
Tortoise Tracks

The Desert Tortoise Preserve Committee, Inc.

Summer 2006 26:2



Desert Tortoise at the Desert Tortoise Natural Area
Spring, 2006
Photograph by Kevin Ebi
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DTPC MOVES TO PERMANENTLY REMOVE LIVESTOCK GRAZING FROM 42,000 ACRES OF DESERT TORTOISE CRITICAL HABITAT

In April 2006, the Desert Tortoise Preserve Committee took advantage of recently enacted changes to the Bureau of Land Management's California Desert Conservation Area Plan to initiate the process of formally ending grazing on the 42,000 acre Pilot Knob Grazing Allotment.

Eleven years ago, the Desert Tortoise Preserve Committee partnered with The Wildlands Conservancy to buy out the lessee of the Pilot Knob Grazing Allotment by jointly purchasing 1,360 acres of in-holdings, associated permitted range improvements, certain water rights,

and the allotment grazing lease. The acquisitions were made specifically as a first step to permanently ending cattle grazing in this fragile habitat. Ed Hastey, acting State Director of the Bureau at the time, heralded the buyout as a winning situation for both the tortoise and the livestock grazer.

The Committee and The Wildlands Conservancy acquired the allotment grazing rights in October 1995 with the expressed purpose of retiring the allotment from livestock grazing to benefit desert tortoise conservation and recovery. Although cattle were

Allotment Relinquishment continues on page 2

"MEGADUMP" INITIATIVE PULLED

In mid April, the law company acting for Missouri-based Herzog Environmental announced it was stopping its petition drive to place an initiative on the November 7 ballot to set up the "High Desert Green Energy Park". According to the company's statement "To avoid further confusion, to address legitimate concerns and to proceed to implement a project that is more responsive to the priorities of Kern County residents, we have decided to withdraw the current initiative from circulation".

The measure would have placed a giant trash dump next to the DTNA. Despite the "Green" label attached to it, the proposal faced widespread opposition from almost all sectors of the community.

ALIEN INVADERS TACKLED AT DTNA

Removal of the exotic mustard
Hirschfeldia incana from the
Desert Tortoise Natural Area

Southern California has witnessed a massive proliferation of alien and exotic mustard plants over the last decade or so. These plants bear bright yellow flowers and are commonly seen along roads and on disturbed land throughout the region. The plants produce copious numbers of tiny seeds that can be carried long distances in mud on vehicle tires. These roadside plants can then be sources for seeds that disperse into relatively remote desert when carried along desert washes during rare flooding events as occurred in 2005.

Alien Invaders Tackled continues on page 3

Allotment Relinquishment continued from page 1

last grazed on the allotment in 1995, permanent retirement of grazing in the allotment could only become effective through amendments to the California Desert Conservation Area Plan.

On March 13 2006, the Bureau of Land Management issued its long-awaited Record of Decision on the West Mojave Plan Amendment to the California Desert Conservation Area Plan. These amendments specify that allotment lessees can voluntarily relinquish their grazing rights and that the so relinquished allotments become unavailable for grazing.

On April 27, 2006, the Desert Tortoise Preserve Committee and The Wildlands Conservancy initiated this process of voluntarily relinquishing their grazing rights at the Pilot Knob Grazing Allotment with the understanding that the grazing allotment would no longer be available for livestock grazing.

The Pilot Knob Allotment is classed as an "ephemeral" range type. In an ephemeral allotment, the Bureau authorizes the extent of grazing based on the available annual forbs and grasses. This ephemeral forage production can vary extremely from year to year. Because desert tortoises depend on these same ephemeral forage plants the recently amended California Desert Conservation Area Plan also specifies that ephemeral authorizations will not occur in designated Desert Wildlife Management Areas. This offers further protection to the area's desert tortoises by assuring that any future land use decisions would require extensive environmental review.

The Pilot Knob Grazing Allotment includes 42,000 acres of desert tortoise and Mohave ground squirrel habitat in northwestern San Bernardino County. It is bounded by Cuddeback Dry Lake on the west and China Lake on the north and east.

The topology of the area is very

variable and presents the visitor with impressive and outstanding desert vistas. The allotment includes part of the Golden Valley Wilderness and two thirds of the Grass Valley Wilderness Area.

