

Sonoran Desert Tortoise



Gopherus morafkai

Identification

The Sonoran Desert tortoise (also known as the Morafka desert tortoise) is found in the Sonoran Desert, east and south of the Colorado River in Arizona and into Mexico. The Sonoran and Mojave Desert tortoises were once considered the same species but are now recognized as distinct species in different geographies. There are some hybrids where the two deserts meet in northwestern Arizona. They are found primarily between 900-4,200 ft/275-1,280 m in elevation. Sonoran Desert tortoises have high domed shells that are brown with patterned growth lines (the bottom shell is yellow). Their front legs are flattened for digging and have scales, while the back legs are stocky. Males have visible throat shields. Adult Sonoran Desert tortoises grow to be 8-15 in/20-38 cm long from shell tip to tip. Adults can live to be over 50 years old and have high survivorship once they reach adulthood (92% of adults survive from year to year), though young tortoises are easy prey. Sonoran Desert tortoise are a state protected species in Arizona and as federally Threatened in Mexico.

Observation Tips

Sonoran Desert tortoises are most active when temperatures are between 79-86 ° F /26-30 ° C. They are most visible during mornings as well as in spring and late summer, especially during monsoons and rain. Otherwise, they spend most of their time sheltering from the sun in rocky crevices and caliche caves. They also brumate, a lethargic condition similar to hibernation, in underground dens in winter, starting in October, though some are active year-round in good weather. Breeding season is July through September. Every 1-2 years females lay on average 4-6 eggs and as many as 12 eggs in late spring, which hatch in September and October.



Photo credit: [AZ Game and Fish/Flickr](#)

Interesting Fact

Sonoran Desert tortoises eat a wide variety of wildflowers, grasses and cacti. However, they will also occasionally eat insects, especially when young. Some have even been observed scavenging road-kill lizards. Additionally, Sonoran Desert tortoises eat soil with calcium carbonate for nutrients.

Ideal Habitat

Sonoran Desert tortoise habitat is desert scrub on the rocky hillsides and alluvial fans in the Sonoran Desert in Arizona and Sonora, Mexico. Generally slope within tortoise habitat was > 20% and often >40%. Ideal habitat in Arizona includes rocky outcrops, alluvial fans, creosote shrublands, paloverde, saguaro, or mixed cactus communities, and some desert grasslands. The habitat in Mexico includes more thornscrub, forest, and woodland. The best habitat has high plant species diversity. Any habitat must have shelter for the tortoises, including loose sandy loam soil (with some gravel or clay) for digging burrows below rocks, vegetation, and on slopes. Therefore, shrub cover is generally 10-30%.



Range map provided by NatureServe

Management Activities that Benefit Species – Best Management Practices (BMPs)

Maintain intact high-quality desert grasslands and scrub. Manage grazing, especially by sheep, as heavy unmanaged grazing can also result in trampled burrows and even injured tortoises. Preserve high quality desert tortoise habitat where possible and create firebreaks to prevent fire from spreading into and across desert tortoise habitat. Add tortoise fencing to heavily utilized roads and drive cautiously to prevent tortoise deaths.

Management Activities to Avoid

Because of the disease threat, do not allow the release of domestic tortoises in desert tortoise habitat. Avoid direct killing, disease from handling, and vehicle collisions from roads and off-road vehicles. Avoid and prevent destructive uses, such as development and off-road vehicles. These activities can further degrade habitat by introducing nonnative species and have the potential to start wildfires.

Other Species that Benefit from Similar Habitat Management

A wide variety of species benefit from the Sonoran Desert tortoise habitat, including use of their burrows. Some of these species are ground squirrels, pocket mice, kangaroo rats, woodrats, jackrabbits, desert cottontail, skunks, kit fox, burrowing owl, Gambel's quail, poorwill, roadrunner, desert gecko, desert iguana, desert spiny lizard, western whiptail, and various snakes and insects. Some species also prey on young tortoises, including ravens, Gila monsters, some snakes, as well as mammals such as grey foxes and mountain lions.

Other Resources

DesertUSA. [Desert tortoise.](#)

NatureServe. 2021. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. [Gopherus morafkai.](#)

Tucson Herpetological Society. [Sonoran desert tortoise.](#)