DeKay's Brown Snake Care Guide

Storeria dekayi

This small dietary specialist needs reliable earthworm-based feeding, moist cover and careful weight monitoring. Tiny neonates and unknown-history wild-caught animals are substantially harder to establish than their size suggests.

Species Profile

Common name: DeKay's Brown Snake

Scientific name: *Storeria dekayi*

Adult size: Usually 9-15 in (23-38 cm) total length

Average lifespan: 5-8 years

Native range: Eastern and central North America, including parts of Canada, the United States and Mexico

Habitat and activity: Secretive terrestrial snake in moist leaf litter, gardens and woodland edges

Diet: Suitable earthworms and captive-cultured slugs/snails; not a rodent diet

Care difficulty: Advanced

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: 78-82°F (26-28°C).
- Cool-zone air: 68-74°F (20-23°C).
- Nighttime air: 65-70°F (18-21°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

50-70% with a moist refuge and drier escape areas. 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

DeKay's brown snakes are ground-dwelling and spend a lot of time under cover, so substrate is very important. A good DIY substrate is a mix of organic topsoil and coco fiber, topped with clean leaf litter. Untreated sphagnum moss can be added to the humid hide or one corner of the enclosure.

Use 2-4" of substrate so the snake can burrow and hide. Aspen is usually too dry for this species, and cedar or pine should never be used. Paper towel can be used temporarily for quarantine or medical monitoring, but it is not ideal for long-term enrichment.

Feces, urates, and old food should be removed as noticed. Contaminated substrate should be scooped out and replaced, and the enclosure should be fully refreshed as needed depending on moisture, odor, and cleanliness.

Food & Feeding

DeKay's brown snakes are specialized invertebrate-eating snakes. Their natural diet is mostly earthworms, slugs, and snails, not rodents. They should not be expected to eat pinky mice, and forcing rodent feeding is not appropriate for this species.

The easiest staple feeder is appropriately sized nightcrawlers or earthworms. Large worms can be chopped into manageable pieces. Captive-raised slugs or snails may be offered if available, but wild slugs and snails should be avoided because they can carry parasites, pesticides, or other contaminants.

Avoid red wigglers and compost worms as staple feeders. Many small snakes reject them, and they can produce defensive fluids that may irritate or discourage feeding. Use clean nightcrawlers or pesticide-free earthworms from a reliable source instead.

How often DeKay's brown snakes need to eat depends on age:

Juveniles - small chopped worms every 3-4 days

Adults - appropriately sized worms 1-2x/week

Feed in the evening or when the snake is active. Offer small portions and remove uneaten food before it spoils. Because worms decay quickly, cleanliness matters more with this species than with many rodent-eating snakes.

Supplements

An earthworm/slug-based diet has different nutritional properties from a standard feeder-insect diet. Do not blindly copy an insect-dusting schedule. Discuss a balanced long-term feeding and supplement program with a reptile-experienced veterinarian, particularly for growing neonates or breeding females.

Decor & Enrichment

Decorations play a vital role in your DeKay's brown snake's enclosure as environmental enrichment. Enrichment items encourage burrowing, hiding, scent-trailing, exploring, and other natural behaviors.

Good decor can include cork flats, bark slabs, leaf litter, small logs, flat hides, humid hides, moss patches, and low artificial foliage. The snake should be able to move from one side of the enclosure to the other without feeling exposed.

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. Size differences and predatory behavior can lead to cannibalism; never feed animals together.

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.

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.