

Tortoise Tracks

The Desert Tortoise Preserve Committee, Inc.

Fall 1998, 18:3

DESERT TORTOISE NATURAL AREA SPRING 1998 - NATURALIST PROGRAM REPORT

This was the tenth consecutive year in which the Desert Tortoise Preserve Committee, Inc. (DTPC) funded a naturalist on site at the Desert Tortoise Natural Area (DTNA). *On-Track Consulting and Research*, of Ridgecrest, California, staffed and supervised the naturalist position.

This past spring, Karen Randall and Jim Bills served as naturalists at the DTNA located northeast of California City in the western Mojave Desert of Kern County, California. Their duties included: recording information about visitors and visitation patterns; educating visitors and answering their questions about desert tortoises, other fauna and flora around the Interpretive Center (IC), and the desert ecosystem; discussing the DTNA and its role in conserving a part of the desert biome; observing the conduct of visitors and taking appropriate action when prohibited activities were observed; recording wildlife sightings, maintaining exhibits along trails, monitoring outhouses for venomous animals, and collecting litter; taking part in DTPC programs such as guided tours; selling DTPC fundraising products, such as T-shirts, patches, tie tacks, and postcards; and in preparing reports.

From 12 March through 31 May 1998, a naturalist was on-site at the DTNA seven days per week, 10 hours per day for 81 consecutive days. Ms. Randall was on duty 73 days and Mr. Bills assisted eight days. Since Ms. Randall lived on-site in the Desert Tortoise Discovery Center (DTDC) motor home, the number of hours when someone was present is actually much higher.

The naturalists recorded 561 groups totaling 1,580 individuals at the Interpretive Center. Of the 297 people (an 18.8% sample of total visitors) who completed a visitor survey form, 87% were from California. There were visitors from fourteen additional states and four foreign countries. Of the 297 respondents, most (71.8%) were first-time visitors. The most common way that visitors learned about the DTNA included word of mouth, books/guides, and road signs. The DTNA was the sole destination for 35% of its visitors. Of the 561 groups, 52 (9.3%) arrived on an off-highway vehicle (OHV). The average length of visit for OHV users was 27 minutes and that for non-OHV users was 1 hour and 26 minutes. Most OHV users would look at the displays, talk with the naturalist at length about tortoises and other wildlife they had seen while riding, and take long walks looking for tortoises.

Visitor knowledge and expectations were varied and diverse. Most visitors had a basic awareness that the tortoise population is in trouble, but were only familiar with a few of the reasons for the decline of the species. Many visitors knew that the desert tortoise is both state and federally protected, but were not sure what exactly the term "protected" entailed. Most visitors used the term "rare," "threatened," or "endangered" interchangeably, and considered these all to simply mean "hard to find" or "uncommon". Some perceived protection as something that only applies to an area that has been set aside.

Almost all visitors were sympathetic to, and expressed concern over, the predicament of wild tortoises. Visitors exhibited complete support of the DTPC's campaign to preserve desert tortoise habitat and the species. Most made a point to mention their appreciation of the DTPC's conservation efforts, and were glad the DTNA existed. In contrast to 1995, no visitor felt that the DTNA "encompassed too much land" (Boland 1995). In fact, several visitors encouraged further land acquisition.

Nine visitor groups arrived with dogs. All of the visitor groups attempted to take their dogs into the DTNA, but were successfully intercepted by the naturalist without incident. All of these visitor groups seemed satisfied with the rationale and reasons for not permitting the entry of domestic pets into the DTNA, and complied with the naturalist's request.

The naturalist encouraged visitors to stop by the Discovery Center before they began their walks. This helped to stimulate their curiosity and interest in the tortoise and other wildlife in the Mojave Desert. This also provided the naturalist with an opportunity to remind visitors how to respect all forms of plant and animal life and to be aware of rattlesnakes.

Contacting visitors again after their walk was beneficial to both the naturalist and the visitor group. It was more reasonable to have them complete visitor survey forms after their walk and it provided visitors with an opportunity to "report back" to the naturalist on their wildlife sightings and discoveries. The visitors appreciated that their observations mattered and were noted by the naturalist. Many visitors returned from their walk with additional questions and often needed help in identification of flora and fauna. The displays and field guides in the Discovery Center library were very helpful to visitors seeking identification of an unknown species.

