

THE STORY OF TORTOISEVILLE AT THE GREAT OUTDOORS AND ITS NAMESAKE GOPHER TORTOISES

Get to know Florida's only native tortoise

Tortoiseville: About ten years ago a far-sighted resident of The Great Outdoors realized that our community was fortunate to have its own resident population of the increasingly-uncommon Gopher Tortoise. A group of tortoises was found in a small area just off the Dog Walk Cart Path near Baytree Drive, but it was being adversely impacted by heavy equipment accessing the easement for the overhead powerlines. Sandy Juba took action and that area was designated as a "Protected Gopher Tortoise Habitat." In the ensuing years, however, the area was invaded by aggressive non-native plant species that took over and degraded the quality of the habitat for the tortoises.

Then, in late 2021, TGO residents joined forces again to begin reclaiming the Protected Gopher Tortoise Habitat and restoring it for the benefit of the tortoises and the other wildlife that live there. Many hundreds of volunteer hours have been devoted to the project so far ... the dense stands of Brazilian pepper, Guinea grass, and other undesirable plant species have been brought under control, and restoration plantings of beneficial species have begun. The tortoises have already benefitted from these improvements! During this same time period, **TGO NatureScape** was created as a not-for-profit 501(c)(3) educational organization. TGO NatureScape is now leading a team of partners to manage the Protected Gopher Tortoise Habitat and has named the project **Tortoiseville!**

The management and improvement of Tortoiseville is a long-term project that will require a lot more work. If you would like to volunteer to help, or provide financial support, please contact us through **TGONatureScape.org**

What is a Gopher Tortoise, anyway? Tortoises are a group of turtles that live on land. Unlike most of our other turtles (snapping turtles, softshell turtles, box turtles, and river and pond turtles), tortoises do not go into the water, and they stay away from damp and low-lying places. There are five species of tortoises that live in North America, but Gopher Tortoises like those at TGO are the only ones that are found east of the Mississippi River. Remember ... ***All tortoises are turtles, but most turtles are not tortoises.***

Where do Gopher Tortoises live? The range of the Gopher Tortoise includes the southeastern Coastal Plain from eastern Louisiana to southern South Carolina, and south through Florida. Most of them are found in Florida and southern Georgia. Within their distribution range, suitable Gopher Tortoise habitat contains: 1) well-drained sandy soils for digging burrows and nesting, 2) abundant low-growing herbaceous plants for forage, and 3) open, sunny areas with sparse canopy for basking (they are "cold blooded") and incubating their eggs.

In addition to their natural habitats (such as longleaf pine sandhills, scrub oak, coastal grasslands, and beach dunes) they can survive in altered and disturbed areas such as pastures, residential neighborhoods, and powerline easements. At The Great Outdoors, Tortoiseville is a preferred location because of its elevated position and the resulting dry soil where they can burrow easily. There are about

14 tortoises that live at Tortoiseville. We also have several other tortoises in the palmetto flatwoods along the Nature Trail behind the Library, and a few at other scattered locations.

What do Gopher Tortoises look like? Full-grown Gopher Tortoises are 10-15 inches long (average about 12 inches) and weigh 8-15 pounds (average about 10 pounds). As adults, their color is usually light or dark brown or grey, and is influenced by the type of soil that they live in. At Tortoiseville, most individuals are quite dark due to the high level of black organic material in the soil. In contrast, very young tortoises (2-3 inches long) tend to be yellowish or yellow-brown, and then pass through a brown phase, becoming darker as they get older.

Because Gopher Tortoises dig long underground burrows, they have several characteristics that make it easier for them to do so. They have stumpy, elephant-like hind legs and strong, flattened, shovel-like forelimbs covered in thick scales. They have sturdy claws (not sharp) that they use to dig in the soil. Their top shell (carapace) does not have a high “dome” like most other land turtles that do not dig burrows (think Galapagos tortoises).

Males and females look very much alike, but males have a depression on their bottom shell (plastron) whereas females do not. Also, an extension on the front of the plastron is usually longer in males than females. If you see a Gopher Tortoise walking on the ground or sitting in the mouth of its burrow, it is usually difficult to tell if it is a male or female.

What are their burrows like? The opening (mouth) of a Gopher Tortoise burrow is flat on the bottom and round on the top (“half-moon” shaped). The tunnel slopes downward and is big enough for the tortoise to turn around at any point. There may be an enlarged chamber at the end. The sand from the excavated burrow is thrown out by the tortoise, resulting in a “mound” or “apron” in front of the opening. This is where they like to bask in the sun and often lay their eggs.

The length of the burrow can vary widely, depending upon the soil type, how long the tortoise has lived in it, and the depth of the underground water table. Scientists use long probes with cameras on the end to investigate burrows without destroying them. Burrows average 15-20 feet long, and the chamber at the end is usually 6-8 feet below the ground level. However, some burrows have been found that are up to 40 feet long and 10 feet deep! Gopher Tortoises win the prize as “Florida’s Best Excavators”!

The temperature and humidity inside the burrows are very stable year-round, regardless of the season. Consequently, burrows provide protection from extreme temperatures, storms, drought, and fire. Tortoises spend up to 80% of their time in their burrows, especially in the cold winter months. They will, however, emerge to bask in the sun or to forage near the burrow on warm winter days.

