



Red-Eared Sliders

A GUIDE TO MAINTAINING GOOD HEALTH THROUGHOUT YOUR TURTLE'S LIFE.

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Natural History

Red-eared Sliders (*Chrysemys scripta*) are found throughout the United States east of the Rockies. The subspecies *C. s. elegans* is the one most often sold in pet stores here and abroad. These fresh water turtles spend much of their time in the warm waters of their native habitat. While they are strong underwater swimmers, these sliders spend much of the warmer hours of the day hauled out on logs or rocks (or, when very small, on marsh weeds and other aquatic plants) basking in the sun. All of the sliders are omnivores, eating both animal protein and vegetable/plant matter. Younger turtles need up to 40% of their food from protein sources while adult turtles feed more heavily on vegetation. In the wild they begin by eating tiny fish and amphibian larva, water snails and a variety of plants growing in the water and on land.

It is illegal in the U.S. for pet stores to sell turtles less than four inches in length (this is problematic for those species whose full adult size is 4" or less!). The ones sold legally will be at least four inches long from the neck end of the carapace (top shell) to the tail end of the carapace. If male, it will be somewhere between 2-4 years old and already sexually mature. Wild females reach maturity later, between 5-7 years, and will then be over 5 inches in length; in captivity, females may reach maturity at about 3 1/2 years. You will be able to tell male from females because males are smaller than females in overall body size but have longer tails.

As with all wild-caught reptiles, the animals found in pet stores have been under stress for some time. As a result, they are most likely suffering from protozoan and bacterial infections, including Salmonella, which is easily transmitted to young children. Additionally, they are usually emaciated and dehydrated due to long periods of time without food or water or being held in areas too cold to stimulate the appetite. Many of these **turtles will not eat when they are stressed or frightened, and cannot eat when they are too cold.** As soon as you can after you take your turtle home, scoop up a fresh fecal sample and take it and your turtle to a reptile veterinarian. While the feces is being tested, the vet will check out your turtle for signs of nutritional deficiencies, topical bacterial or fungal infections, beak overgrowth, respiratory and eye infections - all very common in wild-caught animals (and in captive turtles who have not been provided with the proper environment or diet). Make sure your turtle is given all the medication prescribed

by the vet. If you have trouble administering it yourself, take your turtle back to the vet to have it done. If maintained at the proper temperatures, fed a healthy varied diet and kept in a stress-free active environment, your turtle may outlive you: some individuals have lived more than 100 years.

Creating the Proper Habitat

All Sliders need both a warm, dry area and a large pool of warm water. In the wild, they chose water that warms up quickly in the sun each day. You will need to provide a warm enclosure with both heated water and a warm place for your turtle to climb out and dry off. The water must be kept clean; rotting bits of food mixed with feces will combine to make an unhealthful habitat and a sick turtle. Turtles are messy eaters and defecate in their water, so cleaning will be an almost daily routine.

Tank

Start with at least a 20 gallon aquarium. If you are not interested in actually watching your turtle swimming around, you can use a large opaque plastic container such as a large plastic storage box bottom, concrete mixing bin or deep kitty litter pan. You can use clean aquarium rock and gravel to build a slope up from the wet end (the pool) to the dry end (the land). You can silicone together pieces of Plexiglas to make a moveable platform onto which your turtle can crawl onto to rest. Floating cork rafts are another alternative. Rough rocks must not be used as they can scratch turtle shells and this will allow bacterial and fungal infections to get started and penetrate into the turtle's body.

Water

The water must be as deep as your turtle is long. If your turtle's carapace (the top shell) is 5 1/2 inches long, your pool must be at least 5 1/2 inches deep. This will enable your turtle to swim around naturally. This also means that you will have to continue to increase the water area as your turtle grows.

Water Filter

Proper water filtering systems are necessary to keep the water fairly fresh between your weekly changes. If you have a powerful filter system and you feed your turtle in another tank, you may be able to get away with replacing 25-50% of the water each week for two or three weeks, emptying and cleaning out the tank thoroughly every third or fourth week. Remember to replace the water with warm water. Talk to your aquarium shop about the following types of filters that are suitable for Red-Eared Sliders: canister, under-gravel, sponge, and power filters. You will also need some type of automated siphon for the partial changes of water done between the heavy-duty changes and cleaning.

Water Heater

The water temperature must be maintained between 75-86 degrees F. If you buy a submersible pre-calibrated heater, test it first and make sure the water is the proper temperature before you put your turtle in the water. Too cold and it won't eat; too hot and you'll cook it. Buy an aquarium thermometer and monitor the temperature regularly.

Area Heating

If the room the turtle is being kept in is always over 75 F, then you will only need to heat up a basking area. Using an incandescent light or spotlight, allow the area closest to the light to reach 85-88 F. Make sure there is absolutely no way for the light to fall into the water or for the turtle to come into direct contact with the light bulb. Be aware that the light will heat up the water to a certain degree so be sure to monitor the water temperature. Young sliders, and any sick turtle, should be kept warmer (water temperatures between 82-85 F) than the average healthy adult. **Sustained low temperatures (between 65-72 degrees) will cause turtles to stop feeding and respiratory infections may result.** If the room is not warm enough to provide the turtle with the proper air temperature gradient, you will need to supplement the heat, providing another source of heat, which may be used day and night in addition to the basking light. One alternative is to use one of the new ceramic heat elements; these screw into regular incandescent sockets (preferably porcelain sockets), come in a variety of powers, and last a very long time.

Special Lighting

On sunny days when the outside temperatures are warm, feel free to put your turtle outside for a while for some sunshine. Either move your turtle tank outside, or set up a tub with basking and swimming areas. Exposure to **full-spectrum lighting** such as a Vita-Lite is recommended by some turtle experts, and is considered mandatory by others. Full-spectrum light is an essential part of the calcium metabolization process, and calcium deficiencies are very common in captive turtles. Many herpetoculturists use full-spectrum lights as, in addition to their importance in mineral metabolizing, they may have subtle psychological benefits such as improved appetite.