A total of 118 (21%) visitor groups saw at least one desert tortoise during their visit. The naturalist and visitors observed 10 species of reptiles (including desert tortoise), 25 species of birds, and four species of mammals in and around the IC and within 0.5 miles of the visitor areas.

Visitors that were unable to find a tortoise usually expressed some disappointment, but enjoyed seeing lizards, and snakes, and just walking through the desert. The lack of visible tortoises illustrated to some visitors how dramatic and rapid the population decrease occurred. This was especially true when visitors could remember coming to the desert years ago, when tortoises were much more prevalent.

There were a total of 88 individual tortoise sightings recorded this spring by the naturalist and visitors. The naturalist observed 51 tortoises (42 marked and nine unmarked). Twelve tortoises

were seen in March, 19 in April, and 24 in May. Visitors reported an additional 37 tortoise sightings. A visitor group reported seeing 2 carcasses. No tortoises seen this spring exhibited symptoms of upper respiratory disease (URTD); all seemed healthy and alert.

There were fifteen sightings of rattlesnakes. The sightings were of Mojave and sidewinder rattlesnakes. It was not necessary to move any of these animals, but visitors were made aware of a known location of a snake before they left for their walk.

Ravens were observed 36 of the 81 days a naturalist was present. These sightings were almost always an individual or a pair.

No attempts to collect wild tortoises in the Interpretive Center area were witnessed, although a few individuals inquired about release of wild tortoises into the DTNA. There was one attempt to release a juvenile wild tortoise, which was intercepted. The tortoise was re-released to where it was originally found.

Excerpted from *Observations and Activities of the Naturalists at the Desert Tortoise Research Natural Area, Kern County, California: 12 March through 31 May 1998* (Aug 23, 1998 - draft) prepared by On-Track Consulting & Research for the Desert Tortoise Preserve Committee, Inc. in cooperation with the U.S. Bureau of Land Management Ridgecrest Area Office.

FALL WORK PARTY WEEKEND SCHEDULED FOR NOVEMBER 7 - 8

Saturday, **7 November**, the work party will be at the Desert Tortoise Natural Area and hosted by Board VP Laura Stockton. For more details contact Laura at 805-831-2325 or via email <lstockton@lightspeed.net>.

Sunday, **8 November**, the work party will be at the Blackwater Well ranch site of the Pilot Knob Allotment and hosted by VP Karen Spangenberg. Please contact Karen at 818-766-4327 or via email [Karen Spangenberg](mailto:Karen.Spangenberg) for further information.

Work party volunteers who would like to camp overnight at Blackwater Well on Saturday, the 7th of November, need to contact Karen for details.

FEATURING VOLUNTEERS

Susan Moore - A resident of Inyokern, Susan has been the Products Chairperson for the Desert Tortoise Preserve Committee since the winter of 1995. You may have had the pleasure of meeting and talking with her at a California Turtle and Tortoise Club (CTTC) chapter's annual

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show, at the Desert Tortoise Natural Area, or at several of the local communities' seasonal festivals in California City, Kernville, and Ridgecrest. She has also represented the Committee at annual meetings of the Desert Tortoise Council. Her most recent public appearance and educational outreach program for the DTPC was as a guest speaker at the September meeting of the local Audubon Society in Bishop.

Though her duties as products chairperson include ordering, storing, inventory control and filling your orders for our fundraising items, she points out that her personal goal is primarily to provide the public with information and education about the Desert Tortoise, preservation of its critical habitat, and the DTPC's efforts and goals in regard to both. Interacting with the public, Susan reports, is her favorite part of her involvement with the DTPC.

Susan first became a supporter of the DTPC in 1991, when she and her husband, Peter Woodman, invited their wedding guests to make donations to the Committee in lieu of wedding gifts. She and Peter met when she returned to school for a degree in biology, after a ten year career in the health care field. Though she has worked as a field biologist doing desert tortoise and rare plant botany surveys, she is currently a full time mom who does volunteer work with the DTPC and her son's preschool, and assists Peter with his business, Kiva Biological Consulting.

