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Introducing the desert tortoise¹

By AARON AUPPERLEE Staff Writer

BARSTOW - Although the desert tortoise spends more than 90 percent of its life underground, hidden away from the public eye and desert temperatures, residents of Barstow constantly entangle the tortoise in public debates. The tortoise gets involved with everything from an expansion of Fort Irwin to cattle ranching to a proposed composting site near Hinkley. And although people can come face to face with Chewy, the resident tortoise at the Desert Discovery Center on Barstow Road, few have really met the desert tortoise.

Kristin Berry, a research scientist with the United States Geological Survey, has met the tortoises and spent considerable time with them. She has studied the desert tortoise since 1971 and studies the social behavior of tortoises in the Fort Irwin area.

According to Berry, tortoises roamed the Mojave Desert even before the dinosaurs.

"The turtle form is a form that has been highly successful until humans arrived on the scene," she said.

Since humans, disturbances to the fragile ecosystem of the tortoise have depleted their numbers greatly. Great drops in populations have been recorded next to highway areas, she said. Berry could not give an exact number of the tortoises still in the Mojave Desert but said, "There are not as many as there used to be."

In some respects, Berry said, the desert tortoise story is a success story. They have adapted behaviorally and physiologically for living in the desert. The tortoise avoids the extreme heat and cold of the desert climate by staying underground as much as possible. It hibernates during the cold and dry months to save water. The tortoises will come to the desert floor briefly during cooler temperatures or when they know it will rain.

A meteorological expert in its own rite, the desert tortoise can accurately predict when the scarce rain of the Mojave Desert will fall. Before the rain falls, the tortoise will trek to its favorite drinking site.

"Water is extremely important," Berry said. "Even in the middle of courting, if it rains, the females dart for the drinking site."

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The males, she said, have a bit more of a one-track mind.

While drinking, the tortoise will flush out its entire system, emptying its large bladder and then refilling with water. Berry said the amount of water a tortoise can carry depends on its size, but a trip to the watering hole can increase its body weight by 25 to 30 percent.

Similarities between the tortoises may just stop at the water's edge. Berry said she has observed many different social and behavioral traits among the creatures.

"I think each one has its own array of behaviors that are unique to each individual," she said.

Some tortoises are shy; some are curious. Some take on dominating and leadership roles in a population, and some hang back and follow. Berry said some are picky eaters as well.

Fighting among males, another social trait of the tortoise, still puzzles Berry and many other scientists. Berry said not all tortoises like to fight, but some go around looking for trouble. Some fights appear to be playful; some appear to be battles to the death, she said.

Typical fights, Berry said, involve head bobbing, presumably for intimidation, biting and ramming each other with the horn located underneath the neck of the tortoise. A tortoise will ram, wedge its horn underneath its adversary and then flip it on its back. Then, Berry said, the upside down tortoise is sort of helpless until it can right itself.