



Photo courtesy of Joshua Tree National Park

# Tortoise Times

*Newsletter of  
the Desert Tortoise Outreach Project  
of the Desert Managers Group*

*February, 2008*

## Environmental Education Preparing for the Future

Environmental educational outreach programs offered by desert national parks address the issue of dwindling tortoise populations. At Joshua Tree National Park, for example, education rangers offer in-class and in-park programs that familiarize students with the anatomy, physiology, and behavior of tortoises. The Desert Managers Group, (DMG) a consortium of federal land managers, sponsors a program called the Mojave Max Emergence Contest. Every year thousands of school children from eight counties participate in a guessing game to determine when Mojave Max, a desert tortoise that lives at Red Rock Canyon Natural Conservation Area in Nevada, will come out of brumation, (hibernation in reptiles). The student who guesses the closest date and time to Mojave Max's emergence wins a pizza party for his/her class. The contest promotes awareness of the plight of the desert tortoise. It gives teachers an opportunity to inform their students about the desert ecosystem, and the plants and animals that live there. It also gives teachers an opportunity to discuss major threats that will change the desert as more and more people move into it and use it for recreation.

In-class programs include the middle school program, "Tortoise, Tortoise", which gives students a feel for what wildlife biologists do in the field: individual tortoises are tracked and monitored to get a better understanding of their behavior. Sometimes radio transmitters are affixed to a tortoise's shell so that a researcher can find it over and over again in the field

and check its health. GPS (global positioning system) coordinates are used to record a tortoise's whereabouts, making it easier for a field researcher to track the tortoise in the future. Other programs teach students about the importance of preserving the tortoise's habitat; one of the main threats to its existence is the loss of healthy habitat through development and human encroachment. In a high school program, students are introduced to desert issues, including major threats to the natural environment, in places such as Joshua Tree National Park and other federal lands.

Tortoise kits provide teachers with an assortment of materials that can inspire classroom lessons. These kits can be checked out and used in the classroom over a period of several weeks. They contain puppets, videos, posters, books, booklets, brochures, plant specimens, and curriculum outlines. A newer, updated version of the kits "Tortoise Trunks" - has been developed and is available to teachers, nature centers and other organizations that work with students.

By learning about the desert tortoise in particular, students from preschool through high school are given an opportunity to develop an appreciation and understanding of the broader desert ecosystem. The hope is that as they learn about specific plants and animals, they will begin to care about preserving these species and will form a relationship with them that will inspire them to become future stewards of these fragile and beautiful places and all that thrives therein.

# DMG Partners

## US Department of Defense

Naval Air Weapons Station, China Lake  
Edwards Air Force Base  
National Training Center, Fort Irwin  
Marine Corps Air Ground Combat Center  
(Twentynine Palms)  
Marine Corps Logistics Base (Barstow)  
Marine Corps Air Station (Yuma)

## US Department of the Interior

Bureau of Indian Affairs (Pacific Region Office)  
Bureau of Land Management  
Barstow Field Office  
Desert District Office, Riverside  
El Centro Field Office  
Needles Field Office  
Palm Springs Field Office  
Ridgecrest Field Office  
Fish and Wildlife Service  
Carlsbad Office  
Ventura Office  
National Park Service  
Death Valley National Park  
Joshua Tree National Park  
Lake Mead National Recreation Area  
Mojave National Preserve  
Geological Survey  
National Mapping Division (Menlo Park)  
Water Division (San Diego)  
Western Ecological Research Center  
(Sacramento)

## State of California

Department of Fish and Game  
Department of Transportation  
State Parks, Colorado Desert Sector  
State Parks, Mojave Desert Sector

## California State Counties

Kern County  
Imperial County  
San Bernardino County

## US Department of Agriculture

US Forest Service



# Desert Tortoise Recovery Team

Who is drafting the Revised Desert Tortoise Recovery Plan and what is the Desert Tortoise Recovery Office? The U.S. Fish and Wildlife Service established the Desert Tortoise Recovery Office (DTRO) in 2004 to address population declines and focus on recovery of the species. The DTRO assists in the coordination between managers and research scientists. The DTRO also works with the Desert Tortoise Management Oversight Group in coordinating range-wide issues and works with the California DMG and other local, state, or regional working groups in coordinating issues on tortoise recovery efforts. The DTRO team has many members. In this issue we have profiled three.

**Roy Averill-Murray** has been the Fish and Wildlife Service's Desert Tortoise Recovery Coordinator since December, 2004.



Roy earned his B.S. in Wildlife and Fisheries Sciences from Texas A&M University in 1990 and his M.S. in Wildlife and Fisheries Sciences from the University of Arizona in 1993, where he completed his thesis on estimating density and abundance of desert tortoises in the Sonoran Desert. He worked for the Arizona Game and Fish Department as Desert Tortoise Coordinator from 1995

to 2002, where he directed the state's population monitoring program; conducted research on desert tortoise ecology; and co-chaired the Arizona Interagency Desert Tortoise Team. From 2002-2004, he served as Amphibians and Reptiles Program Manager for the Arizona Game and Fish Department. He has published 10 peer-reviewed scientific papers and book chapters on desert tortoises.

