heavy structures must rest on the enclosure floor or independent supports so digging cannot cause collapse.

Retain dry exposed basking surfaces, one lightly moist retreat, and several cooler shaded shelters. King's skinks use undergrowth, caves, rocky country, coastal heath and jarrah forest; do not reduce the enclosure to an open hot box.

Basking, light and UVB

During full activity, begin with a broad **38-44 C basking surface**, warm-side air around **25-30 C** and shaded retreats in the low 20s. A measured **UVI 3-5** at the main basking position is a practical open-habitat target, with complete shade and shelters below UVI 1.

No species-specific preferred-body-temperature or UV-exposure experiment was located. These are facility starting points, not experimentally established thresholds. Measure surface and air temperatures independently and provide immediate escape from heat and light.

Diet and supplementation

Penguin Island animals ate **mainly soft plant material**, supplemented by insects and seabird eggs. Base the adult captive diet on varied leafy greens, safe weeds, flowers, herbs and seasonal vegetables. Offer gut-loaded roaches, crickets, locusts, silkworms, snails and other suitable invertebrates once or twice weekly during full activity; juveniles can receive smaller animal-protein meals more often.

Wild egg-taking does not require routine captive egg or vertebrate feeding. Keep fruit occasional and portions condition-led. Use plain calcium on most growing-season invertebrate meals and a low-frequency multivitamin according to product strength; avoid routine high-dose D3 where measured UVB is effective.

Seasonal feeding rhythm

Period	Feeding management
Jan-Feb	One or two small plant-based feeds; invertebrates only if fully active
Mar-Apr	Increase gradually after normal heat, activity and stools return
May-Sep	Plant food 5-6 days weekly; adult invertebrates 1-2 times weekly
October	Maintain female recovery and neonatal access to food
Nov-Dec	Reduce portions with heat and day length; never feed a cold animal

Cool-season management

Use a gradual autumn reduction, not abrupt shutdown. A cautious core range around **10-13 C at night and 16-19 C by day**, with a short 30-34 C basking opportunity, provides a clear season while preserving the year-round activity documented on Penguin Island. Cool only healthy, well-conditioned adults.

Weigh adults every two weeks and juveniles weekly during transitions. Record basking, feeding, hydration and faecal output. Reverse the cycle for sustained mass loss, dehydration, respiratory signs or activity without normal digestion. Gravid females, juveniles and compromised animals should not be forced through the adult schedule.

Breeding, Neonates and Evidence Review

Species-specific field studies provide unusually strong timing, litter and diet data. Captive thermal, UV and enclosure values remain clearly labelled management inferences.

Reproductive timing and litter

The species is viviparous. On Penguin Island, females ovulated in **late November** and gave birth in **mid-late April** after **20-22 weeks**. Most litters contained **4-6 young** (range 2-8); neonates averaged **7 g** and **60-80 mm SVL**. Shifted six months, the principal Netherlands targets are late-May ovulation and October birth.

A separate ten-year observation of one mainland family recorded 9-11 young in summer or autumn at intervals of one to three years. Because this is a single exceptional family, use the population study's 4-6 as the usual planning range and retain capacity for a larger litter.

Maturity, growth and family life

Penguin Island males were mature from about **190 mm SVL** and females from about **185 mm SVL**. Growth to adult size was slow and the adult-heavy population suggests long life. Breed by size, condition and veterinary assessment rather than calendar age alone.

In the observed family, neonates stayed with the adult pair through their first year and up to three annual cohorts used the central shelter. Captive family retention is optional and depends on equal resource access. Provide neonatal-width retreats and separate any youngster that fails to feed, bask or gain mass.

Neonate start

Offer several low basking choices, fine plant material and small gut-loaded invertebrates. Record birth mass, SVL where handling is safe, feeding, shedding and weekly mass. Juveniles rely more on tail autotomy than adults, so avoid grabbing the tail and minimise restraint.

Evidence status of key settings

Point	Evidence and keeper interpretation
Identity and range	Accepted as Egernia kingii, endemic to Western Australia; south-west coastal and island range.
Habitat	WA Museum records support islands, coastal heath, jarrah forest, rocky slopes, watercourses, caves and ground cover.
Activity and diet	Species-specific Penguin Island evidence: active all year; mainly soft plant matter with insects and seabird eggs.
Births and litter	Species-specific field evidence: late-November ovulation, mid-late-April birth, 20-22 weeks, usually 4-6 young.
Sociality	One ten-year family showed pair stability and multi-cohort shelter sharing; unrelated-adult compatibility was not tested.
Climate schedule	Derived from Swanbourne and Perth Metro normals, then shifted six months. Captive shelter microclimate is not a weather-station value.
Heat, UVI and size	Conservative facility starting points. No controlled species-specific threshold study was located.

Key references

1. Arena, P.C. & Wooller, R.D. (2003). The reproduction and diet of Egernia kingii on Penguin Island, Western Australia. Australian Journal of Zoology 51:495-504. doi.org/10.1071/ZO02040

2. Masters, C. & Shine, R. (2003). Sociality in lizards: family structure in free-living King's Skinks Egernia kingii from southwestern Australia. Australian Zoologist 32:377-380. doi.org/10.7882/AZ.2002.015

3. Western Australian Museum. King's skink account and Skinks of the Perth Region: morphology, habitat and natural history. museum.wa.gov.au/explore/galleries/skinks-perth-region

4. Bureau of Meteorology. Swanbourne (009215) and Perth Metro (009225) monthly climate statistics: temperature, rainfall and relative humidity. Swanbourne | Perth Metro

5. The Reptile Database. Egernia kingii (Gray, 1838): accepted name, Western Australian distribution and live-bearing reproduction. reptile-database.reptarium.cz/Egernia/kingii

6. Barr, J.I. et al. (2022). Ontogeny and caudal autotomy fracture planes in a large scincid lizard, Egernia kingii. Scientific Reports 12:7046. doi.org/10.1038/s41598-022-10962-x

Important: This is a practical evidence-informed protocol, not a controlled experimental standard. Provenance, age, condition, enclosure size and room climate affect safe settings. Use legally sourced captive-bred animals, thermostatic control, independent probes, a UV meter and reptile-veterinary oversight; change all seasonal parameters gradually.

UVI beneath the optional T5 tube

Egernia kingii

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	2-3
April	3-4
May	3-4
June	3-5
July	4-5
August	4-5
September	3-4
October	2-3
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.