



# CARE OF JUVENILE TORTOISES

*Our Turtle & Tortoise Care Sheets are meant as a general guideline to caring for your Turtle/Tortoise. Every specific species requires its own unique care - while many species are overlapping and can be kept with other species that have similar needs.*

*For even more details about the needs of a specific species - or for ideas about which different species will go well together (many do), please contact us by phone or email. Thank you!*

## **GENERAL**

Often we are asked to explain basic husbandry for juvenile tortoises, from hatchlings up to 2 - 3 year olds. I'm putting it in writing to make for easy reference for tortoise keepers.

First, try to remember that juvenile tortoises instinctively hide quite a bit while still small. They will come out, bask, eat, and quickly dig their way back into the leaf litter or mulch. They do this so that they will not end up on the menu (in the wild). This tendency does two things: It makes them instinctively shy, even in captivity; and second, it makes for a very humid environment early on in their lives. Even desert species do this.

With these situations in mind, as keepers, we have two things to focus on. First, juvenile tortoises will need a lot more humidity and moisture than adults; and second that it takes a while to teach them that their keepers are not going to eat them.

These goals are easily accomplished.

## **SOAKING & HUMIDITY**

We soak all young tortoises in shallow, warm (80 - 85 F) water for 5 - 10 minutes, three times each week. Any similar schedule will normally work. Shallow means that they must put their heads down by their feet to drink. Deeper water can cause eye infections if your tortoise dirties the water before drinking.

5 - 10 minutes, means until dirty or 10 minutes. If your tortoise dirties the water immediately, simply change it out and allow for at least 5 minutes of soaking in clean water. Many keepers instinctively want to provide water bowls in their tortoise enclosures - the problem is the same possibility of eye infections developing if not kept constantly clean. Also, constantly accessible water is too much for many species, who will not know any better than to over hydrate... So water bowls for juvenile tortoises should not be provided (a nice dark piece of romaine lettuce serves as an excellent constant water



source). Soaking is the best way to keep them properly hydrated. As your tortoise grows past his first 7 - 10 months, and is thriving, cutting back to 2 soakings per week for "drier" species like Leopards and Sulcattas is sufficient. Proper humidity and moisture also helps to prevent "pyramiding" or abnormal shell growth.

Also, be sure to keep your tortoise's substrate moist - not wet, but moist. Heated or basking areas tend to dry out very quickly, so keep an eye on them. More tropical species like Red Foots, Yellow Foots, Elongated Tortoises and Burmese Mountain tortoises do best with "very moist" substrate. Spraying the substrate will work. Extra dry enclosures may even need poured water to be mixed in. The time spent waiting for your tortoise to finish his/her soak is also a good time to moisten their substrate. Desert species, like Sulcattas and Leopard Tortoises, will do better with drier substrate (30% - 55% humidity), but their regular soaking, and constant access to greens is essential for their success.

## **TLC**

Gently handling your tortoise, and hand feeding his/her favorite food, will transform your shy, hiding tortoise into the puppy dog like shelled creature that charges over to see you when you enter the room. Each morning, if still sleeping in the substrate, gently dig your tortoise out, and carefully place him/her in front of the day's food offering - or the basking area. Similarly, each evening when your timer shuts off the basking light, and your second timer turns on your heating source in the sleeping area (if needed), gently place your tortoise on or near his/her favorite sleeping location. Being careful to always be gentle with your tortoise, and sometimes hold and even hand feed your tortoise will, in time, make for a very outgoing and tame tortoise. Before long, you will even see their personality develop before your very eyes.

## **FEEDING**

We offer food almost daily. 5 - 6 times each week is normally sufficient. Many tortoise experts have differing opinions on what, and exactly how much to feed young tortoises. As a rule, we feed a lot to very young tortoises in order to get them well started and thriving. The fourth or fifth month normally sees very successful juvenile tortoises, and it is at this point that we back off the food in both quantity and quality. We reduce quantity a bit to keep young tortoises from growing at an un-natural rate. Over feeding juvenile tortoises can cause distorted shell development and unhealthy growth in general. We also back off the "quality" of the food offered to also more closely mimic what a tortoise will eat naturally if he/she were living in the wild. The combination of very healthy commercial tortoise diet, and keeper's fascination with seeing their young tortoise do what it does best (eat), often leads to over feeding - or "over nourishment" Many times in the wild, a young tortoise will not be able to find lots of the best possible food. Many desert and forest species eat food containing minimal vitamins throughout their lives, such as grasses and hay. Well intended keepers often provide "all you can eat buffets", not



ever realizing that too much of a good thing can be bad - or at least not what is normal for their tortoise.

