



DESERT TORTOISE & WILDLAND FIRE

DESERT TORTOISES ARE PROTECTED

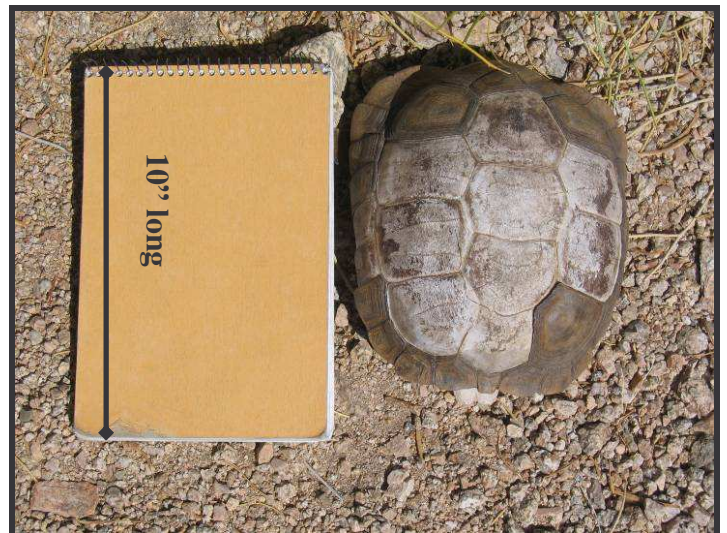
- Desert tortoises (*Gopherus agassizii*) are listed under the Endangered Species Act as a “threatened species”.
- They are protected against any form of “take” - “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.”

TORTOISE FACTS

- They occur throughout the Mojave Desert. The best habitats are at elevations below 3500’ but tortoises can be and have been found outside of that range (park biologists have observed several above 4400’).
- Tortoises are slow growing creatures that range from the size of a silver dollar when they hatch to over 12” long later on in life. They have been known to live about 80 years in the wild.

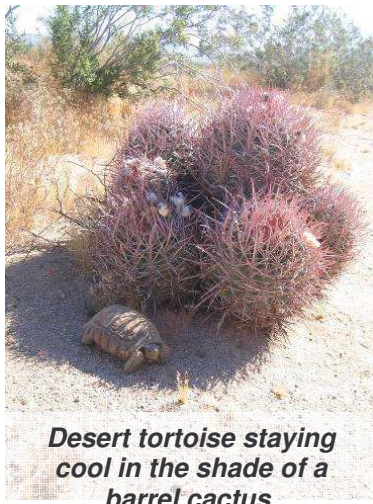


This tortoise is approximately 1 year old.



This tortoise (est. 50 yrs) died a while before this photo was taken. Due to exposure to the elements some of the scutes have come off, revealing the bone shell underneath.

- Desert tortoises are vegetarians and rely heavily on native shrubs and grasses for both nutrition and water.
- They are well-adapted to the extremes of the desert and can withstand ground temperatures as high as 140° F.
- Tortoises excavate and occupy burrows to escape cold & hot weather. They will also utilize shade from boulders, vegetation and even vehicles.



Desert tortoise staying cool in the shade of a barrel cactus.



Tortoise seeking shade underneath a JOTR Park maintenance truck.



DESERT TORTOISES AND WILDLAND FIRES

- Tortoises can be impacted by wildland fires and fire management activities in three ways:



Direct

Slow moving tortoises are very vulnerable to heat and smoke generated by rapidly spreading desert fires.



Operational

The activities undertaken to suppress wildland fires can affect desert tortoises in many ways. Some examples are:

- Tortoises can be crushed or disturbed by off-road vehicle travel or line construction.
- Improper food disposal can attract ravens, which are major predators of young tortoises.
- Fingers or unburned areas act as refugia for wildlife during and after a fire therefore burn-out operations of these areas are highly discouraged.



Indirect

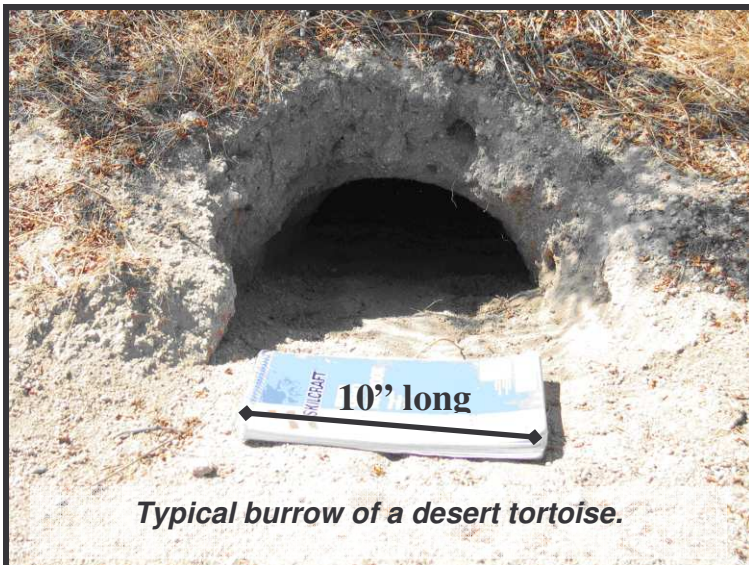
Immediately following a wildland fire, desert tortoises in burned areas may lack easily accessible food and necessary cover from the elements and ravens. In the long-term, frequent wildland fires may “type convert” native vegetation in tortoise habitat to exotic non-native grasses, which they cannot digest nearly as well. This could result in less nutrients and water being available to the tortoises over time.

Fighting Fire in Desert Tortoise Habitat..... Things You Can Do to Help Keep Them Alive

SEVERAL THINGS YOU CAN DO TO HELP MINIMIZE SUPPRESSION IMPACTS TO TORTOISES:

TORTOISE BURROWS – KNOW WHAT TO LOOK FOR

- In the case that off-road travel is permitted and a park biologist or other staff is not available to walk in front of the vehicle or engine – have someone from your crew walk in front looking for tortoise burrows.
- If you happen to find a burrow, direct the vehicle around it by at least 15 feet (as the burrows can be up to 15’ long).
- Providing for your safety first, flag the burrow with the words “tort burrow” or “tortoise” written on it. This helps make it visible to other crews and to the READ.
- Notify the READ as soon as possible with the UTM’s!



The entrance/hole looks like the letter “D” lying on its side.

The “ramp” or apron (delineated by the black line in above right photo) into the burrow is completely flat, descends at a gradual angle and is void of vegetation.

BURN-OUT OPERATIONS

Something to consider:

Fingers or unburned areas are very important as they act as refugia for wildlife during and after a fire. They also provide an instant seed bank for the surrounding area to reveg with native plants naturally.



Burrow will be the size of the tortoise that created it.

Burrows can be found almost anywhere – out in the open, tucked under vegetation, under a fallen Joshua tree, etc.



Tortoise exiting a burrow surrounded by red brome.

LOOK UNDER VEHICLES BEFORE YOU DRIVE!

As we show in the previous photos tortoises have been known to seek shade under vehicles.

They (and other wildlife) may be drawn to water dripping from engines.

If you find a tortoise under your vehicle – call the READ ASAP! They will assess the situation and move the tortoise appropriately.



PACK IT IN, PACK IT OUT

Remove all trash. Food stuff, trash and other items attract ravens.

Ravens are one of the primary predators of baby and juvenile desert tortoise and contributors to the overall tortoise population decline.

By taking your trash with you, you will help minimize raven predation of baby and juvenile desert tortoises in the burned areas.