

Nature Notes

...from Sharon

The gopher tortoise is a threatened and protected species in Florida, belonging to a group of land tortoises that originated in western North America nearly 60 million years ago. They are considered a keystone species because they are the backbone of the plant and wildlife community in which they live. The gopher tortoise eats plants and disbursts seeds, thereby producing plants that are important food sources for other animals. Burrows have been known to shelter over 300 different species of animals—not all at once. Animals recorded using burrows for refuge are frogs, snakes, birds, mice, spiders, crickets, lizards, burrowing owls, rabbits, etc. These "commensals" use burrows to escape predators, adverse weather conditions, and fire. A burrow is usually only inhabited by one tortoise at a time. Burrows are 30-60 feet in length, with a slight slope of approximately 30 degrees. The gopher tortoise digs down until it comes to the water table and makes a living cavity just above that...which helps regulate temperature in a burrow. A tortoise will build from one to 10 burrows in a lifetime. A gopher tortoise locates food by smell and sight and feeds on low-growing plants such as cactus, flowers, grasses, and even poison ivy. Their home range is from 2 to 5 miles and may take up temporary residence in other burrows, for better food sources. They have no teeth, but have powerful jaws. They can live 60-100 years. They reach sexual maturity in 10-20 years, when the shell reaches about 9 inches. Being reptiles, they need sunlight to help regulate body temperatures. They need water every 7-8 days and if there is no water available through rain or other sources, then they get it through their food.

Gopher Tortoise (*Gopherus polyphemus*)



Once a year from May-August and after mating, mature females lay 4-10 eggs on or near the apron of their burrow (the sandy area surrounding the opening). Eggs hatch after approximately 90 days. The eggs are round and resemble ping pong balls. Newly hatched gopher tortoises are about 1.5 to 2 inches long. Young may linger around the burrow

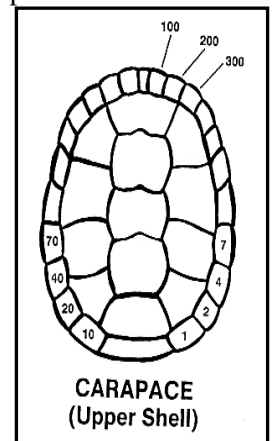


for a time, but are on their own for food—the mother does not take care of the young. Sometimes the young can become disoriented and end up on the beach. The one on the right was found by a visitor and was relocated more inland by a ranger. Growth is slow and may be less than 1 inch per year. Sex of the tortoise is determined by the temperature of the nest. Near sexual maturity, you can start to tell differences between males and females. Males have a concave plastron (underside of shell). The males also have a much longer gular scute—the bony protrusion located just under its neck.



When challenged by another male, they use this to jostle and may even flip their opponent over on its back. Adults can get up to 15 inches in length. The front legs are broad and flat like a shovel and their hind legs are elephantine—elephant-like. The shell is actually bone. Their backbone and ribs are fused to the shell, which is covered in scutes made of material similar to your finger nails. Some say the rings on the scutes can indicate the age of the tortoise.

Currently, there is a research project going on in the Preserve to determine the distribution of gopher tortoise burrows and locations. Each burrow located was given a number (note an orange flag near burrows) and adult gopher tortoises were given special markings during the census. As of August 28, there were 549 burrows located and 32 gopher tortoises marked. Researcher Margie Hamilton's best guess puts projected burrow count at 650. With 100-125 being abandoned, she puts total park population around 300-350 gopher tortoises. The special markings are in accordance with FWC regulations, whose numbering system is shown at the right. Tortoises were marked by drilling holes in one or a combination of the eight rear-most marginal scutes (the four right ones and the four left ones) and the three right-front marginal scutes. The system is additive; e.g., tortoise #14 would require the drilling of the first scute left of the rear marginal and the third scute right of the rear marginal. When you see a gopher tortoise in the Preserve, notice if it has drill marks, then figure out its assigned I.D. number. In the near future, we may be asked for I.D. numbers and locations of gopher tortoise sightings.



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