

# The Threatened Desert Tortoise

## Life History

The desert tortoise is the largest reptile and the only wild land tortoise found in the southwestern United States. The tortoise occurs in southern Nevada, western Arizona, southeastern California, and northwestern Mexico. Desert tortoises are typically found in creosote bush, cactus and shad scale scrub, and Joshua tree woodland habitats below 5000' elevation.

Tortoise populations are patchily distributed and densities range from a few per square mile to 200 per square mile. A tortoise will live in the same general area of less than one square mile during its lifespan of 50 to 100 years. This slow-moving desert reptile ranges in size from 2 to 15 inches long and is soil colored. Because of their color and shape, tortoises can be very difficult to see.

There are several clues that can be used to tell male and female tortoises apart. However, only tortoises greater than seven inches long can be sexed reliably. Males tend to be larger than females, have a longer tail, have longer upward curving gular horns, have larger chin glands, and have a concave plastron (bottom portion of shell).



Tortoises are well adapted to their desert environment and spend up to 98% of their time in burrows they dig. Burrows are crescent shaped and are most often found at the base of desert shrubs or in wash banks.

A tortoise may excavate and use many burrows during the year. Some burrows are used for only a short period of time and others may be used for several years. Some researchers believe that some winter dens on the Beaver Dam Slope in Utah may be 5000 years old. Many mammals, birds, reptiles, and invertebrates utilize tortoise burrows. Burrows and tortoises are most often found on valley floors and slopes, but they may also be found on the less precipitous slopes and ridges of desert mountain ranges.

Besides burrows, and remains; another method that biologists use to determine if tortoises exist in an area is the presence of scat (feces). Fresh scat is dark brown or black, but turns gray as it weathers. Scat length varies, from one half to four inches, depending on the size of the tortoise. Scats usually contain coarse plant fibers.

Tortoises are inactive from mid November until February. The activity period for desert tortoises is from March until late October when they usually spend part of each day above ground. Tortoises are especially active during warm days when it is overcast or raining, when they seek water that collects in natural depressions or in depressions the tortoises dig themselves. Available drinking water is essential to tortoise survival. The diet of tortoises, which are vegetarians, includes a wide variety of herbs, grasses, cacti, and flowers. Since droughts are common in the desert that tortoises inhabit, they rely on the erratic years of good rainfall and the ensuing growth of palatable plants.



Sexual maturity for tortoises occurs at 15-20 years of age. Breeding occurs in March and April and egg laying is from May to July. Nests are almost always located at the entrance of burrows. Clutches 1 to 14 eggs and a mature female may lay 0 to 3 clutches annually. The eggs are covered with soil and hatch after 80 to 130 days in August or September.

Predators are usually only a problem for young tortoises. Predation is the greatest cause of mortality for hatchlings. Eggs are eaten by Gila monsters, foxes, coyotes, snakes, and badgers. The shell of juvenile tortoises does not harden for five or more years and young tortoises may fall prey to ravens, hawks, eagles, coyotes, foxes, bobcats, badgers, skunks, and feral dogs and cats. Up to 200 young tortoise carcasses have been found under raven perches and nests. While successful predation on adults is rare; coyotes, foxes, bobcats, eagles, and feral dogs have been known to prey on adult tortoises. Habitat quality can affect predation in certain habitats.

## Research

The Bureau of Land Management will be actively involved ongoing research projects that are addressing various aspects of tortoise management and physiology. Research is being conducted on the Upper Respiratory Tract Disease. Research will continue on those topics and on livestock grazing, predator-prey relationships, genetics, tortoise translocation/relocation, and habitat restoration.

## Legal Status

The desert tortoise (*Gopherus agassizii*) in the Mojave Desert was federally listed under the Endangered Species Act of 1973 as a threatened species on April 2, 1990. The tortoise was listed because of direct losses and threats to tortoise populations and habitat. Desert tortoises are directly impacted by increased raven predation on juveniles, collection by humans, vandalism, losses on roads and to off-highway vehicle (OHV) activities, and Upper Respiratory Tract Disease (URTD). Tortoise habitat is lost directly to urbanization, agriculture, road construction, military activities, and other uses. OHV use, rights-of-way, and grazing degrade habitat. All of these activities fragment tortoise habitat, which may reduce a tortoise population below the level necessary to maintain a minimum viable population.

