Petri’s Gecko / Dune Gecko Care Guide

Stenodactylus petrii

Provide deep fine sand with sheltered edges and vegetation-like cover as well as open hunting space. Field research on Stenodactylus petrii supports its association with dune habitat and vegetation-related microhabitats.

Species Profile

Common name: Petri’s Gecko / Dune Gecko

Scientific name: *Stenodactylus petrii*

Adult size: About 3-4 in (8-10 cm) total length

Average lifespan: 5-10 years

Native range: North Africa through Sinai and the southern Levant

Habitat and activity: Nocturnal sand-dune specialist; burrowing with vegetation-associated cover

Diet: Tiny varied cultured insects

Care difficulty: Intermediate

Shopping List

- Secure enclosure at least 24 × 18 × 12 in (61 × 46 × 30 cm; L × W × H) for one adult; see Housing for exceptions and group arrangements.
- Digital thermometers for different zones; a suitable hygrometer; timer for a consistent day/night cycle.
- Species-appropriate substrate and multiple stable hides or covered retreats.
- Reliable supply of the staple foods described below, clean feeding tools and a transport container.
- Appropriate overhead heat source if required, controlled by a compatible thermostat; infrared thermometer for surfaces.
- Appropriate visible lighting and, where recommended below, a linear UVB fixture with measured shade and exposure zones.
- Fresh-water dish or cup; insect supplements when applicable; a scale appropriate to the animal’s size.

Housing

Our recommended starting adult enclosure is 24 × 18 × 12 in (61 × 46 × 30 cm; L × W × H) for one animal. Larger usable space is encouraged. These dimensions are a husbandry recommendation, not a species-specific experimentally proven threshold.

Provide multiple hides across the warm-to-cool and moist-to-drier gradient, covered travel routes and species-appropriate burrowing or low climbing structure. Fix heavy decor to the floor before adding loose substrate so digging cannot undermine it.

Juveniles may use a furnished adult enclosure when food intake, hydration and waste can be monitored. A temporary grow-out enclosure should still offer choice and cover. Quarantine newcomers separately with dedicated tools and a substrate that permits health monitoring; arrange veterinary assessment for unknown-origin animals.

Lighting & UVB

Provide roughly 10-12 hours of visible daylight followed by darkness. A measured UV Index (UVI) around 0.3-0.7 at the most exposed usable site, declining to near zero inside retreats, is our conservative starting recommendation. Low-level UVB is recommended when a usable gradient can be provided; nocturnal activity alone is not a reason to exclude light.

Measure exposure at the animal's back height with an appropriate UVI meter, such as a Solarmeter 6.5. Lamp percentage, wattage and a fixed distance alone do not establish exposure: reflectors, mesh, perch height, plant growth and lamp age change output. Keep glass/plastic out of the UV path, follow fixture safety instructions and provide complete shade. Replace or reassess lamps according to measured output and manufacturer guidance.

Heating & Temperature

- Localized basking surface: 90-95°F (32-35°C).
- Cool-zone air: 72-78°F (22-26°C).
- Nighttime air: 65-72°F (18-22°C) for healthy established animals.

Create the gradient on one side rather than heating every hide to the same temperature. Use a compatible thermostat on each heat source; a manual lamp dimmer does not replace thermostatic protection. Secure the probe and verify temperatures independently: probe thermometers measure air/retreat temperature, while an infrared thermometer measures exposed surfaces.

Use appropriately guarded overhead warmth when needed. Keep animals clear of hot fixtures, avoid heat rocks, and switch visible lights off at night. Night heat is needed only when the room falls below the appropriate range; use a thermostat-controlled lightless source if necessary.

Humidity & Ventilation

30-50% ambient with a continuously available localized humid refuge. Treat readings as a starting pattern rather than a number to chase regardless of substrate, airflow or animal behavior.

Measure humidity in a representative occupied zone, away from a freshly sprayed surface. Provide sheltered moisture choices while retaining airflow. Persistent condensation, sour odor, flooded soil or surfaces that never dry indicate a setup problem. Ventilation and hydration must be adjusted together rather than simply sealing all vents.

Water & Hydration

Provide a clean, appropriately shallow dish or accessible elevated water cup at all times. Change it daily and immediately when soiled; wash it regularly with dedicated tools. Potable water is generally suitable, with treatment where local water quality requires it.

For animals that drink droplets, mist foliage or suitable surfaces at the time they become active, then allow partial drying. Droplets supplement the dish; water chemistry claims should be based on evidence rather than a species' trade name.

Substrate

This is a true sand-dune specialist, so clean fine sand is appropriate when husbandry is correct. Use 2-4" of washed play sand or another clean fine silica sand; a sand-rich arid mix with a small amount of

soil/clay can also be used if it remains diggable. The substrate should allow the gecko to bury and form shallow retreats.