The habitat supports rare plants including the most northerly population of the Desert Cymopterus and the Barstow Woolly Sun ower. Other features include a lava ow, a rock and cactus strewn ridge known as the Black Hills and a National Historic Register listed archeological site. The allotment boundary lies entirely with the Superior-Cronese Desert Wildlife Management Area.

The Committee is working with the Bureau of Land Management to remove surplus fences and water tanks that were used as part of the grazing operation, and to identify areas of the perimeter fence that should be left in place where it affords protection from trespass by sheep and unauthorized off road vehicle activity.

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The Desert Tortoise Preserve Committee, Inc.

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TORTOISE TRACKER AWARD

The key to the continued success of the Desert Tortoise Preserve Committee is the vision and dedication of numerous volunteers and professionals. The Committee recognizes some of these contributions during the Annual Banquet by awarding certificates, photo plaques and the Golden Tortoise Award. This year a new award was instituted. The Tortoise Tracker award is an engraved walking stick given to recognize an individual who has contributed to the goals of the committee over a number of years and often in many ways.

Our first Tortoise Tracker awardee is Bob Parker, a biologist in the Bureau of Land Management Ridgecrest Field Office.

Bob has worked with us for nearly 20 years. Each year he helps coordinate the spring and fall work parties, arranges for supplies and equipment, and works along with the volunteers.

Bob has been instrumental in obtaining BLM funding to help support the naturalist who meets spring visitors on the DTNA. He often coordinates the DTPC BLM Ridgecrest annual coordination meeting. In addition, Bob has participated in a number of tortoise population surveys and other research projects that enhance the management of desert habitat and wildlife.

SPRING WORK PARTY REPORT ELLEN MOE WORK PARTY PARTICIPANT

My daughter Minda and I spent a great weekend in the Mojave Desert at the Desert Tortoise Preserve Committee's spring work party

Minda and I left Los Angeles at 6:30 AM Saturday, April 1st and drove through rain. However, once we approached Palmdale, we were greeted by a fantastic rainbow and the rest of the weekend was clear.

We met a small group of volunteers at the Desert Tortoise Natural Area, near California City. Perhaps the threat of rain dampened the turnout, and we were told that the turnout of volunteers was a bit less than previous work parties.

We spent a short time helping clean the information kiosk. While the others headed off to work on placing signs along the fences, Minda and I were treated to a short hike and tour by the DTPC Director, Michael J. Connor while we waited for stragglers to arrive. He was able to locate a wild female desert tortoise (#599) sunning just outside of her burrow.

We bought a bunch of t-shirts and note cards and then followed Mike across the desert to Blackwater Well on the Pilot Knob Allotment. The DTPC purchased this cattle ranching operation in 1995. Since then, they have been working to help return the area to a more natural state since it is

within desert tortoise Critical Habitat in the central Mojave desert.

Although the group was small in size, the spirits were high and quite a bit was accomplished. Spending time with Mike was fantastic. He has accumulated a wealth of knowledge about the desert tortoise and the Mojave. Since this was my first experience with this group, he patiently answered my many, many questions.

In addition to spending some time working, I hiked about a bit checking out the local rocks, my other new hobby. We also took a short drive north to an impressive lava flow and spotted Chukars, black tailed hares, bunnies, kangaroo rats, ground squirrels and a wide variety of native Mojave plants.

I highly recommend that any CTTC members that haven't been to the Desert Tortoise Natural Area try to get out there one weekend before the end of June.

There weren't many wildflowers the Work Party weekend, mostly just goldfields. But spring is the best time of year to see a desert tortoise in the wild.

Minda so enjoyed the trip that she volunteered us for the fall work party. Hopefully, the nights won't be quite as cold - we woke up to find frost on the windows of our Jeep.

Alien Invaders Tackled continued from page 1

Recently, the exotic mustard, *Hirschfeldia incana*, was found at locations within and around the DTNA. The mustard is particularly prevalent along Cache Creek where the wash passes through the DTNA's southwest corner.

The Committee hired Eremico Biological Consulting to tackle the first assault on these pesky plants. During the initial effort, 5,410 Mediterranean mustard plants, weighing nearly 1,500 kilograms were removed.

