

The Gopher Tortoise – A Keystone Species

A keystone species is a plant or animal that plays a critical role in maintaining the structure of an ecological community. An ecosystem may experience a dramatic shift if a keystone species is removed. Such is the fate of the gopher tortoise. One of the oldest living species, the gopher tortoise (*Gopherus polyphemus*) is native to the southeast United States. It is considered a keystone species because it digs burrows that provide shelter for many other types of animals.

For those folks who have lived in Highlands County for a while, the gopher tortoise burrow may be a common site. Gopher tortoises prefer digging their tunnels in dry habitats such as the scrubby areas located on the Lake Wales Ridge. The burrow is fairly easy to spot because of the bare, sandy mound with a dark hole, shaped like the tortoise's shell, at its center.

The tortoises are master diggers and often make their burrows from 10- 50 feet long and 3 - 20 feet deep. Their front legs, or forelimbs, are shovel-like and equipped with sharp claws for digging. Their back legs look similar to those of an elephant, which give them strength to push forward and back out of the burrow. These long, underground burrows are a "motel" for other critters that live in the area. The endangered Indigo Snake, gopher frogs, mice, foxes, skunks, opossums, rabbits, quail, armadillos, burrowing owls, snakes, lizards, frogs, toads and other invertebrates live in the burrow with the tortoise.

The burrow is a haven for the tortoise and the other animals that live there because it provides protection from predators and the weather. During drought, freezes, or fire, the burrow is a shelter from the elements above. And when the summer heat begins to sizzle, the animals have a cool place to rest during the day.

Gopher tortoises are herbivores and feed mostly on low-growing plants such as legumes and grasses. They do enjoy the occasional gopher apple, pawpaw, blackberries, saw palmetto berries, and most any other fruit. They get the water they need from the food they eat and rarely if ever actually take a drink of water.

Gopher tortoises are solitary animals except for during breeding season. Each tortoise needs about four acres to live. These critters reach maturity at about 10 -15 years of age. When mature, their shells are about 9 inches long. They mate from February through September. The female will lay from 3 – 14 eggs in a sandy mound close to the entrance of her burrow. The eggs incubate for about 85 days until they hatch. Eggs resemble ping pong balls. The temperature of the sand will determine the sex of the young.

Once the eggs are laid, approximately 90% of the clutch will be destroyed by predators. Less than 6% of the eggs are expected to grow into tortoises that live one year or more after hatching. Once hatched however, the shells of the babies are yellowish in contrast to the dull brown of the adults. Once they mature, the shell begins to turn darker. They begin life at about 1 – 2 inches long and they grow about $\frac{3}{4}$ inch per year.

Unfortunately, many gopher tortoises have been killed as a result of development. Since April 2009, more stringent permitting and relocation requirements have been put in place for

development on gopher tortoise habitat. Hopefully these new requirements will help the animal to survive.

In Florida, gopher tortoises are on the Endangered Species List, categorized as a Threatened Species. Their numbers are dropping mainly because of habitat loss. The fact that they don't mature until they are about 10 and they have a low reproductive rate is also a factor in their future success. Other threats are by people who eat the animal, and those who are hunting rattlesnakes that share the tortoise burrow. Traffic is another major concern for the survival of this creature.

What can you do to help?

- Take steps to ensure preservation of their upland habitats. (Educate yourself on the laws, write letters to elected officials, participate in groups that ensure habitat protection and restoration)
- Protect burrows by not covering them up or building over them.
- Do not pour anything down a gopher tortoise burrow.
- Support stiff penalties for those that harm gopher tortoises.
- Do not keep a gopher tortoise as a pet.
- Do not transport a tortoise out of their habitat.
- If you see a tortoise crossing the road, safely stop traffic and put the tortoise on the side of the road that it was walking toward.