Electric Shock Hazard

As with tropical fish, there is a danger of electrical shock--to you and to the turtle--when using electric filters, water heaters and lamps in and around the tank of water. All electrical cords should be connected to a ground-fault interrupter, which shuts off the current if anything happens. Buy one at your local hardware store. Do not use bulbs with higher wattage than your light fixture is rated for (no 100 watt bulbs in 60 watt fixtures for example). Turtles will investigate and knock things about so secure your water heater behind an immovable wall or partition.

Feeding Your Turtle

To ensure proper nutrition, strong growth and a healthy long-lived turtle, feed a varied diet to both adults and juveniles. Just remember that adults eat less animal protein and more vegetable matter. Juveniles must be fed every day; adults can be fed once every two to three days. Do not feed more than they can eat; the excess food will go to waste and foul the water. Feed a combination of the following foods:

Commercial diets (No more than 25% of total diet):

Trout Chow, commercial floating fish, reptile or turtle food (pellets, sticks or tablets). The pellets and sticks have the advantage of being formulated specifically for reptiles and don't decompose in the water as fast as other foods.

Animal Protein (No more than 25% of total diet).

Live feeder fish: (do not feed frozen fish since they are deficient in thiamin and excess consumption will cause a thiamin deficiency in your turtle). Earthworms-- buy them from a reptile or aquarium store; do not feed the ones from your yard as they may contain bacteria, parasites and pesticides against which your turtle has no immunity. Finely chopped raw lean beef, beef heart and cooked chicken; raw chicken is too often riddled with salmonella. High quality dog kibble can be offered occasionally--dog and cat foods tend to be too high in fat and additives and so should not be used as the main source of protein.

Plant Matter (50% or more of total diet).

Offer leaves of dark leafy greens such as collard, mustard and dandelion greens. Offer shredded carrots (and carrot tops), squash and green beans. Thawed frozen mixed vegetables may be used occasionally, but care should be taken as some frozen green vegetables have thiaminase, which destroys that all-important B vitamin. Fruit can be offered raw. You should shred hard fruits like apples and melons, while chopping soft fruits such as berries. To help keep their beak trimmed, let them gnaw on pieces of cantaloupe with the (well-washed) rind still attached.

Vitamin supplements should be added twice a week. Use a good reptile or turtle multi-vitamin. Turtles must also be supplied with additional calcium; they often enjoy taking bites out of calcium blocks and gnawing on cuttlebone, so always have some available to them.

(Be very careful not to over-supplement with vitamins since toxicity's can develop, too much can be just as dangerous as not enough. Also, calcium powders can be purchased which can be sprinkled on the food a couple of times per week).

Health

Watch your turtle for any signs of illness: cloudy, closed or swollen eyes; swollen cheeks; open mouth breathing; bubbly mucous around the nose or mouth; runny stools; loss of appetite; listlessness; spots appearing on plastron (bottom shell), carapace or body; soft shell or excessive shedding. **Newly acquired turtles are under a lot of stress and may be riddled with bacterial or parasitical infections that may be passed along to you or your kids.** Always take a sick turtle to a reptile veterinarian, and have your children checked out by their physician if they begin to exhibit any signs (nausea, stomach aches, vomiting).

Acclimation and Handling

After bringing home and placing your turtle in its already-established tank, let it get used to its new surroundings for several days. It may spend the first couple of days closed tight in its shell, or may quickly withdraw when it sees you looming overhead or approaching the enclosure. During this time, put fresh food out every day and make sure the water stays warm and clean. After a while, the healthier turtle will begin to explore its surroundings, and may begin to watch the goings-on around it. When you pick up the turtle, support its body with both hands. Turtles feel more secure when they can feel something beneath their feet; "swimming" in air is stressful to them. Let them feel your hands or fingers beneath their feet, not just

their plastron (bottom shell). A two-handed carry will also help ensure that they will not suffer a potentially crippling--or fatal--fall.

When your children's hands are big enough, teach them the proper way to hold and carry the turtle and to wash their hands after handling the turtle. If they have been playing with any other animals before they go to handle the turtle, they should wash their hands before handling, too.

Generally speaking, turtles are not appropriate pets for young children. The care and feeding is more complicated than is generally thought, and the daily maintenance of the enclosure, enclosure apparatus and feeding soon gets boring for most kids. (Some adults, too, are dismayed to find that they can't just stick the turtle in a box or tank of water or let them loose in their yard, tossing lettuce to it once in a while.) **When obtained for a child, the parent must acknowledge and accept primary responsibility for the care of the turtle and routinely check it regularly for any signs or symptoms of illness.**

Scientists believe that many cold-blooded animals, especially turtles and tortoises, can live almost forever as they show no signs of aging as they get older. They die from being successfully attacked by one of their few natural predators, from the poisoning or destruction of their natural habitat, and from improper care in captivity.

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The preceding article was originally authored by Melissa Kaplan and can be found on the world wide web: <http://www.sonic.net/melissak/index.html>. Some minor formatting and grammatical changes were made and italicized suggestions included by the veterinarians at Fisherville Animal Hospital & Bird Clinic so that this article could be used as an educational tool for our box turtle owners. In our opinion, Melissa Kaplan's web page contains accurate and useful information on the husbandry of many different reptiles. Another good site to visit is the New Hampshire Herpetological Society at <http://members.aol.com/NHHerpSoc/index.html>. As you should already know though, information from the World Wide Web should always be viewed with skepticism since there is no formal "policing" mechanism to verify the accuracy of the material contained within.