Eliminating exotics from desert tortoise habitat is extremely important for a number of reasons. These plants com-

pete with other native plants for scarce resources while typically being of lower nutritional or ecological value to desert tortoises. Alarmingly, when the plants dry out they create fuel for fires. Given their penchant for growing along roadsides where sparks from vehicles or a carelessly-tossed cigarette butt could trigger a blaze, they create the perfect conditions for an ecological disaster to occur.

During the weed removal effort, the western and northwestern boundaries of the DTNA were assessed for additional infestations. Mediterranean mustard was found throughout Cache Creek. Tumble

mustard (*Sisymbrium altissimum*) was scattered throughout the area but was concentrated along the boundary fence in Section 18. Russian thistle (*Salsola tragus*) was mainly concentrated along the western edge of Section 5. Both of these species were identified as having the potential to infest the interior sections of the DTNA, if left unchecked, and were also recommended for eradication along with the Mediterranean mustard.

Given the persistent, insidious nature of these alien plants, the Committee expects to be in the weeding business for many years to come.

UPDATE ON THE 2006 VISITOR SEASON

This year's Naturalist was retired BLM Ranger Ed Patrovsky. DTPC volunteer and former Naturalist Chuck Hemingway filled in for the naturalist on his days off. During the period March 16-June 5, 2006 there was an on-site presence for 72 days.

Visitation was down from the previous year reflecting the lower rainfall and the resulting lesser wildflower display. Paradoxically, it rained on several of the typically busy visitor weekends.

Visitors saw desert tortoises frequently until the latter half of May, and nearly half of the DTNA visitors saw at least one during their visit.

Many of the tortoises seen were local residents seen in previous years. However, at least 4 individual juvenile tortoises were observed by visitors and staff.

The Naturalists hosted several large tour groups, including docents from the Oakland Museum of Natural History, students from Citrus College, Redlands University, and Porterville High School, and the Ridgecrest Girl Scouts.

BLM Law Enforcement Rangers visited the DTNA twice during the season, both on the same day in April. A California Department of Fish and Game Warden also visited the DTNA during April, and exchanged information with the Naturalist. 2 BLM biologists participated in the DTNA work party in March, and provided materials and equipment for the Naturalist. BLM also provided a portable radio in case an emergency contact needed to be made.

ATTEMPTED RELEASES OF DESERT TORTOISES AT THE DESERT TORTOISE RESEARCH NATURAL AREA, 1989-2006

by Michael J. Connor

The Desert Tortoise Preserve Committee has staffed naturalists at the Desert Tortoise Natural Area each spring for the last 18 consecutive years.

The naturalists perform a number of duties. These include providing interpretive and educational services, providing support for DTPC activities, collecting data on visitors, monitoring visitors and wildlife, and reporting.

The naturalists are stationed at the DTNA during prime visitor periods. One of their monitoring tasks is watch for release or collection of desert tortoises.

The desert tortoise was listed as threatened under the Endangered Species Act in part because of the threats posed by diseases such as Upper Respiratory Tract Disease (URTD). The latter disease results from infection with one of several *Mycoplasma* species. The infection spreads through direct contact. There has long been concern that release of infected tortoises has contributed to the spread of URTD and other diseases.

Table 1 below and across, summarizes the naturalists observations of tortoises being brought to the DTNA for the years 1989 to 2006. We have compiled this

data in one place because it may be useful in making management decisions. The naturalists reports are one of the few available sources of such information.

Captive tortoises were brought to the DTNA in 1989, 1991, 1992, 1994, 1996, 1997 and in 2004. The 2004 incident, the only one in the last 10 years, was a captive found in California City and brought to the DTNA specifically to give to the Naturalist.

Most of the tortoises that the naturalists observed being brought to the DTNA were wild tortoises. While most were locally caught, some had been brought from some distance away. This is of significance because the latter animals could be from genetically different populations as well as being potential disease sources.

In 2005, which was a record setting wet year in the Mojave Desert, eight tortoises were brought to the DTNA. These were all local tortoises found on dirt roads near the DTNA. In each case, the tortoises were returned to their points of collection. The visitors bringing the tortoises did so with the good intentions of returning an "escapee" back to the DTNA or moving the tortoise away from a hazard.