Products Chairperson has historically been a euphemism for a one-person committee with occasional assistance from others to work at the CTTC shows and community festivals. Susan says she is excited about working closely with new Board member, Rae Packard, to increase the number of and locations for outreach and educational activities and pursue some new avenues for promotion of DTPC's fund-raising products. They hope to gain a more active participation by the membership in delivery of educational outreach programs and/or a speakers-bureau to represent the DTPC to groups requesting programs. In other words, they would like to establish an active multi-member committee. If you have an interest, Susan and Rae want you to contact them by calling 1-800-525-2443 or sending an email to <dtpc@pacbell.net>.

If you haven't yet had the pleasure of meeting Susan, she plans to have a DTPC information booth at the CTTC, Inland Empire mini-show in Chino, October 10 at the Senior Citizens' Center. Come by and tell her what a great job she's doing!

Thank you Susan!

BLACKWATER WELL/PILOT KNOB ALLOTMENT REPORT

Background - In 1995, the Desert Tortoise Preserve Committee, Inc. (DTPC) and The Wildlands Conservancy purchased the livestock grazing operator permit, all range improvements and permits associated with grazing operations at Pilot Knob, including the ranch cabin and structures at Blackwater Well, and the private lands within the Pilot Knob Allotment. The allotment is located 25 miles southeast of Ridgecrest, California, on the east side of Cuddeback Lake adjacent to the Naval Air Weapons Station (NAWS). The Pilot Knob Allotment contains approximately 49,000 acres of public land managed by the Bureau of Land Management (BLM).

The DTPC owns 1,260 acres of unfenced land within the boundary of the allotment. The majority of lands within the Pilot Knob Allotment have been determined to contain "Critical Habitat" for the Desert Tortoise (*Gopherus agassizii*) and its recovery.

In conjunction with the BLM and the NAWS, the DTPC is in the process of establishing near-term and long-term management plans for the allotment. These plans will ultimately lead to a long-term management program to promote recovery of desert tortoise habitat and other cultural and biological resources in the area. There is a complex of National Historic Register eligible archeological sites at and around Blackwater Well. The primary prehistoric cultural resource at Blackwater Well site is a semi-sedimentary prehistoric village complex centered near the year-round water source. Application to the National Historic Register is being completed by the BLM this year. In addition to these cultural resources, approximately 90% of the Grass Valley Wilderness Area (14,000 acres) lies within the allotment.

Since acquisition in 1995, the DTPC has had sole responsibility for land management activities. The intention is to secure permanent retirement of livestock grazing and other affirmative measures to protect desert tortoise habitats and populations. The permanent retirement of livestock grazing in the allotment would only become effective through an amendment to the California Desert Conservation Plan with the acceptance of the West Mojave Coordinated Management Plan scheduled for completion in 1999. As part of the DTPC's contribution to the overall management of Pilot Knob Allotment, the DTPC coordinates the activities of a joint BLM/DTPC volunteer to act as Host/Interpreter at the Blackwater Well ranch complex to protect and maintain the cultural and biological resources of the area as well as to interface with visitors to these public lands.

Host/Interpreter Activities From January 15 through June 15, 1998, Richard Olson and Jimmy Bills served as volunteer Host/Interpreters at Blackwater Well and the surrounding Pilot Knob Allotment. Their duties included maintaining a presence at Blackwater Well/Pilot Knob Allotment, from January 15 through June 15, 1998, specifically during weekend days and holidays between March 15 and April 15; routine inspections and inventory of structures at Blackwater Well and outlying range improvements every two weeks including but not limited to the windmill and pump, ranch house, corrals, barn and water tanks, and keeping a log of these surveys; biweekly reports of visitation, periodic checks of structures and other activities; and a final report with summary and recommendations.

During the three and a half month period from January 15 through April 30, Richard Olson was on-site at Blackwater Well thirty-seven days (approximately one third of the time) including weekends and holidays between March 15 through April 15. The Host/Interpreters cleaned and prepared the ranch cabin to provide suitable living quarters for themselves, maintained structures at Blackwater Well, made periodic checks of range improvements throughout the allotment, interacted with visitors to the area, collected visitation and activity information and filed biweekly reports with the DTPC.

