

United States Department of the Interior



BUREAU OF LAND MANAGEMENT

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The Threatened Desert Tortoise



Legal Status and Threats

The Mojave population of desert tortoise (*Gopherus agassizii*) located north and west of the Colorado River is Federally listed as a threatened species under the U.S. Endangered Species Act of 1973. This Act makes it illegal to harass, collect or harm tortoises. Civil penalties of up to \$12,000, and criminal penalties of up to \$25,000 and 6 months in prison may be assessed for each count. Nevada State law also affords protection to the desert tortoise.

The Endangered Species Act allows for individuals of an endangered or threatened species to be taken incidentally to an otherwise lawfully activity, as long as conditions of the U.S. Fish and Wildlife Service's Biological Opinion are followed. "Take" includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting or attempting to engage in any such conduct. Harm includes significant habitat modification or degradation that impacts a listed species by interfering with breeding, feeding or sheltering behavior.

The tortoise was listed because of direct losses and threats to tortoise populations and habitat. Desert tortoises are impacted by increased raven predation on juveniles, collection by humans, vandalism, losses on roads, off highway vehicle (OHV) activities and Upper Respiratory Disease Syndrome. Tortoise habitat is lost directly to urbanization, agriculture, road construction, military activities and other uses.

Life History

The tortoise occurs in southern Nevada, western California, southwestern Utah, western Arizona, and northwestern Mexico. In Nevada tortoises are found in creosote bush, cactus-shadscale scrub and Joshua tree woodland habitats below 5000' elevation.

Tortoise populations are patchily distributed and densities range from a few animals per square mile up to 200 per square mile. A tortoise will live in the same general area of less than one square mile during its life span of 50 to 100 years. This slow moving desert reptile ranges in size from 2 to 15 inches long and is soil colored. Tortoises can be very difficult to see because of their color, shape and behavior. Well adapted to their desert environment, tortoises spend up to 98% of their time in burrows they dig. Burrows are crescent shaped and are most often found at the base of bushes or in wash banks. A tortoise may excavate and use many burrows. Some burrows are used for only a short period of time while others may be used for years.

Tortoises usually spend part of each day above ground from March to October. Tortoises are especially active during warm days when it is overcast or raining. At these times, they seek water that collects in puddles. Water often puddles in ruts in roads, trails, and attract thirsty tortoises. Available drinking water is essential to tortoise survival. The diet of tortoises, which are vegetarians, includes a wide variety of plants.

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, longer upward curving gular horns, larger chin glands, and have a concave plastron (bottom portion of shell). Sexual maturity for tortoises occurs in March and April, and egg laying is from May to July. Clutches contain 1 to 14 eggs and a mature female may lay up to 3 clutches annually. The eggs are covered with soil and hatch after 80 to 130 days during August or September.

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

Research

There are many on going research project that are addressing various aspects of tortoise management and physiology. Research is being conducted on the Upper Respiratory Disease Syndrome and on health baseline. Research will continue in 1991 on those topics and live stock grazing, predator-prey relationship, genetics, tortoise translocation/relocation, research protocols, and habitat restoration. The Bureau of Land Management will be actively involved in funding and participating in theses research projects. This is especially true in the Las Vegas Filed Office, where the BLM is facility manager of the Desert Tortoise Conservation Center in cooperation with the Nevada Department of Wildlife and the Nature Conservancy.

Tortoise Handling

Handle tortoises carefully and only if authorized to do so! Tortoises can be injured and die from improper handling. Do not approach tortoises unless absolutely necessary, as your presence can induce stress in the animal. When you must approach a tortoise, move slowly and approach from the rear of the animal. Pick up the tortoise gently and keep it level at all times. When handling large tortoises, grasp the animal with both hands, one at each side of the animal. When moving tortoises long distances, a cardboard box should be used. All personnel handling tortoises must wear surgical-type gloves to inhibit the transmission of diseases among tortoises. Not more than one tortoise can be handled with each pair of gloves. Upper Respiratory Disease Syndrome is not transmissible to humans.



A juvenal tortoise one year old