



Melissa Kaplan's Herp Care Collection

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Red-Eared Sliders

Trachemys scripta, *T. s. elegans*

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Natural History

Yellow-eared and Red-eared Sliders (*Trachemys [Chrysemys] scripta*; *T. s. elegans*), are found throughout the United States east of the Rockies. They are the sliders is the one most often sold in pet stores here in the U.S. 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; 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 any turtle that is less than four inches (10.6 cm) in length (this is problematic for those few turtle species whose full adult size is 4" or less!). The ones sold *legally* must 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 (12.7 cm) in length; in captivity, females may reach maturity at about 3 1/2 years. You will be able to tell male from females: 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

For the smallest turtles, start with at least a 30-50 gallon (113-189 liter) glass aquarium (see **Water** before you rush out and buy that 30 gallon aquarium you saw on sale!) . If you are not interested in actually being able to watch your turtle swimming around under water, you can use a suitably 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 or anchored cork rafts or logs are another alternative. Rough rocks must not be used as they can scratch turtle shells which allows bacterial and fungal infections to get started and penetrate into the turtle's body.

Note: one of the biggest mistakes aquatic turtle keepers make is not providing a body of water that deep, long and wide enough for their turtle. The minimum size required for a 4" turtle will not work for a 6" or 8" (15 or 20 cm) aquatic turtle, and certainly not for a full grown one. Since turtles will grow relatively quickly when they are cared for properly, you should start off with an enclosure size big enough for your turtle to comfortably grow into for at least 1-2 years. That will give you some time to think out, plan, and build the turtle's next, much larger, enclosure.

Think two turtles are better than one? Assuming they are compatible, it can be nice for your turtles to have one another for company. But two turtles require an even larger enclosure than a single turtle. So, unless you are prepared to keep and service giant enclosures for turtles who can easily reach the size of dinner plates, rethink getting two...or even one.

Water

The water must be at least 1.5 to 2 times your turtle's total length (called carapace length, or CL) in depth, with several extra inches of air space between the surface of the water to the top edge of the tank to prevent escapes. The tank length needs to be at least 4-5 times the CL, and the front-to-back width should be at least 2-3 times the CL. So, for a turtle who is 4" CL, your enclosure water area must be at minimum 6-8 inches (15-20 cm) deep, 16-20 inches (40-51 cm) in length, and 8-12 inches (20-31 cm) in width. As you can see, if you are going to have a land area at one end as well as sufficient water area, you need something much larger than a 10-20 gallon (38-76 liter) tank. See *Reptile Housing: Size, Dimension, and Lifestyle* for the dimensions of standard aquaria and other enclosures.

Keep in mind that if your turtle is not yet full grown (hint: if he is not yet as large as a dinner plate, he is not full grown), you not only need to provide room in the tank (water and land) for him the size he is now, you need to provide additional room to allow for future growth.

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, undergravel, sponge, and power filters. You will also need some type of automated siphon for the partial changes of water between the

overall heavy-duty changes and cleaning.

Water Heater

The water temperature must be maintained between 75-86 degrees F (23.8-30 C). 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 good quality an aquarium thermometer and monitor the temperature regularly.

Area Heating

If the room the turtle is being kept in is always over 75 F (23.8 C), then you will only need to heat up a basking area, rather than heating up the room, too. Using an incandescent light or spot light, allow the area closest to the light to reach 85-88 F (29.4-31 C).

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 F [18.3-22.2 C]) 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 a ceramic heat elements (CHE). CHEs screw into regular incandescent sockets and come in a variety of watts, and last a very long time. **Safety warning:** you must install CHEs into porcelain light sockets. These devices throw enough heat upwards to melt plastic sockets.

Note: Don't guess at the water or air temperatures. Reptile species have very specific temperature ranges during the day and during the night. If your guess is off, that will make the difference between a reptile that thrives, and one who merely survives - or dies. Use thermometers.

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 (so long as it is not a glass enclosure, which can overheat to the point of causing fatal hyperthermia), or set up a secure outdoor enclosure for your turtle to sun and soak in, or set up an indoor enclosure complete with a UVB-supplemented basking and a swimming area. The latter will be required if you cannot regularly get your turtle outside or otherwise safely exposed to sunlight (not filtered through plastic or glass), or live where the amount of natural UVB is not sufficient year round to enable your turtle to make the amount of pre-vitamin D it needs to ensure adequate calcium metabolism.