One important diet consideration is to offer variety. In the wild, a tortoise normally will eat different foods based on what is in season. This normally means that several dozen species of plants are eaten through out the year. This broad spectrum approach assures essential nutrients along with the proper variety. For example: a bag of "spring mix" is a better choice than a head of one type of lettuce...

We mix our pellet tortoise diet with thawed, frozen, cut mixed veggies (peas, carrots, corn, lima beans etc.) in a 60% diet to 40% veggies ratio. We then add a high-quality calcium supplement (we use Mineral, but there are other quality brands) and enough water to make a very thick paste. We serve a clump large enough for a young tortoise to eat at knee to eye level. If served on a plastic plate (even the lid of the deli cup they come in) the food will not dirty the substrate very much... A few days worth can be prepared ahead of time, kept fresh in the fridge, and served at room temperature (never cold).

Additionally, each particular species has its own set of favorite and important foods. Our web site descriptions cover each species fairly well in that regard. In lieu of a water bowl, any of the dark leafy greens (outer leaves of romaine, endive, green leaf, red leaf and collard greens etc.) give both a good water source, and something to work on for young tortoises.

## **SUBSTRATE CHOICES**

We enjoy a great deal of success with cypress mulch. We are biased this way because here in South Florida, large bags are inexpensive, and seemingly sold on every street corner... For very young tortoises, sphagnum moss by itself holds humidity and works very well. We like to use clumps of sphagnum moss soaked and wrung out by hand to give young tortoises a soft, humid place to hide and sleep. The moss can be placed in a depression made in the cypress mulch. Re soaking can be done as often as necessary. Some species will eat the sphagnum and cause concern for their keepers; this has not shown to be a problem so long as the moss is reasonably clean. (It is packaged very cleanly.) We like the moss instead of a hide box for young tortoises as it gives shelter, but does not spoil them in this way. It serves as a nice transition to becoming tame. We send each juvenile tortoise with a sample bag of sphagnum moss for this purpose. As your tortoise matures the need for the moss diminishes. Depth of substrate is another consideration. We recommend no more than an inch, with the sleeping end of the tank or bin deeper to almost two inches in the corners. These corners are where you will usually find your hiding/sleeping young tortoise. The rest of the enclosure needs to be shallow to discourage hiding - and help to promote the taming of your tortoise.

Both the moss and the cypress mulch can usually be found in the garden departments of home improvement stores - or in specialty garden stores. I have been asked about other substrates: Dirt, sand, rabbit pellets, aspen bedding, pine mulch and commercially prepared tortoise bedding. Except for



the last two, all have their shortcomings, and while your tortoise is young, providing what works well isn't very difficult or expensive...

Older, established tortoises usually do well on mulch or dirt/sand mixtures.

## **TEMPERATURE & LIGHTING**

Here is perhaps the most missed detail of juvenile tortoise husbandry. Plain and simple, young tortoises need to stay above 79 degrees 24 hours each day for the first 5 - 6 months and beyond. Even mountain and northern species like Russian tortoises need 80 F as the lowest temperature at night while very young.

Basking temperatures for nearly all species should range from 92 - 99 degrees. A thermometer placed directly under the basking light will show the keeper what their tortoise is getting. A colder side of the enclosure, away from the hot basking area, is essential for your tortoise to thermo regulate (control their own temperature) successfully. There are many good basking bulbs and lights on the market today - we have good results with the ones made by Zoo Med, but other good bulbs are available. Bulbs that emit UVB (ultraviolet B rays) do the most for young tortoises. We have found the Reptisun 5.0 fluorescent to be excellent and use it along side basking bulbs that provide the heat for the basking spot. Many young tortoises do well with regular incandescent bulbs, but our experience has shown that UVB lighting has a lower incidence of problems for young tortoises. Some keepers ask about higher and lower levels of UVB, giving good reasons for both. We have had success with lower UVB levels and have found no reason for higher UVB levels - stories of eye damage with higher UVB levels have been circulating enough for us to stick with the lower UVB bulbs. Which ever bulb or combination of bulbs you use, keep in mind that providing the right temperatures and UVB lighting can not be stressed enough for young tortoises.