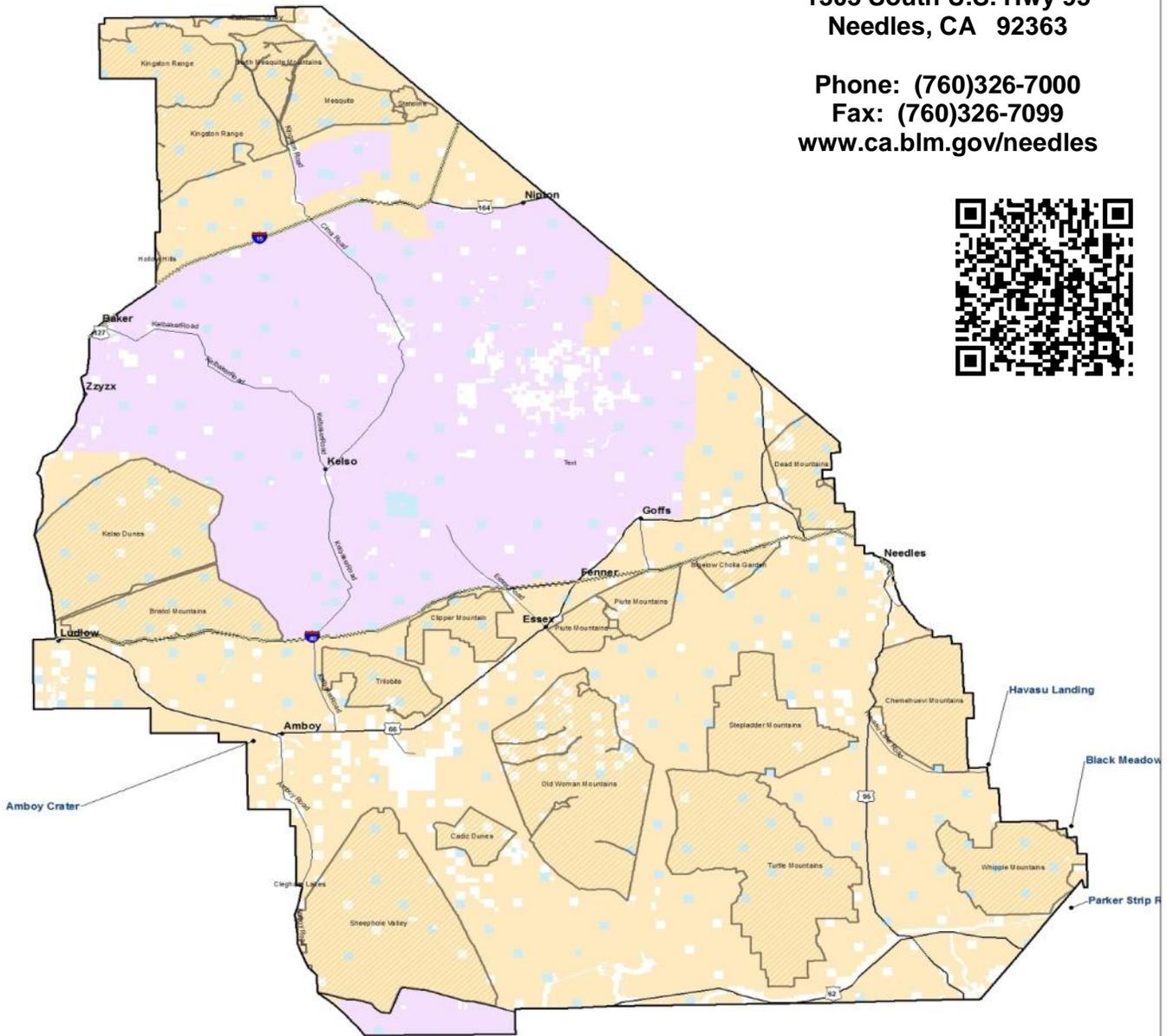
The U.S. Endangered Species Act makes it illegal to harass, collect, or harm tortoises and provides for penalties of up to **\$50,000 in fines and one year in prison for each count**. State laws and Fish and Game Codes also afford protection to the desert tortoise.



# Needles Field Office Boundary

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## OHV Use

Off-highway vehicles (OHVs) provide fun, entertainment, and discovery. However, many of the desert's most attractive and fragile resources can be destroyed if vehicle access is not properly controlled. Resources, cultural and natural, can be unintentionally damaged or destroyed by uncontrolled vehicle use. We all have the responsibility for the proper use of vehicles, so please remember to TREAD LIGHTLY on public and private lands. Stay on open routes of travel

**NO CROSS COUNTRY TRAVEL**

