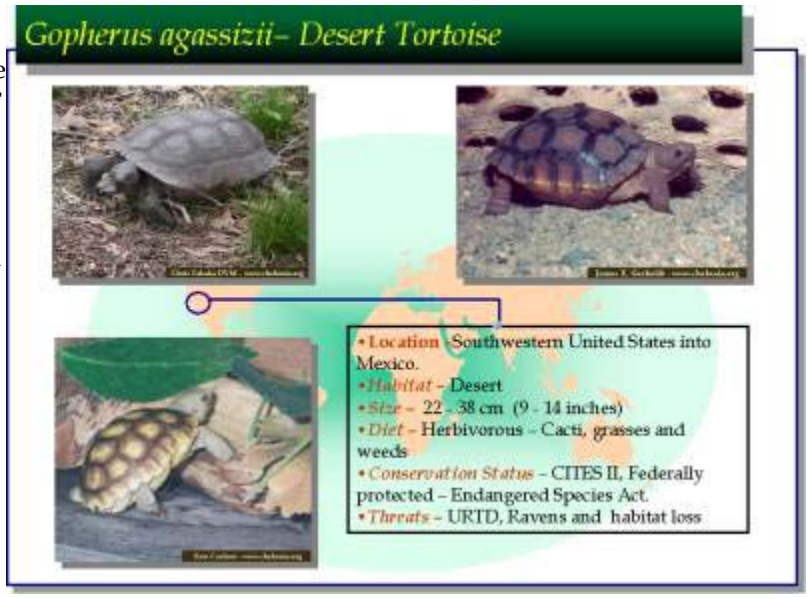
Desert Tortoise – *Gopherus agassizii* (Cooper 1863*) - Chris Tabaka DVM and Darrell Senneke

Many taxonomists split this species into two subspecies or types: The Mojave Desert populations north and west of the Colorado River tend to aggregate more toward flatlands and are considered genetically distinct from the Sonoran Desert populations.
*Original name - *Xerobates agassizii*

This care sheet is intended only to cover the general care of this species. Further research to best develop a maintenance plan for whichever species/subspecies you are caring for is essential.

The Desert tortoise (***Gopherus agassizii***) is a medium sized tortoise growing to an adult size of 22 - 38 cm (9 - 15 inches) in length. It makes its home in the desert regions of the Southwestern United States and Northern Mexico. The Desert Tortoise is listed internationally as a CITES II species and is federally listed in the United States under the Endangered Species Act. Because of their protected status, it is illegal to collect a Desert tortoise from the wild in Arizona, California, Nevada or Utah without a permit. Contact your state's wildlife agency for information on the permitting procedure as it varies state to state. Such wild collection permits are very rarely granted, so the only realistic way to acquire a Desert tortoise is by adopting one from a state recognized organization or to be given a hatchling from a breeding captive animal. Again, check with your state wildlife agency BEFORE you consider adopting an animal of this species as federal law protects it.



It is unlawful to touch, harm, harass or collect a wild desert tortoise. If you come upon one in the wild **DO NOT PICK IT UP.** When stressed, Desert tortoises expel the contents of their bladders as a last ditch defense measure. This loss of their water reserves can easily doom the animal to a slow death from dehydration. Desert tortoises are under extreme pressures in the wild. The combination of chronic upper respiratory tract disease (URTD), the explosive raven population which is believed to be accounting for the death of up to 50% of all Desert tortoise hatchlings, and habitat loss are the three major reasons for the severe population decline in wild ***G. agassizii.***

HOUSING DESERT TORTOISES INDOORS - As there is no legal trade in Desert tortoises, it is very rare that one would be held outside its natural range. Because of this there should be almost no reason to have to house one indoors. Occasionally this does become necessary though, especially with hatchlings. In the event that outdoor accommodations are not practical, predator safe, or are environmentally unsuitable, indoor facilities may become necessary.

The most common form of indoor accommodation for small or medium sized Desert Tortoises consists of a "turtle table'. To all appearances this looks like a bookshelf unit flipped onto its back. A reasonable size habitat for a hatchling is 2 feet by 3 feet (60 cm by 90 cm); as the animal grows the size of this habitat should be increased. Into the bottom of this "turtle table" holes can be cut to allow for the sinking of food and water containers flush with the surface for easier animal access.

