

Chaco Tortoise – *Geochelone chilensis* (GRAY 1870*) - Chris Tabaka DVM and Darrell Senneke

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*Geochelone chilensis donosobarrosi***

*Geochelone chilensis petersin***

*Initially designated as *Testudo* by Gray - placed in *Geochelone* (PRITCHARD 1967)

** *Geochelone chilensis donosobarrosi* and *Geochelone chilensis petersin* are designated distinct species *Geochelone donosobarrosi* and *Geochelone petersin* by (Freiberg 1973) This species/subspecies designation is still unsettled.



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 Chaco tortoise (*Geochelone chilensis*) is a medium size tortoise growing to about 20 cm (8 inches) in length with the largest specimens reaching 23 cm (9 inches). It takes its name from the Chaco regions of Argentina and Paraguay where their range extends from Bolivia east to Paraguay and into parts of Argentina. Their taxonomic name is misleading as they are not found in Chile. It is interesting to note that while they are the smallest tortoises in the genus *Geochelone*, they are also the closest living relative to the giant Galapagos tortoises (*Geochelone nigra*) as determined by DNA analysis. It is determined that this division took place long before the Galapagos islands were colonized from the mainland. The small size of the Chaco is not conducive to “rafting” which is the hypothesized method of the island’s colonization. The dry, rocky natural habitat and dietary preferences of *C. chilensis* is also much more similar to that of *C. nigra* than to either of the other two South American *Geochelone* (*G. carbonaria* and *G. denticulata*).

HOUSING CHACOS INDOORS -

The most common form of indoor accommodation for small or medium sized Chaco Tortoises consists of a “turtle table”. ([How to Build an Indoor Land Turtle Table](#) by David T. Kirkpatrick Ph.D) 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. For a large adult Chaco tortoise the indoor accommodation should be at least 4 feet by 4 feet (120 cm by 120 cm). Into the bottom of this “turtle table” holes can be cut to allow for the sinking of food, water and eventually nesting containers flush with the surface for easier animal access.

Chaco Tortoise - *Geochelone chilensis*

- **Location** - Bolivia - East to Paraguay and into parts of Argentina
- **Habitat** - Arid, rocky regions
- **Size** - 20 cm (8 inches)
- **Diet** - Grass, succulents, weeds
- **Conservation Status** - CITES II
- **Threats** - habitat loss, Pet trade
- **Alternate Names** - N/A



The water area of 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 from drowning. Photographic developing trays work well for this with larger specimens. As a substrate, in the dry portion of the environment grass hay or Orchard grass hay works well. Chacos 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.

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 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 syntheses (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 Chaco tortoises can handle cool weather quite well, cold combined with wet conditions will result in respiratory distress. They must be kept in an area with a dry retreat. There should be a hide box located in the corner away from the basking spot to allow the animal a dim cooler retreat.

OUTDOOR HOUSING - Predator proof outdoor habitats offer many advantages over indoor accommodations and should seriously be considered as an option during warm weather. As these tortoises dig fairly well this should have sides extending beneath the surface of the soil. If they are kept in areas of high rainfall, provision must be made to insure that a large portion of their environment does not become overly wet through the use of landscaping and proper drainage. Due to their propensity to pyramid, 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. Chaco tortoises are very prone to pyramiding or "stacking" of the scutes as well as bony imperfections. Over reliance upon 'supermarket' greens should be avoided.

Diet:

- Leafy greens (dandelions, endive, grape leaves etc.)
- Assorted weeds
- Grasses

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 - Chacos are **extremely** susceptible to disease. Therefore, like any other chelonians, they should never be mixed with any other species of turtle or tortoise, including other South American species.

Rapid beak growth is a common problem in this species. While cuttlebone can help keep the beak growth down, trimmings and shapings will still most likely be necessary at some point. When doing beak trims, one author will put the animal on systemic antibiotics for three to five days before doing the beak trim itself. There have been anecdotal reports of deaths in Chacos shortly after the beak has been trimmed. This may be due to bacteria getting into the bloodstream from the trimmed beak or possibly other causes.

Pyramiding is an extremely common problem in *Geochelone chilensis*, especially animals brought into the United States in the 80s and early 90s. Unfortunately, the only side effect of this problem is not just in the scutes. Abnormal bone growth also occurs leading to animals that are unable to walk completely upright and who's bone structure is imperfect. This is the cause of the following problem in many cases.

One author has found dystocia to be a very, very common problem in this species, particularly for the first ova. He feels that the reason is improper bony growth leading to problems laying the ova. Multiple transplastral egg removal surgeries have had to be performed for first time layers, including one time to remove an egg that was floating free in the coelomic cavity.

Herpes can also be an affliction in this species as well as in others. The following is from Jacobson et al in 1985. "Twelve hundred of 2200 recently imported Argentine tortoises (*Geochelone chilensis*) died over a 3 month period; red-footed tortoises (*Geochelone carbonaria*) imported with the Argentine tortoises and housed together remained clinically healthy (Jacobson et al., 1985)."

While this species does hibernate in nature, in nonnative climates, it is only with very, very careful research of methods used to safely do this that we would attempt this.

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.

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