Keep in mind that, in the wild, when turtles get too hot when basking in the sun or upper layers of sun-heated water, they simply dive into deeper, cooler, water or move into a cool pocket of wet bankside overhung with plants providing shade. So, while it is great to give your turtle some direct sunlight, you must guard against it getting too hot, which can result in fatal hyperthermia. If you cannot provide a suitably cooler retreat area your turtle can go to when it gets too warm, and you can't keep a direct eye on your turtle to watch for signs of overheating, don't put it outside. Enclosures are like automobiles: the temperatures inside reach 20-30 degrees hotter than the outside air temperature, making the inside potentially lethal on mildly

warm days.

Exposure to an ultraviolet B (UVB)-producing fluorescent light, such as a Vita-Lite®, is recommended by some turtle experts, and is considered mandatory by others. UVB exposure is an essential part of the calcium metabolism process, and calcium deficiencies are very common in captive turtles. Many herpetoculturists use UVB-producing fluorescents because of their importance in calcium metabolism but also because the UVA they produce may have subtle psychological benefits such as improved appetite, since many reptiles see into the ultraviolet range.

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 (in other words: no 100 watt bulbs in 60 watt fixtures). Turtles will investigate and knock things about. You must secure your water heater behind an immovable wall or partition to turtle-proof it.

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 defrosted frozen fish; 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 are okay for treats, but are not appropriate as a major part of a balanced diet for whole prey eaters. Raw chicken and beef is too often riddled with *Salmonella*, *E. coli* and other food-borne organisms. High quality dog kibble can be offered occasionally as treats, too; like muscle meat, dog and cat foods are not appropriate when used as a significant portion of a turtle's diet.

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 develop thiaminase which destroys that all-important B vitamin. Fruit can be offered raw; shred hard fruits like apples and melons, chopping soft fruits such as berries. To help keep their beak in trim, let them gnaw on pieces of cantaloupe with the (well washed) rind still attached. Check out the edible aquatic plants sold at aquarium stores, too. You can drop these into their enclosure for them to free feed upon.

Vitamin Supplements should be added twice a week. Use a good reptile or turtle multivitamin. 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.

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 parasitic infections that may be passed along to you or your kids. One of the reasons for it being illegal to sell turtles under 4" in the U.S. is that, once the law was passed, it greatly reduced the number of hospitalizations and deaths of children whose parents did not realize that most turtles carry *Salmonellae*, which is irregularly passed through their feces into their water, and onto their shells and skin. Read up on proper precautions to take to prevent infection of children and immunocompromised adults.

Always take a sick turtle to a reptile veterinarian. Reptile vets are an important part of keeping healthy reptiles healthy, and helping sick ones attain health. Many people don't want to spend more for a vet visit than they paid for the animal. A good rule of thumb for all animals, especially 'cheap' ones, is: if you can't afford the vet, you can't afford the pet.

Make sure to have your children checked out by their pediatrician if they begin to exhibit any signs of illness (nausea, stomach aches, vomiting, diarrhea).

Handwashing Hint: One way to get your children to make sure they are vigorously rubbing their hands with soap (including between their fingers and under and around their fingernails) is to have them sing the Happy Birthday song two times in a row. Depending on how often they wash their hands, you might eventually want to encourage them to sing softly, or sing it in their heads. Decrease the risk of infection by using a liquid soap in pump bottle instead of a bar of soap, and disposable paper towels for drying the hands and turning off the water faucet.

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 how to properly 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 the turtles, as well as afterwards.

Generally speaking, turtles are not appropriate pets for young children. The higher risk of infection aside, 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 their 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, intolerably alteration or destruction of their natural habitat, and from improper care in captivity.

In Closing...

This article should be enough to help you decide whether a slider or other aquatic turtle is the right pet for you. For more information on care, more creative captive environments, breeding and other behaviors, be sure to check out the chelonian sites linked to my main Chelonians page and join a turtle-related e-mail list or two.

Sources

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