



This care sheet is intended only to cover the general care of this species. Ongoing research to best develop a plan to keep the animal in peak condition for whichever species you are caring for is essential.

The combination of its small size and beautiful golden color has made *Testudo kleinmanni* a much sought after addition to tortoise collections. This popularity within the pet trade is second only to habitat loss in terms of impacting the overall wild populations. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) lists *Testudo kleinmanni* as an Appendix I species, affording it the highest possible protection. The Egyptian tortoise is also listed as Endangered on the World Conservation Union (IUCN) Red List, which is the second highest designation.

T. kleinmanni is a difficult species to maintain and should not be considered an appropriate species for the beginning tortoise keeper. Found from Libya to Israel, they are extremely well adapted to their native arid environment; unfortunately this very adaptation to extreme conditions leaves them vulnerable when we attempt to maintain them in our "human" temperate world. Only if one is willing to go to great lengths to duplicate their natural environment should keeping and breeding this species be attempted. Only captive hatched animals should be obtained. The combination of shipping stress, exposure to foreign pathogens, and minimal physical reserves due to their diminutive size results in the vast majority of wild caught specimens perishing, even with aggressive medical care.

As indicated by their light coloration, *T. kleinmanni* originate in sandy / rocky areas. Evolving a darker coloration in such an area would make a tortoise easy prey for any predator. Their small size allows them to warm quickly after cold desert nights and their reflective rather than absorptive carapace color allows them to extend their time foraging during the day before the desert heat drives them under cover. Male Egyptian tortoises are typically 3 - 4 inches (8 - 10 cm) in length as adults, while females are somewhat larger at 4 - 5 inches (10 - 12 cm)



HOUSING: Egyptian tortoises **MUST** be housed in a dry, warm environment with low ambient humidity. This must be taken into consideration when arranging housing for them. Upon exposure to a humid environment, even if warm, many of these tortoises fare very poorly and rapidly decline. This is a species that has evolved a very strict niche over the years and one that does not fare well outside that niche. While most species of tortoises respond well and do much

better with outdoor maintenance, this species tends to do best in indoor accommodations unless they are being maintained in a low humidity, high temperature climate. Egyptian tortoises tend to bury themselves in the topsoil or under the base of clumps of grass, regardless of being maintained indoors or out. Opportunities to practice this natural behavior should be provided for.

HOUSING EGYPTIAN TORTOISES INDOORS: - The most useful form of indoor accommodation for Egyptian Tortoises consists of a "turtle table". To all appearances this looks like a bookshelf unit flipped onto its back. A reasonable size for a single specimen is 2 feet by 3 feet, (60 cm by 90 cm). If keeping more than one together, the size of this habitat should be increased along with providing sightline breaks and opportunities to blend into their surroundings for this easily stressed species. For a pair of adult Egyptian tortoises the indoor habitat should be at least 4 feet by 2 feet, (120 cm by 60 cm). Into the bottom of this "turtle table" holes can be cut to allow for the sinking of food, water, and nesting containers flush with the surface for easier animal access.

Many *T. kleinmanni* will not make use of a water dish. For those that will utilize one, the water dish in the habitat should be large enough to allow the tortoise to soak in it if it wishes - it must also be shallow enough to protect it from drowning. Small photographic developing trays work well for this purpose. Due to the nature of this species, one of the authors places his animals in a soak bowl once a week to maintain hydration. As a substrate, the dry portion of the environment should consist of a mixture of sand and clean topsoil. Some keepers use a combination of topsoil and chicken grit (crushed coarse limestone) as a substrate. As an alternative to these substrates grass hay serves admirably and is preferred by the authors. Grass hay provides supplemental food as well as a burrowing substrate that does not "hold" humidity. Due to the rapid degradation of hay when it gets damp, it should be monitored closely and changed as needed.