The water area of the habitat should be large enough to allow the tortoise to soak in if it wishes - it must also be shallow enough to protect it from drowning. Photographic developing trays work well for this with larger specimens. While it is very rare that a Desert tortoise would come upon standing water in the wild, our inability to perfectly duplicate the microclimate inside a burrow necessitates the provision of a water source. As a substrate, in the dry portion of the environment grass hay or Orchard grass hay works well. Desert tortoises are very sensitive to excess humidity and hay protects against this as it does not "hold" humidity. Grass hay also provides supplemental food. Diligence in removing wet or spoiled hay must be practiced. As an alternative to hay and to more closely mimic their natural habitat, a mixture of 50% clean topsoil without herbicides, fertilizers or other additives and 50% playsand may be used. As waste products will be more difficult to detect with such a substrate it is recommended that if using this soil mix that one replace all of it at regularly scheduled intervals such as every 6 weeks or so.

In one corner of the environment a 100W spot lamp should be positioned to provide artificial basking facilities. This should be positioned to provide a basking spot of 95 degrees F (35 C) or so 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 synthesis (needed in calcium metabolism). If preferred to this lighting arrangement a Mercury vapor bulb may be used that fulfills both heat and UV requirements. While Desert tortoises can handle cool weather quite well, cold combined with wet conditions will result in respiratory distress, especially in animals that have suffered from prior cases of URTD. As they are burrowing animals they should be provided with a dark, dry retreat. There should be a hide box located in the corner away from the basking spot to provide the animal with this retreat.

OUTDOOR HOUSING - Predator proof outdoor habitats offer many advantages over indoor accommodations and should be seriously considered as an option during warm weather. Since these tortoises burrow, the perimeter should have sides extending well below the surface of the soil. This species does not do well in areas of high humidity and rainfall. If they are to be kept in such areas, provision must be made to ensure that a large portion of their environment does not become overly wet through the use of landscaping and proper drainage. Many keepers have found that it is advisable to construct an artificial burrow for their tortoises to mimic their natural environment. Some form of outdoor housing for much of the year is **vastly** preferred over strictly indoor housing.

DIET - A high fiber, low protein, and calcium rich diet will ensure good digestive tract function and smooth growth. Desert tortoises are prone to pyramiding or "stacking" of the scutes as well as bony imperfections. Over reliance upon 'supermarket' greens should be avoided. In general supermarket greens have been cultivated to appeal to human tastes; this tends to result in a "green" that is both high in sugar and low in fiber.

Diet:

- Cacti (spineless prickly pear/ opuntia pads)
- Grasses (Bermuda grass or Orchard grass)
- Assorted weeds
- Leafy greens (dandelions, endive, grape leaves etc.)

Additional calcium supplementation is essential. Powdered calcium can be sprinkled all foods. 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 required, is also highly recommended not only for the calcium but also to maintain proper beak growth. Regular supplemental use of vitamins and mineral complexes is encouraged.

MEDICAL – Desert tortoises are **extremely** susceptible to disease, in particular URTD, which is believed to be caused by *Mycoplasma agassizii*. Specific tests have been developed at the University of Florida to check for this organism in your animal. If one wishes to maintain a group of CDTs, each animal should be tested in order to determine its mycoplasma status. Positive and negative animals should **NEVER** be mixed. It is believed by many that the URTD that is causing a massive die off of wild desert tortoises originated in captive populations that were released after contact with exotic tortoises. For further information on mycoplasma, please refer to: http://www.vetmed.ufl.edu/sacs/wildlife/URTD.html

This species should **NEVER** be mixed with any other species of turtle or tortoise. If you are maintaining animals with known respiratory disease, be sure to use extreme caution to prevent cross contamination with other chelonia in your collection.

This is a rather obstinate species and males cannot be housed with other males. Combat will ensue and if flipped over in warm temperatures, there is a good chance if this is not caught and remedied early on that the loser of the battle could expire from hyperthermia and dehydration.

This species hibernates in nature, after careful research and provision of a cool dry location this can be reproduced for your tortoise.

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. 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.

World Chelonian Trust
www.chelonia.org
685 Bridge Street Plaza PMB# 292
Owatonna, MN
55060