A timer that turns basking lights on an hour or so after day light, and shuts off an hour or so before dark (dark in the tortoise's room), will make things a lot easier for keepers. Most keeper's homes are far cooler than 80 degrees Fahrenheit at night. For these keepers we recommend heating pads under their tortoise's sleeping area. Be careful to set the pad under the tank or bin (not inside with your tortoise). There are several "reptile" heating pads on the market; we prefer the Zoo Med pad that comes with adhesive that sticks to the bottom of your tank... We sometimes use the "human" kind of heating pad - available at most drug/convenience stores. Be sure the tank is not crushing the pad or cords; be sure it is on a low setting; be sure it can not get to hot, or cause a fire from over heating in any way... Also, be sure it will not shut off automatically after a certain amount of time... There are several types of night heating bulbs available. Our concerns with these are: If they give off any light at all, they interrupt or do not allow proper sleep. Heating from the top down is not efficient and a partially or fully buried tortoise will not be heated as the bulb's heat will bounce off the substrate surface... When ever possible, under the tank heating is best for your tortoise at night, and be sure the temperatures above the heating pad, on the floor of your tank is 80 -84 while it is on. You can direct your tortoise to their sleeping area by



making the substrate a little deeper in that spot, and making a small crater for him/her to go in and spend the night - you may need to place him/her there at first until he/she learns where the warm sleeping spot is.

Set your tortoise's tank up well a head of time, and be certain that it provides a range of 80 - 84 degrees in your tortoise's sleeping area at night, in the room it will operate in. A timer that turns it on soon after the basking area turns off, and shuts it off about 90 minutes after day light will save the keeper a lot of effort. The reason many young tortoises struggle is that they are heated and fed very well by day, mimicking their warmest seasons in nature, followed by too cold of nights that do not allow for proper digestion. Young tortoises need warm temperatures to digest full bellies of food properly. Warm temps also keep your tortoise's immune systems at their strongest, enabling them to fend off any cold viruses that may come their way.

## **SETUP**

Many new keepers wonder about the ideal set up for their new tortoises. A rectangular shaped environment is best for providing temperature options for your tortoise. On one end, a cool by day, warm by night sleeping area, on the other end a warm by day, cool by night, basking area. In the middle is a good place for the food. A 20 gallon "long" glass aquarium (or larger for larger tortoises) will provide this quite well. A similar shaped (Rubbermaid type) plastic bin will accomplish the same goals. Glass tanks provide better viewing from the side, good foundations for safe lighting, and are less of a fire hazard. However, they are more costly to buy and upgrade down the road as your tortoise grows. Many keepers build their own tortoise box, or tables. These custom set ups often come out great for the tortoises, but are normally more difficult to keep warm and moist. Another consideration is for outdoor keeping. Juvenile tortoises can be easy prey for many animals such as birds, rats, raccoons and dogs, so outside accommodations need to be properly protected. Natural sunlight for young tortoises has no equal as far as lighting goes, but keepers must be mindful of minimum temperatures (even with strong sunlight); and the absolute necessity for plenty of shade options for any tortoise outdoors. Night time lows often necessitate your tortoise coming back inside before sunset. As your tortoise matures, the acceptable temperature ranges increase considerably.

Inside or out, Keepers can put together nicely arranged set ups, complete with plants and other attractive objects. Care must be taken to ensure that tortoise will not flip themselves over when climbing or rolling down grades. An upside down tortoise is a very serious problem - and must be prevented. Care must also be taken to insure that your tortoise will not be able to eat anything that it should not. Tortoises will try to eat everything: rocks, sticks, potted plants, even the wire or rubber bands holding lettuce together. These items can harm your young tortoise, so keepers need to imagine and consider their tortoise eating anything in reach.



## **FINALLY**

There are many sources of good tortoise husbandry info out there: Books, internet sites, experienced hobbyists etc. Many have differing view points, I like to consider all available info, find people with experience I can trust, and go with the most frequently agreed upon recommendations. Keepers come up new ideas and innovations all the time. Just like any worth while pursuit, a little home work and preparation will go along way to insuring success with these amazing animals. With good care and a little luck, keepers extra efforts will be rewarded for decades.