In one corner of the environment a hardware store reflector clip light lamp should be positioned to provide artificial basking facilities. This should be positioned to provide a basking spot of 95 - 100 degrees F (35 - 38 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 (an essential component of calcium metabolism). A Mercury vapor bulb may be used to fulfill both heat and UV requirements. Some keepers have had excellent success with using both a mercury vapor light to provide UVB and daytime heat as well as a ceramic heat emitter on 24 hours over one end of a habitat to provide a temperature gradient. Both the Mercury vapor light and the ceramic heat emitter mentioned above it is advised that one use a fixture with a ceramic lamp holder, as these are both very hot. Fixtures should also be affixed in such a manner that they cannot contact the possibly flammable substrate. There should be a hide box located in the corner away from the basking spot to allow the animal a cool, dim retreat. This is an extremely important component particularly for this species.

OUTDOOR HOUSING - Predator proof outdoor habitats offer many advantages over indoor accommodations and should be seriously considered as an option during warm weather if one lives in a **low humidity climatic zone**. While both authors are strong proponents of outdoor habitats for chelonia, *Testudo kleinmanni* is one of the few exceptions where properly designed indoor habitats are preferred in most situations. Egyptian tortoises appear to be fairly cold tolerant but as mentioned earlier in this care sheet cannot tolerate damp conditions.

DIET - A high fiber, low protein, calcium rich diet will ensure good digestive tract function and smooth growth. *Testudo hermanni* fed on cat or dog foods frequently die from renal failure or from impacted bladder stones of solidified urates. There is no reason to presume that Egyptian tortoises would react otherwise. Avoid over-reliance upon 'supermarket' greens, which typically contain inadequate fiber levels and are too rich in sugar. While fruit need not be completely

avoided, they should be given very, very sparingly to this species as the high sugar foods can cause diarrhea and are not a natural part of the wild diet. A light water sprinkling of leafy greens and weeds prior to feeding will approximate the early morning foraging of Egyptian tortoises and supply needed moisture to the diet.

- Leafy greens (dandelions, clover, endive etc.)
- Grasses and weeds

Additional calcium supplementation is essential. Powdered calcium can be sprinkled on all foods. It is suggested that the caregiver provide 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.

This species does not hibernate but it does aestivate in very hot, dry periods. It is not suggested that anything but very minimal aestivation be attempted and even then only with very close supervision. Environmental modification for breeding purposes has proven to be an important part of continued reproduction with this species.

MEDICAL: Before purchasing an individual of this species, a number of things should be taken into consideration. First and foremost is the intended purpose for your new Egyptian tortoise. *Testudo kleinmanni* are a species, which is under considerable wild pressure, and purchasing such an animal bears additional responsibilities in terms of making all necessary adjustments/pairings to reproduce it. We all have a responsibility to be sure that we do not contribute to the loss of such a magnificent species but rather contribute to it's future.

Also, even now it is not uncommon for members of this species to be smuggled into the country due to their diminutive size. Captive bred animals, while not available in large numbers, are being produced regularly from various dedicated breeders. They can be distinguished from their wild caught counterparts by a number of features. First and foremost, captive bred animals tend to be fairly outgoing whereas one will seldom see the head of a wild caught animal as they withdraw themselves within their shell. Secondly, wild caught Egyptian tortoises almost invariably have heavy, heavy parasite loads. Due to their harsh environment, wild caught animals typically have a variety of old shell lesions compared to relatively undamaged captive bred stock. Last, but not least, most captive bred animals have some degree of pyramiding to their scutes.

Before purchasing an animal, closely examine the mouth, nares (nostrils), and eyes of your intended purchase. If the mouth is extremely pale, the tongue appears covered in a coating of plaque-like material, there are bubbles coming from its nares or mouth, or the tortoise's eyes/eyelids are swollen shut do **NOT** purchase it. Also, again be sure to note the captive bred versus wild caught nature of the animal. While captive bred animals tend to be wonderful additions to any serious collection, wild caught animals of this species are incredibly difficult to adapt to captive conditions without serious intervention.

This is a species that must **NEVER** be mixed with another species. Egyptian tortoises have adapted themselves to a very, very tight niche over the millennia and because of this are extremely sensitive to disease carried by other species.

Lastly, it should be noted that drug dosage and administration information available on the Internet or in hobbyist books is often dated and possibly dangerous, please leave drug advice to trained professionals.

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. Care is discussed in our free online email community, which may be joined from the web address above. Please contact us about the many benefits of becoming a member of the World Chelonian Trust.

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