TABLE 1

Year	Naturalist	Reported Releases
1989	Jeff Howland	4 captive
	Howland, J. M. 1989. Observations and Activities of the Naturalist for the Desert Tortoise Natural Area, Kern County, California, March 12 - July 12, 1989. Desert Tortoise Preserve Committee, CA. 62 pp.	
1990	Shannon Ginn	5 wild.
	Ginn, S. E. 1990. Observations and Activities of the Naturalist for the Desert Tortoise Natural Area, Kern County, CA., March 18 - June 2, 1990. Desert Tortoise Preserve Committee, CA. 37 pp.	

TABLE 1 (cont)

Year	Naturalist	Reported Releases
1991	W. Bryan Jennings & Jackie Gooch	2 wild; 2 captive
	Jennings, W. B. 1991. Observations and Activities of the Naturalists for the Desert Tortoise Natural Area, Kern County, CA March 2 - May 27, 1991. Desert Tortoise Preserve Committee, CA. 40 pp.	
1992	Steve Ogg & Randy Gallant	4 wild including 1 from Kramer Junction; 3 captives
	Ogg, S. and Gallant, S. 1992. Observations and Activities of the Naturalists for the Desert Tortoise Natural Area, Kern County, California, March 3 - May 31, 1992. Desert Tortoise Preserve Committee, CA. 53 pp.	
1993	Jane Kidd & Mercy Vaughn	3 wild including 1 from Edward's Air Force Base
	Kidd, J. 1993. Observations and Activities of the Naturalists at the Desert Tortoise Natural Area, Kern County, California: 1 March through 31 May 1993. Desert Tortoise Preserve Committee, CA. 34 pp.	
1994	Chuck Boland	2 wild; 1 captive
	Boland, C. 1994. Observations and Activities of the Naturalists at the Desert Tortoise Natural Area, Kern County, California: 1 March through 31 May 1994, for the Desert Tortoise Preserve Committee, CA. 38 pp.	
1995	Chuck Boland	2 wild including 1 from Red Rock Canyon; 1 captive
	Boland, C. 1995. Observations and Activities of the Naturalists at the Desert Tortoise Natural Area, Kern County, California: 1 March through 31 May 1995, for the Desert Tortoise Preserve Committee, CA.	
1996	Sonja Norstedt	1 captive
	On-Track Consulting and Research. 1996. Observations and Activities of the Naturalists at the Desert Tortoise Research Natural Area, Kern County, California: 9 March through 31 May 1996. Desert Tortoise Preserve Committee, CA.	
1997	Ken Holmes	1 captive
	On-Track Consulting and Research. 1997. Observations and Activities of the Naturalists at the Desert Tortoise Research Natural Area, Kern County, California: 8 March through 25 May 1997. Desert Tortoise Preserve Committee, CA. 40 pp.	
1998	Karen Randall & Jim Bills	1 wild
	On-Track Consulting and Research. 1998. Observations and Activities of the Naturalists at the Desert Tortoise Research Natural Area, Kern County, California: 12 March through 31 May 1998. Desert Tortoise Preserve Committee, CA. 39 pp.	
1999	Karen Randall & Lou Silva	No releases observed
	On-Track Consulting and Research. 1999. Observations and Activities of the Naturalists at the Desert Tortoise Research Natural Area, Kern County, California: 28 March through 2 May and 8 May through 6 June 1999. DTPC, CA. 27 pp.	
2000	Mark Clark & Lou Silva	No releases observed
	Connor, M. J. 2000. Observations and Activities of the Naturalist at the Desert Tortoise Natural Area, Kern County, CA., March 30 - June 9, 2000. Desert Tortoise Preserve Committee, CA. 30 pp.	
2001	Mark Clark	1 red eared slider
	Connor, M. J. 2001. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, CA., March 16 - May 31, 2001. Desert Tortoise Preserve Committee, CA. 28 pp.	
2002	Mark Clark	No releases observed
	Connor, M. J. 2002. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, CA., March 15 - May 31, 2002. Desert Tortoise Preserve Committee, CA. 29 pp.	
2003	Chuck Hemingway	1 wild? No captive releases observed
	Connor, M. J. and Hemingway, C. C. 2003. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, CA., March 24 - June 19, 2003. Desert Tortoise Preserve Committee, CA. 31 pp.	
2004	Jan Kaur	1 captive given to Naturalist
	Connor, M. J. and Kaur, J. 2004. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, California: March 12 - June 7, 2004. Desert Tortoise Preserve Committee, CA. 31 pp.	
2005	Jan Kaur	8 wild tortoises brought to the naturalist
	Connor, M. J. and Kaur, J. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, California: March 16 through June 7, 2005. Desert Tortoise Preserve Committee, CA. 32 pp.	
2006	Edward Patrovsky	No releases observed
	Connor, M. J. and Patrovsky, E. Observations and Activities of the Naturalist at the Desert Tortoise Research Natural Area, Kern County, California: March 15 through June 6, 2006. Manuscript in preparation.	