Avoid calcium sand, crushed walnut shell, sharp gravel, dyed sand, and coarse particles. Sand itself is not a husbandry mistake for a healthy sand-adapted species; ingestion problems are more strongly associated with poor temperatures, dehydration, oversized prey, illness, or inappropriate substrate materials. Feed from open areas or a smooth dish if a particular animal repeatedly swallows large amounts of substrate.

Food & Feeding

Petri's geckos are small insectivores and active nocturnal hunters. Offer a rotation of appropriately sized crickets, small roaches, flies, bean beetles, black soldier fly larvae, mealworms, and similar cultured prey. Feeder insects should be smaller than the gecko's head and easy for the animal to overpower.

Juveniles can be fed small meals daily or every other day. Adults generally do well with feeding about 3-4 times per week, adjusted to body condition and reproductive status. Remove uneaten crickets or other biting prey before the gecko settles for the day.

Gut-load insects when practical. Avoid wild-caught prey because pesticide exposure and parasites are unpredictable.

Supplements

Lightly dust appropriate insect meals with calcium and use a balanced reptile multivitamin containing suitable vitamin A according to the product’s directions. Gut-loading and variety support nutrition but do not eliminate the need to balance calcium-poor prey.

Match D3 supplementation to the actual UVB exposure and to vitamins already included in other products. UVB does not automatically mean zero dietary D3, and lack of UVB does not justify unlimited D3. Follow one coherent program; do not combine multiple strong vitamin products or coat every feeder heavily.

Decor & Enrichment

Combine open sand with cover. Low cork pieces, dry grass clumps, small branches, artificial scrub, and flat hides reproduce the patchy structure of dune habitat and allow the gecko to move between concealment and open hunting areas. Provide several hides rather than one "best" shelter.

Keep hard decor low and stable because these geckos are terrestrial and delicate. Their main enrichment comes from digging, exploring, hunting live prey, and choosing different microhabitats rather than climbing tall structures.

Handling & Behavior

Treat this animal primarily as a display species. For transfers, gently guide it into a cup, tube or transport container instead of chasing and grabbing. Keep doors and escape routes controlled before opening the enclosure.

Allow new animals to settle and eat reliably. Avoid restraint by the tail, repeated uncovering or forced interactions. Track normal activity for the individual so changes in feeding, posture or hiding can be recognized.

Cleaning & Routine Maintenance

Daily: check the animal's access to water/appropriate moisture, temperatures, visible condition and equipment. Remove feces, contaminated material, dead feeders and spoiled food promptly.

Regularly: clean dishes and feeding surfaces, check thermostats and probes, inspect decor stability and maintain ventilation. Bioactive systems still require waste checks, food removal, plant care and drainage maintenance; they are not self-cleaning.

Record appetite, activity, shed history and weight or body condition when safe. Arrange veterinary assessment for unexplained changes. Quarantine new animals with dedicated tools, and disinfect only with a suitable product used at the label dilution/contact time, then rinse and dry as required before return.

Cohabitation

Individual housing is the safest routine default. Shared housing can cause food competition, injury or reproductive pressure even without obvious fighting. Never assume a male/female pair or female group is compatible. Breeding introductions belong in a planned specialist program with separate backup enclosures and individual monitoring.

Shedding & Seasonal Changes

Maintain access to a clean humid retreat and inspect toes, tail tip and eyes after shedding when observation is possible. Do not peel retained skin or apply oils/adhesives. Persistent constriction, damaged tissue or repeated failed sheds warrants veterinary help.

Seasonal changes in appetite or activity can occur. Check temperatures, hydration and weight before treating prolonged refusal as normal. Deliberate brumation or breeding cycles require healthy animals and species-specific preparation; pet care does not require forcing a seasonal shutdown.

Reproduction

Mature females may develop eggs, including infertile eggs without a current male. Provide a suitable moist laying retreat or substrate access, monitor body condition and nutrition, and seek veterinary advice for prolonged straining, swelling or decline. Breeding, incubation and offspring rearing require a prepared species-specific program.

Common Health Concerns

- Poor body condition or feeding decline: check the full gradient, hydration and food quality; arrange assessment for persistent refusal accompanied by weight loss.
- Calcium/vitamin imbalance: weakness, tremors, a soft or misshapen jaw or abnormal limbs require veterinary assessment; extra high-dose supplements are not a substitute for diagnosis.
- Skin, shed or injury problems: repeated retained skin, wounds, swelling or abnormal discoloration deserve prompt attention.
- Respiratory or systemic illness: labored/open-mouth breathing at rest, marked lethargy, loss of balance, persistent diarrhea or rapid deterioration require an experienced exotic veterinarian.

- Unknown-origin or wild-caught animals may carry parasites. Fecal testing and veterinary-directed treatment are preferable to indiscriminate preventive medication.