



Practice Limited to Birds, Reptiles and Exotics

Dr. GREGORY RICH
Dr. LESLIE PENCE
www.avianandexoticvet.com

AFTER HOURS EMERGENCIES
504.835.8508

Box Turtles

Box Turtles are one of the most common reptile pets in the United States. With proper care, they are long-lived, with life spans of 30 to 40 years and perhaps much longer. Unfortunately, they are among the most neglected reptiles in captivity because most people just do not appreciate how to care for them properly.

Several subspecies of Box Turtles are common in the pet trade, including the Eastern Box Turtle, *Terrapene Carolina carolinia*; Gulf Coast Box Turtle, *Terrapene c. major*; Three-toed Box Turtle, *Terrapene c. triunguis*; the Ornate Box Turtle, *Terrapene ornate ornate*; and the Desert Box Turtle, *Terrapene o. luteola*.

OUTDOOR HOUSING: During the late spring, summer and early fall months, turtles do best outdoors in a back yard or fenced enclosure. Provide shade with dense shrubbery, dry leaves, or a wooden shelter so the turtles can escape the hot sun when needed. Box Turtles are good at digging under fences and escaping. The yard perimeter should be carefully sealed with bricks, rocks, boards, or buried fencing and periodically patrolled for developing breaks. Box Turtles can also climb over fencing less than 12 inches high. Bring turtles indoors whenever the temperature drops into the low 60°F range (15°C to 18°C) unless brumation (hibernation) is anticipated.

INDOOR HOUSING: Twenty-gallon aquaria are the minimum size for Box Turtles. Consider larger aquaria or make larger cages out of plywood or use concrete mixing container available in most hardware stores. Larger enclosures are always better. The bottom of the cage should be filled with humid substrates such as medium-to-large wood chips mixed with peat moss, cypress mulch, or sand and soil mixture. Drier substrates promote skin cracking and poor health. Avoid sand, gravel, clay cat litter and crushed corncob or walnut shells because they can cause GI impaction. Substrates need to be completely changed every few months, and feces need to be scooped out weekly. A hide box that the turtle can get under and out of sight is important. Many turtles prefer to sleep in them. Loose-leaf litter can be spread in the cage.

TEMPERATURE: The indoor cage should get no colder than 60°F at night and gradually warm to 70°F to 80°F during the day. A 75-watt incandescent bulb with a reflector can provide a warm basking area at one end of the cage and should be between 80°F and 90°F. Lights should be turned off during the night, so supplemental heat from heat tape or heating pads also should be provided under one half of the cage if temperatures drop below 60°F. Hot rocks do not work well for turtles because the rigid shell inhibits conductive heat transfer.

WATER: An easy-to-clean shallow water dish, big enough for the turtle to get into, should always be available. Water depth should be no deeper than the turtle's chin when its head is partially retracted. Turtles prefer to defecate in their water bowl, so it should be cleaned several times per week. Juvenile Box Turtles are often much more aquatic than adults. Box Turtles drown in deep water, such as a swimming pool.

FEEDING: Box turtles are much more carnivorous than most people realize. Adult Eastern Box Turtles are opportunistic omnivores that consume beetles, grasshoppers, millipedes, centipedes, land snails, slugs, earthworms, spiders, sow-bugs or pill-bugs, crayfish, carrion, fish, frog, tadpoles, toads, small mammals, birds, salamanders, lizards, snakes, smaller turtles, and plant material such as mushrooms, strawberries, raspberries, blackberries, blueberries, mulberries, tomatoes and grasses. Youngsters are primarily carnivorous. Ornate Box Turtles are mainly insectivorous and consume dung beetles, caterpillars, cicadas and grasshoppers, but they also eat mulberries, leaves tender shoots, and carrion. Unlike other Box Turtles, Ornates frequently use burrows and prefer more arid habitat such as open prairie.

(continued on reverse)

FEEDING (CONTINUED) In captivity chronic nutritional problems are typical for most Box Turtles yet difficult to appreciate. Nutritional diseases can be avoided with a well-balanced diet that is continually varied. Interpret these guidelines liberally. Different species have different dietary preferences. Wash fruits and vegetables, and chop all items into bite-sized pieces.

Box Turtles have a continuous need for vitamin A-rich foods. Liver (in whole mice or fish) is an excellent source of vitamin A, as are rich yellow or dark orange-colored vegetables (carrots, sweet potatoes, butternut and winter squashes) and dark leafy greens (dandelion greens and flowers, spinach, turnip and mustard greens). Steaming (not boiling) hard squashes makes them much more palatable and easier to chop.

DIET: Items listed in italics often entice anorexic animals to eat. Adults should be fed three or more times per week in the morning, and juveniles fed daily. Juveniles tend to be much more carnivorous than adults. For every feeding, lightly dust food with calcium lactate, carbonate, citrate or gluconate. Every 2 to 4 weeks, lightly dust food with multivitamins (if vitamin-fortified foods are not available). Limit vitamin D-fortified foods to less than 5% of total diet.

50% Animal or High Protein Foods: *Earthworms, crickets, grasshoppers, slugs, snails, pill-bugs, cicadas, whole skinned chopped mice, baby mice (pinkies)*, goldfish, waxworms, mealworms, silk moth larvae, other insects, adult low-fat soaked dry dog chow, trout, or box turtle chow.

50% Plants (12.5% Fruits and 37.5% Vegetables)

Fruits: Tomatoes, strawberries, raspberries, blackberries, mulberries, blueberries, apples, grapes, cherries, oranges, peaches, pears, plums, nectarines, figs, *melons* (remove seeds), bananas, mangos, and grapefruit.

Vegetables: Dark leafy greens (mustard, collard, radish, beet and turnip greens or tops, kale, cabbage, *dandelion leaves, stems or flowers*, spinach, bok-choy, pak-choi, broccoli rape), red leaf or romaine lettuce (be careful not to overfeed lettuces), Swiss chard, steamed chopped squashes, sweet potatoes, shredded (not chopped) carrots, green beans, lima beans); alfalfa, radish, clover, or bean sprouts; soaked alfalfa pellets, *mushrooms*, bell peppers, broccoli, green beans, peas in the pod, okra and prickly pear cactus pads (shave off spines).

ACCLIMATIZATION: Most pet Box Turtles are wild-caught adults and may adapt poorly to captivity, although some do well from the start. Fall and winter are particularly difficult times to establish brumating (hibernating) species because they are not normally eating. If healthy, brumation is one option; artificially increasing the photoperiod is another. If healthy, new arrivals should be set up in as large of a cage as possible or placed outdoors if the weather is favorable. Box Turtles are naturally secretive animals, and frequent handling or watching deters them from settling into captivity. For finicky eaters, try some of their favorite foods and keep in mind that Box Turtles are particularly attracted to red, yellow and orange-colored foods. Live moving food often stimulates feeding; pinkies and earthworms often entice the most reluctant specimens to feed. Box Turtles are most active in early morning, or late afternoon, when it is not too hot, so these are good times to try and feed them. Rainstorms often increase activity; thus, spraying the cage can stimulate appetite. Mix favored food items into salads heavily at first then gradually decrease over a period of weeks. Bad dietary habits can be difficult to overcome and often require months to correct. Continue to offer foods even if they are not eaten initially; as the turtle adjusts to a varied salad, it gradually increases dietary diversity

We strongly recommend annual health examinations on all exotics!