Visitation Visitation to the area was observed on eleven out of the thirty-seven days the Host/Interpreter (H/I) was on-site. Most visitation was from mid-March to the end of April. Only

four groups were observed earlier in the year as El Nino inhibited visitation (7 inches of rain was recorded in nearby Randsburg during February alone).

Weekend days accounted for only 4 out of the 11 days when vehicles and/or visitors were observed or encountered. Total visitation, however, was greatest on weekends with the highest group and person visitation on Sunday, March 15 (4 groups, 30 persons). This was followed by Sunday, April 5, 1998 with 4 groups and 8 persons. Seventeen groups arrived in a total of 56 vehicles. Of these, only 3 were dirt bikes. Trucks, 4x4's and sport utility vehicles were the largest representative group.

The H/I observed a total of 96 visitors to the area during winter and spring. Out of the 17 visitation groups (consisting of one or more vehicles traveling together), the H/I had contact with 14 groups. H/I, Richard Olson had contact with 89 persons or 93% of those who visited Pilot Knob while he was on site. Purposes for visitation were: scouting for a museum trip, participating in the DTPC spring work party, photographing wild flowers, driving through to Barstow, conducting plant surveys, working on a film crew, reconnoitering for hunting season, and dirt bike riding.

Group size ranged from 1 to 45 persons. Most groups consisted of one to three persons. There were no groups with between 4 to 20 persons. Two groups had over 20 persons. The spring work party consisted of 26 persons representing 3 groups (the Desert Survivors, DTPC, and the BLM) and a geology field trip from the San Bernardino County Museum to the Black Hills had 45 participants with 22 vehicles.

Host/Interpreters' Recommendations

- Keep wire around cabin in good repair as well as all wire gates throughout the allotment.
- The cabin roof leaks throughout the structure and needs replacement.
- The windmill pump does not work. It needs to be pulled, rebuilt and the leathers replaced.
- Add an on-site weather station (at least a min/max thermometer, rain and wind gage).

AMERICAN HONDA STUDY SITE RE-SURVEYED IN SPRING

For the first time since spring 1993, the American Honda Study Plot is being surveyed for desert tortoises. For 17 days from April 14 to June 4, a survey of the American Honda Study Plot was overseen under the supervision of California Department of Fish and Game Biologist, Frank Hoover with the assistance of DTPC volunteer and California City resident, Chuck Hemingway, and Bob Parker and Joyce Schlachter, both Wildlife Biologists with the Ridgecrest Resource Area Office of the Bureau of Land Management. Eighty-five percent of the Study Plot was covered at this time. The last complete survey of the study site was conducted in Spring 1993 at the completion of a series of research studies done at the study site. The study site is located in Section 8, Township 31S, Range 38E, in the northwestern portion of the Desert Tortoise Natural Area (DTNA).

In 1988, American Honda Motor Company purchased 6 square miles for a vehicle testing facility in Cantil, California, just northwest and adjacent to the DTNA. Five of the six sections purchased had been used for irrigated agriculture for approximately 40 years and were no longer viable desert tortoise habitat. Section 6, however, had remained undeveloped and was inhabited by desert tortoises. California Department of Fish and Game and American Honda executed an "Agreement for Habitat Mitigation" relating to the desert tortoise giving American Honda permission to relocate tortoises from Section 6 to Section 8 inside the DTNA. Research funds were allocated as part of the mitigation agreement to evaluate the feasibility of desert tortoise relocation as a mitigation tool. Tortoise-proof fencing was established at that time in Section 8 (the American Honda Study Plot) and, supplemental irrigation was added to half the study site to assess whether additional water would positively affect the survival and health of both the relocated tortoises and the original resident tortoise population. Health studies were also completed on the tortoises in Section 8. The square mile study plot has the DTNA boundary fence along the north and west sides. Inside the boundary fence Section 8 is divided into quarter section plots by a double "tortoise-proof" fence (i.e. one inch mesh chicken wire fencing 24" wide with the lower 6" buried). The two tortoise fences are 12 feet apart. Each quarter section as well as the entire section, is therefore separately fenced. The section has a permanent grid system in place and is divided into 100 quadrants. While most of the section is relatively flat, the northeastern portion is elevated and has rough terrain. For this reason the tortoise fences go around this area and it is excluded from the study plot.