Do other animals use the tortoises’ burrows? Yes – lots of them! More than 350 species of animals have been documented using Gopher Tortoise burrows. Most of these come and go from the burrow at different times, but some of the small invertebrates do not live anywhere else! Because Gopher Tortoises alter their environment in a way that helps other species, they are known as a **keystone species**. Those animals that utilize the burrow as a place of refuge or to find food are known as Gopher

Tortoise **commensal species**. Gopher Tortoises are one of the most ecologically-important species in Florida's natural environment!

Most of the commensal species are invertebrates, including beetles, crickets, ticks, scorpions, moths, flies, and other insects. About 50 vertebrates use tortoise burrows, however, including opossums, armadillos, skunks, burrowing owls, several lizards, the gopher frog, and numerous kinds of snakes. Two **Threatened** snake species that regularly use tortoise burrows are the Eastern Indigo Snake and the Florida Pine Snake. Another snake that co-exists with the Gopher Tortoise and regularly uses its burrow is the Eastern Diamondback Rattlesnake. Consequently, you should always be alert when you are near a tortoise burrow, and **never put your hand inside the burrow!**

How do Gopher Tortoises reproduce? During the spring breeding season (March-May), males visit female burrows and court them by bobbing their heads, nipping at their shells, and rubbing against them to distribute pheromones from scent glands on their chins. Between May and July females lay about 6 ping pong ball-sized eggs in the sand of their burrow aprons or in another open, sunny spot. Unfortunately, predation of eggs and hatchlings by racoons, armadillos, crows, and other animals is high ... estimates are that only 1-2% survive. Egg incubation lasts 80-110 days, with hatchlings emerging from the nest between August and October. There is no maternal care of the eggs or young by the adults.

At Tortoiseville there has been reproductive success in our tortoise population in recent years. The presence of juveniles, sub-adults, and mature adult individuals indicates that some of the hatchlings have survived the hazardous first year! We are optimistic that as we continue to improve their habitat, the tortoises will be able to strengthen the population even more.

How long do Gopher Tortoises live? Gopher Tortoises can live a long time, but they are slow to mature, and their low reproductive success rate inhibits population growth. It takes males approximately 10-12 years to reach adulthood, and females grow even more slowly, requiring 10-20 years to mature depending upon local conditions and food availability. They can live 50-75 years in the wild, and even longer in captivity. Some of the older Gopher Tortoises at Tortoiseville have been living at The Great Outdoors since before the first human residents moved onto Sunset Drive in the late 1980's!

What do Gopher Tortoises eat?

Gopher Tortoises are herbivores and feed on low-growing vegetation and herbaceous plants. Some of their favorite foods are broadleaf grasses, wiregrass, prickly pear cactus, wild grape and other vines, blackberry, blueberry, gopher apples, saw palmetto, and many more. They do not have teeth, but cut plant material to eat using sharp ridges on their top and bottom jaws like scissors. They occasionally ingest insects along with the plants they are eating, and they have been observed gnawing on bones, possibly to obtain calcium. Tortoises typically forage within 160 feet of their burrow but will travel farther if food is unavailable. They get most of their water from the plants they eat but will drink water that has pooled following a rainstorm.

Do Gopher Tortoises bite? NO! ... Gopher Tortoises are very docile and are not aggressive in any way. While some of Florida's other turtles, such as snapping turtles and softshell turtles, can inflict a serious

bite, Gopher Tortoises pose no threat. However, because they are a protected species, you should not pick them up or handle them.

Are Gopher Tortoises Endangered? In Florida the Gopher Tortoise is designated as a *Threatened species* by the Florida Fish and Wildlife Conservation Commission (FWC). It is against the law to kill, harass, or destroy Gopher Tortoises, their burrows, or their eggs. Any construction, land clearing, or other activity that does any of those things is allowed only after obtaining a State-issued permit. Those permits often involve substantial financial costs, include complicated relocation procedures, and usually require the mitigation of negative impacts. It is better to avoid impacting them than to capture them and establish them elsewhere.

The greatest threat to the long-term survival of the Gopher Tortoise is loss of their habitat. Think about where Gopher Tortoises live ... high, dry land with sandy soil. What else goes on in those areas? Home building ... road construction ... farming ... shopping areas ... essentially everything associated with growth in Florida has a negative effect on Gopher Tortoise habitat. That is why TGO NatureScape is doing what it can to protect the tortoises in our community and to improve their habitat here.

Because Gopher Tortoises are protected in Florida, handling or relocating them is illegal unless conducted under a valid permit issued by the FWC. An FWC permit must be obtained before disturbing any burrow or impacting any tortoise. If you see a Gopher Tortoise crossing a busy road, FWC allows you to move it across the road in the same direction it was headed **if it is safe for you to do so**. Do not move the tortoise to another location, take it home, or even put it in your car. Any of those activities would constitute illegal possession.

Looking ahead: In order to ensure the long-term survival of Florida's Gopher Tortoises, the FWC has adopted a *Gopher Tortoise Management Plan* to address threats to the species and to define a State-wide program of protective actions. In light of Florida's continued rapid population growth and development, it remains to be seen if that plan is adequate, or if additional steps will need to be taken. In the meantime, TGO NatureScape and its partners in The Great Outdoors will continue to work hard to improve the habitat for Gopher Tortoises here, and to ensure the continued growth of the tortoise population within our community. If you would like to volunteer to help with this effort, or provide financial support, please contact us through **TGONatureScape.org**