



Royal Animal Hospital – Soft-shelled turtles

Soft-shelled turtles, Family *Trionychidae*, are found in nearly every type of waterway in the world. Every continent with the exception of Australia and Antarctica is host to this unique family. Soft-shelled turtles died out in Australia in the Pleistocene, around 40,000 years ago.

Every species of soft-shell is slightly different in terms of its particular needs and maintenance which is not surprising in a family with species that may range in size as adults from 20 cm to 200 cm. This care sheet is intended only to cover the general care of this turtle family. Further research to best develop a maintenance plan for whichever species you are caring for is essential.

In nature, most soft-shelled turtles reside in bodies of water with soft mud or sandy bottoms where they bury themselves and await passing prey. They are generally avid baskers, utilizing rocks or floating logs and especially muddy banks to maintain proper thermoregulation. They are very carnivorous from birth and are able to deliver a painful bite if the caregiver does not exhibit caution. They are also lightning fast as befits a carnivorous species. In nature a large part of their diet is crayfish and water insects, as well as carrion, fish and occasional plant material. They take readily to commercial trout or catfish food. Feed young, rapidly growing turtles small portions every day or larger portions every other day and feed adults twice a week.

Additional calcium supplementation is essential. Powdered calcium can be sprinkled all foods or placed inside of food items. It is suggested that one use calcium supplemented with vitamin D3 if the animal is being maintained indoors and calcium without D3 if it is outdoors. Provision of a cuttlefish bone, which can be gnawed if desired, is also recommended. Addition of multivitamins if a commercially prepared turtle diet and/or live fish are NOT used is essential for proper fat metabolism. The freezing process for fish destroys the vitamin E which is an important component for maintaining a healthy Soft-shell turtle.



Because of their aggressive nature soft-shells should not be kept in crowded conditions, either with other soft-shells or hard-shelled species. Obviously the bigger the habitat is the more animals can be placed into it but I would not place more than a trio of 20 cm soft-shells in a 2 meter by 2 meter pond without making certain to include numerous sightline breaks to add security for them from each other.

In indoor aquaria water depth should be maintained at a level that will allow the animal to reach the surface by stretching out its neck while buried in the sand in on the bottom. This is especially important for hatchlings. If an aquarium is used it should also have a dry basking area with a hardware store reflector clip light lamp positioned to provide artificial basking facilities. This should be positioned to provide a basking spot of 90 degrees F or so (32 degrees C) in that section of the habitat. The habitat should also be equipped with a full spectrum fluorescent light to provide for UVB. A UVB source is necessary for Vitamin D3 syntheses (needed in calcium metabolism). If preferred to this lighting arrangement an “Active UV Heat” bulb may be used that fulfills both requirements.

Substrate in a pond or aquaria should consist of fine sand or mud. Sharp gravel and rock tends to scratch the shell of these species resulting in fungal or bacterial infections, which may be fatal.

Because of this tendency to develop shell fungus, it is critically important that these animals have access to sunlight outdoors or full spectrum UV lighting inside. While there are many treatments for fungal infections, the best way to avoid it is simply to provide access to a basking area and sunlight to allow them to completely dry their shell when needed. Other methods of avoiding this problem include lowering the pH to about 6.0 – 6.5. Most fungal organisms do not thrive in a slightly acidic environment.

Another condition of critical importance in avoiding disease is water quality. As a general rule, the more water volume utilized, the more leeway for problems with water quality. Many problems with aquatic turtles can be averted if one spends a little time and money designing and purchasing an adequate filtration system for your aquatic pets.

Internal filters with submersible pumps are less expensive and easier to install. However they are less efficient and require cleaning more often than the more expensive, external canister or wet-dry filters. It is better to pay a bit more for the added effectiveness.

It should be noted that turtle and tortoise care research is ongoing. As new information becomes available we share this on the World Chelonian Trust web site at www.chelonia.org. Serious keepers find it to be a benefit to have the support of others who keep these species.