Data from the original 1990 research indicated the relocated tortoises were less likely to survive than resident tortoises (tortoises already inhabiting the study plot). The negative impact on survival was most pronounced in the first year after relocation, which was also a very dry year in the area. The survival of relocated tortoises improved in the irrigated half of the study site compared to the survival of relocated tortoises in the non-irrigated half of the study site in the first, driest year. Results indicated the survival of the resident tortoises were not negatively affected by the addition of new tortoises into their range.

Previous to the spring survey this year, Frank Hoover, Chuck Hemingway, DTNA Naturalist Karen Randall, and DTPC Board Member, Karen Spangenberg, made a visit to the study site. The primary purpose of the visitation was to assess the condition of the study plot in general and, in particular, the condition and integrity of the tortoise fences at the study site. In general, the inner-double fence line was well intact along the west boundary, the western half of southern fences, the southern half of the mid-north/south fence, and the eastern half of the mid-west/east fence. Where the inner-double fence is down, silt deposition and undercutting at washes were the primary causes of breaches in the fence lines. The DTNA boundary fence is intact and in good condition except for one location. In the extreme SW corner of the study site, both the DTNA boundary fence and the outer tortoise fence were down, apparently due to a vehicle driving through it. Two T-poles in the DTNA fence were broken off at ground level at this point. At the central intersection and the SW plot corner, off-road vehicle tracks go right through and across the fence where it is down. These tracks (fresh since much spring rain) go all the way along the midway roadway to the east roadway and then turn north within the roadway.

During the survey this spring, there were 30 live tortoises found. Twenty-five had been previously marked from the earlier study. In addition, 5 unmarked tortoises, including 2 juveniles

and 3 sub-adults hatched since 1993, were encountered. The surveyors also found the shell remains of 27 tortoises, most marked from the previous research projects at the study plot. Out of a possible 108 desert tortoises (alive, missing or unknown status remaining from the 1993 survey), the recent survey was able to account for 41 tortoises (38%): 23 (56%) alive and 18 (44%) dead. Eighteen tortoises seen and alive in 1993 were found dead as well as 2 which were considered missing. However, 4 tortoises which were considered missing in 1993 were found alive this spring. Since the study plot was covered only once during the 17 days, it is possible that some tortoises were inside burrows or above ground in an area previously searched by the surveyors. Also since there is a breach in the southwest corner of the tortoise-proof fence, it is possible that some tortoises have moved out of the study site in the past 5 years. The remaining 15% of the square mile study plot will be surveyed at the end of September to complete the project. It is expected that 5 to 6 more tortoises could be encountered.

Most tortoises (85.7%) were found in the morning between 800 and 1159 PST. This is consistent with tortoise activity during hot weather when they come out in the cooler morning hours then go back into their burrows when it warms up. This pattern of activity occurred from the first day of the survey to the last. The weather during this entire period was comparatively cool for the desert at this time of year and tortoises could have been out all day.

The tortoise survey was for the purpose of updating the American Honda Study Plot tortoise roster. There is the possibility of using the study site in the future for additional research projects, in particular, using modular "predator-proof" pens to enhance survivorship of hatchling and juvenile tortoises hatched from local female tortoises for public education and to restock the local tortoise population.

PUBLICATIONS

An article co-authored by Board member, Kristin H. Berry appears in the July 1998 edition (34:3) of the **Journal of Wildlife Diseases**. Titled *Pathology of Diseases in Wild Desert Tortoises From California*, the article documents a study designed to address the types of diseases and associated pathologic changes occurring in wild desert tortoises, rather than the prevalence of disease. It was part of a larger investigation on density of desert tortoise populations. Tortoises from the Desert Tortoise Research Natural Area were included in this study.