Natural History Notes

Forage Preferences and Feeding Patterns By Mark Massar

One of the original ways biologists collected information on desert tortoise diet was by examining tortoise scat. However, scat analysis is very inaccurate because certain species, such as grasses, pass through the digestive tract more readily than others (i.e., herbaceous plants).

Instead, biologists use bite counts, which involve observing a particular tortoise (with binoculars) from dawn to dusk and tediously counting every bite the animal takes and recording the plant species eaten. Based on tens of thousands of bite counts from various tortoises across the Mojave Desert, a clearer picture of the diet of wild desert tortoises has emerged.

Tortoises are strict vegetarians. In general their food consists of winter annuals, summer annuals, herbaceous perennials, grasses, and, to a lesser extent, cacti. Tortoises do not eat desert shrubs such as the ubiquitous creosote bush. Tortoises are very selective in the plants that they prefer.

The specific plants that tortoises prefer are often rather rare in the environment, and tortoises will make deliberate searches in order to find them, often following specific pathways from one preferred plant to another, and



Desert Dandelion

In their search for preferred plants, tortoises will often bypass common species such as this that may carpet the desert in wet years

bypassing other more common and seemingly palatable plants. The majority of the diet of the desert tortoise consists of just a few plant species. Plants in the legume family make up the greatest percentage of their diet, with lotus and astragalus being particularly important species, especially in the eastern Mojave Desert. Surprisingly, tortoises do not prefer the more common annual species such as desert dandelions or Alkali goldfields, although these species can carpet the desert in a sea of color following wet winters.

As it turns out, there is a good reason why tortoises are particular in their food choices.

Most desert plants contain high levels of potassium. Because an accumulation of potassium in the body is lethal, potassium is regularly excreted from the body using a process that is, unfortunately, water intensive. Obviously, desert tortoises need to be experts at water conservation, so they select the few desert plants in their environment that have relatively low concentrations of potassium and relatively high levels of water and protein.

Desert tortoises prefer fresh, green, succulent annuals over dried vegetation. In the western Mojave Desert

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I WANT TO VOLUNTEER

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fresh annuals are available mainly in the spring following the winter rains.

In the eastern Mojave Desert and the Colorado Desert, rains come not only in the winter but also in the summer. This gives tortoises living there two opportunities to eat fresh green plants. During droughts, tortoises generally become less active, staying mostly underground in their burrows and caves.

An alarming trend in the Mojave Desert is the spread of non-native annual plants. This spread is changing the desert in many ways that are jeopardizing the future of the

desert tortoise. Non-native annuals are replacing many of the native preferred annuals.

Non-native annuals make up a very small percentage of the tortoise's diet, although in some places they now make up more than 90 percent of the annual plant biomass. Also, alien annuals promote the spread of wildfires, which in turn creates conditions favorable for the increased spread of alien annuals.

Although the situation appears dire, land managers are beginning to explore options of controlling the spread of alien annuals and reseeding areas with the native annuals that tortoises prefer.

Fall Work Party October 28-29, 2006

A DTPC work party provides a wonderful opportunity to become intimately acquainted with desert tortoise habitat.

Tasks for the fall work party include weeding, fence signing, trail maintenance and trash removal at the DTNA, and final clean up work at Pilot Knob. Work Party attendees staying for both days will be able to enjoy the traditional camp out at Blackwater Well.

If you are interested in joining the work party on one or both days, please register by calling Michael Connor at (951) 683-3872 or sending an E-mail to <dtpc@pacbell.net>.

Visit the DTPC Website for more information:

www.tortoise-tracks.org



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January 27, 2007
Desert tortoise Preserve Committee
Annual Meeting & Banquet

October 28-29, 2006
Desert Tortoise Preserve Committee's
Fall Work Party

DTPC CALENDAR OF EVENTS
