

# Caring for Turtles

Turtles (chelonians) are reptiles that can be found in a variety of habitats, including oceans, ponds, swamps, grasslands, and deserts. Turtles are sometimes classified as turtles (water dwelling), tortoises (land dwelling), or terrapins (land and water dwelling). For this article, all chelonians will be referred to as “turtles.”

Some turtle species grow quite large and require extensive enclosures or ponds. Others, such as box turtles and painted turtles, can be housed successfully indoors in a classroom setting.

State and federal wildlife agencies should always be consulted prior to obtaining a turtle, as many native species are protected. It is preferable to obtain turtles from a captive-bred source rather than keeping wild-caught animals.

## Housing Requirements

Box turtles, painted turtles, and related species can be individually or group housed, provided there is ample food and uncrowded conditions.

Box turtles are terrestrial and can be housed in large open cages or large aquaria. Paper, hardwood shavings, or another appropriate substrate should be provided. Aromatic shavings, such as cedar and pine, should not be used. A large, shallow water bowl is required for crawling into for drinking and soaking. Fresh water should be provided daily.

Painted turtles and sliders require an aquarium of appropriate size with water for swimming. Substrate is not necessary; however, if a substrate like aquarium gravel is used, it should be large enough to prevent ingestion.

Cages and aquaria should be made of a substance easy to disinfect, such as glass or plexiglass. Lids are generally not required; however, the sides should be of sufficient height to prevent climbing out.

Housing should be cleaned with a dilute bleach solution (1 part bleach to 20 parts water) and rinsed thoroughly to remove all chemical residue. Do not use phenolic compounds like Lysol® anywhere around turtles—these are very toxic. The cleaning frequency depends on the species and number of animals housed. Aquaria with static (unfiltered) water should be emptied and cleaned weekly or more frequently, as determined by the buildup of uneaten food and feces. Similarly, cages for box turtles should be cleaned at least once weekly.

All turtles should have access to shelters that allow them to retreat and escape from view. “Hide boxes” work for box turtles; aquatic species can be provided with plastic aquarium vegetation or submerged objects behind which they can hide.

Turtles generally do well with an ambient temperature of 75–85°F, with a warmer basking spot. Painted turtles and



## BIOLOGICAL INFORMATION

- Turtles are ectotherms; they rely on the external environment to control their body temperature.
- Turtle skin is covered with small scales. Most turtles also have large scales, called scutes, which cover their bony shells.
- The shell is fused with the ribs. In some species, such as box turtles, the bottom part of the shell has a hinge which closes tightly to protect the head and forelegs.
- Turtles have eyelids, and their external ear openings are covered by skin.
- Turtles lack teeth; they have a horny beak which is used for grasping and tearing food.
- All turtles lay eggs. Many require soil or another substrate (material needed to complete the task) to dig a nest. Eggs can be artificially incubated in warm, moist sphagnum moss or vermiculite. Care should be taken not to disturb the orientation of the eggs during incubation.



ed turtles will eat Repto-Min, whole minnows, aquatic vegetation, earthworms, and floating fish food (such as trout chow). Feeding frequency ranges from daily (young animals) to several times a week (adult animals).

## Handling

Box turtles can be easily picked up by the sides of the shell. They rarely bite, but may scratch in an attempt to get away. Young painted turtles and sliders can be handled the same as box turtles; older animals (particularly sliders) may bite if they feel threatened. When restraining any turtle, support it firmly but carefully; dropping an animal can result in a shell fracture or other trauma. Always wear gloves or wash hands thoroughly after handling turtles, their cages and tanks, or anything associated with them. *Salmonella* may be carried by turtles, particularly young animals; avoid eating or drinking anywhere near the cage or tank.

sliders require a dry surface on which to crawl out of the water and bask. Box turtles likewise should have a basking area within the cage.

A low-wattage light bulb focused on the basking site will provide a warm spot and temperature gradient, allowing the animal to engage in behavioral thermoregulation. Young box turtles, painted turtles, and sliders require a full-spectrum light source for proper Vitamin D metabolism. The lights can be purchased at pet stores or through online vendors. The light source should be 18–24 inches above the turtle cage or tank; glass and plastic absorb the needed wavelengths. Care must be taken to prevent the animal from contacting the heat source, and from allowing the cage temperature to get too high. The lack of an appropriate light source, particularly if combined with improper diet, will result in a Vitamin D and calcium deficiency (soft shell).

## Food and Water

Diet depends upon the species. In their natural habitat, box turtles are omnivorous and eat worms, other prey items, vegetation, fruit, and berries. Painted turtles, sliders, and their relatives are also omnivorous, with aquatic vegetation, minnows, and aquatic invertebrates making up the bulk of their diet.

In captivity, box turtles will eat canned dog food, earthworms, fresh fruit, vegetables, berries, and high-quality reptile diet such as Repto-Min (soak the Repto-Min in water first). Sliders and paint-

## Diseases

Lack of adequate temperature, nutrition, and full-spectrum light, or dirty, crowded housing will cause disease, especially in young animals. Older (adult) turtles are generally easier to keep and less likely to spread *Salmonella*. Signs of illness in turtles include open-mouthed breathing, swollen eyes, nasal discharge, blowing bubbles from the mouth or nose, soft shell, reluctance to move, not eating, and diarrhea. If any of these signs are seen, a veterinarian should be contacted immediately.

## Human Health Concerns

Some infectious diseases of turtles, such as salmonellosis, may be contagious to humans. Seek the advice of a physician if a human disease is suspected due to contact with turtles.

## Resources

1. Less Common Research Animals, chapter in *Assistant Laboratory Animal Technician Training Manual*, 2008, American Association for Laboratory Animal Science, Memphis, TN.
2. Contact your veterinarian or a local veterinary school or veterinary technology program to get more information about this animal species.

*Some of this material has been adapted from the Assistant Laboratory Animal Technician Training Manual, American Association for Laboratory Animal Science, Memphis, TN.*