Joining Roy on the team is **Jody Fraser**, who began her career with the Fish and Wildlife Service in the Southern Nevada Field Office in 1998. She graduated from the University of California, Santa Barbara, with a degree in Biology in 1992.

Jody first began working with the desert tortoise when employed with the Nevada Department of Transportation from 1996-1998, where she performed project-specific surveys for tortoises and other sensitive desert species. Her work with the Service has been centered on botanical resources and working with partners to actively conserve threatened species.



**Catherine Darst** is the most recent addition to the Desert Tortoise Recovery Office team. She is stationed in the Service's Ventura, California office as the regional desert tortoise recovery biologist. Cat recently completed a post-doctoral Presidential Management Fellowship



with the Department of the Interior, where she worked in Washington D.C. in science policy and conservation biology. She received her Ph.D. in Ecology, Evolution, and Behavior from the University of Texas, Austin in 2006 with an emphasis in amphibian and reptile biology. She completed her undergraduate

degrees in Ecology, Evolution and English from the University of California, Davis. Cat has published her research in journals such as *Nature*, *The Proceedings of the National Academy of Sciences*, and *The American Naturalist*.

## Coordinator's Corner

This year will be a busy year for desert tortoise outreach. We have applied and received grants from California State Parks/Off Highway Vehicle Commission (green sticker fund) and the National Fish and Wildlife Foundation. The grants will insure another year of outreach projects. Our task list includes maintaining or expanding existing projects and development of new tortoise outreach projects. One project has been completed - the *Public Knowledge and Perceptions of the Desert Tortoise Survey*, by Dr. Jerry Vaske. The survey will give baseline information that can be used to guide future projects, such as public service announcements and environmental education. Dr. Jerry Vaske developed the survey and also presented an overview at the November meeting of the DMG in Ridgecrest.

In 2008 we will continue producing news stories for print media, and publish a new edition of *The Tortoise Times*. Last year we produced radio public service announcements (PSA's). This year we will be producing more radio PSA's and will also develop six TV PSA's. Using the Arbitron rating system it is estimated that last year's radio audience was over 1.5 million listeners. Television PSA's are a new venture. Clark County, Nevada, Desert Conservation Program granted the DMG permission to use footage from a DVD that Clark County developed to support environmental education.

Starting November 1, 2007 the Mojave Max Emergence Contest web page was open for student registration. This

year we hope to have students in all eight counties in our target areas (Inyo, Imperial, Kern, Los Angeles, Riverside, San Bernardino, Orange and San Diego) enroll in the contest. Classroom posters, contest information and promotional items have been sent to a variety of Southern California libraries and educators. A press release about the contest was distributed to DMG membership for release through each members' public information officer to local media.

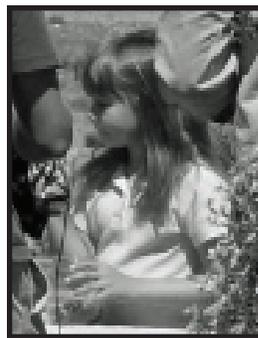


October the National Park Service and the National Oceanic and Atmospheric Administration collaborated on a booth at the California Science Teacher Conference in Long Beach. The booth was staffed by the Desert Tortoise Outreach Coordinator and NPS Environmental Education Specialists. The conference hosted over 3,000 teachers. Many Mojave Max promotional items, brochures and park information were distributed.

Funding is in place. The staff is ready and hopefully 2008 will be a year to remember for desert tortoise outreach.

Anne Staley  
Desert Tortoise Outreach Project Coordinator

## Bindi Irwin Visits Max



Bindi Irwin, daughter of the late *Crocodile Hunter* Steve Irwin, visited Mojave Max, August 2007, at his home in Red Rock Canyon National Conservation Area, Clark County, Nevada. Bindi has her own TV show, *Bindi the Jungle Girl*, broadcast in both Australia and the U.S. Her visit with Mojave Max will be shown sometime in the spring 2008. It is a great

opportunity for the Desert Tortoise Outreach Project- so stay tuned!

# Desert Tortoise Web Site Open

The Desert Managers Group in collaboration with the Redlands Institute and the Mojave Desert Ecosystem Program, have designed and developed [www.deserttortoise.gov](http://www.deserttortoise.gov), an internet based web portal and data clearinghouse designed to provide a one-stop desert tortoise information experience. The site includes sections addressing:

- recovery of the species (groups involved, plans, ongoing planning efforts)
- education efforts (classroom curricula development, Mojave Max contest, tortoise trunks)
- desert tortoise ecology (life history, habitat, threats, land management)
- documents library (geographically referenced studies, papers, plans)
- interactive maps (threats, habitat, static map posters)
- desert tortoise photo gallery
- ongoing projects information
- general information (press articles, FAQs, calendar, partners)



It is the goal of the Desert Managers Group, through this website, to increase public awareness and knowledge of the environmental issues and challenges confronting the desert tortoise. By becoming better informed, it is hoped that the public will become stronger, more effective stewards and more vocal advocates for this endearing symbol of the desert habitat.



## *Desert Tortoise Outreach Project*

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