



### Summer 2011

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### Mt. Charleston Blue Butterfly (*Plebejus shasta charlestonensis*)

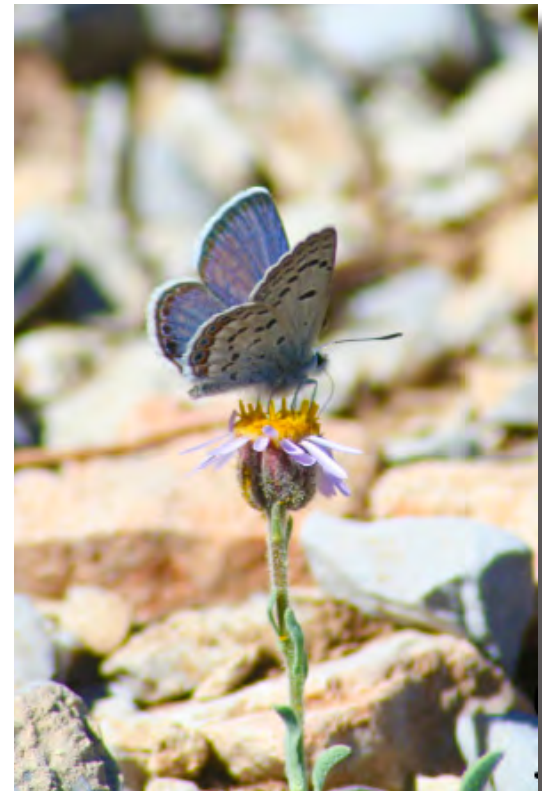
The Mt. Charleston blue butterfly is a subspecies of the wider-ranging Shasta blue butterfly. It only occurs within the Spring Mountains of southern Nevada between 8,000 to 12,000 feet above sea level on Forest Service managed lands.

The small adult Mt. Charleston blue butterflies emerge between July and September. They commonly feed on nectar from Clokey's fleabane and Lemmon's bitterweed, as well as other flowers. When adults are out feeding, males fly low to the ground looking for female mates.

Females lay eggs singly on their host plant, Torrey's milkvetch. Larvae feed on the host plant and may be tended by ants. Ants tend and often protect blue butterflies for a nectar-like substance secreted by larvae called "honeydew." This substance is similar to the substance produced by aphids.

Although the adult Mt. Charleston blue butterfly may only live one or two weeks, it may require two years to complete its life cycle. It is suspected that it may take even longer if weather is unfavorable.

In March 2011, the U. S. Fish and Wildlife Service (Service)



determined the butterfly warranted protection under the Endangered Species Act (ESA), but that adding the subspecies to the Federal Lists of Endangered and Threatened Wildlife and Plants was precluded by the need to complete other listing actions of a higher priority. This placed the butterfly on the candidate list.

The Mt. Charleston blue butterfly is threatened by natural and human-caused habitat alterations, extreme weather events, and climate change. The Service is working with the Forest Service to ensure conservation measures will be implemented to protect the butterfly and its habitat.

## Moving Up The Truckee River



**Erik Horgen, Lahontan National Fish Hatchery Complex Fisheries Biologist, measures, checks the health, and the sex of cui-ui as they make their way through the Marble Bluff Fish Passage Facility. The Lahontan National Fish Hatchery Complex has operated Marble Bluff Fish Passage Facility since its construction in 1976. This year, from mid February until the end of June, the facility passed approximately 900,000 cui-ui into the lower Truckee River.**



Each year, when spring runoff increases water flows, cui-ui (*Chasmistes cujus*) make their way from Pyramid Lake to the mouth of the Truckee River to begin their annual spawning migration.

Cui-ui pronounced kwee-wee, are the largest of the living species of Chasmistes, weighing up to eight pounds. They are long-lived and some have been documented to live over 50 years. They now occur in only one place in the world: Pyramid Lake.

Cui-ui occupy habitat near the lake bottom and generally occur at depths less than 75 feet. They spend most of their life in the Pyramid Lake, leaving only to spawn

in the lower Truckee River when they reach maturity between 6-12 years of age.

Cui-ui once occupied ancient Lake Lahontan, which covered most of northwest and central-west Nevada during the Pleistocene era. This ancient lake diminished

as the climate changed until only fragmented water bodies (Pyramid, Winnemucca, and Walker Lakes) remained.

Cui-ui inhabited both Pyramid and Winnemucca Lakes prior to the 20th century. In 1905, the authorization of the construction of Derby Dam

and canal resulted in diversion of the Truckee River water to the Carson River for irrigation. As a result, Pyramid Lake elevation declined more than 80 feet and water in Winnemucca Lake disappeared entirely in the late 1930s.

This decline in Pyramid Lake elevation caused severe erosion and formation of a delta that prevented cui-ui from migrating into the lower Truckee River to spawn. Because cui-ui is a long-lived species, they were able to survive 19 years (1950-1969) with virtually no reproduction. On March 11, 1967, cui-ui were listed as endangered.

Following the construction of Marble Bluff Dam and Fish Passage Facility in 1976, reduction of water diversions, and the dedication of water for Pyramid Lake, the cui-ui population has increased. This year, with the assistance of Lahontan National Fish Hatchery Complex staff, 900,000 cui-ui returned to their historic spawning grounds.



**American white pelicans gather at the base of Marble Bluff Fish Passage Facility to take advantage of the yearly spawning migration of cui-ui.**

## A Delicate Balance

White pelicans seen gathering on the lower Truckee River or soaring along the shoreline of Pyramid Lake are American white pelicans (*Pelecanus erythrorhynchos*). These pelicans are one of the largest of the pelican species with a wingspan of 110 inches.

The pelicans occurring at Pyramid Lake form one of the largest nesting colonies in the western U. S. and Canada. Each summer over 7,000 pairs of pelicans nest on Anaho Island. In 1930, Anaho Island was established as a National Wildlife Refuge as a sanctuary for birds that nest in colonies, primarily the American white pelicans.

American white pelicans usually lay from two to four eggs per year which are attended by both parents. The young remain in the nest from 17 to 25 days. They begin to fly when

they are approximately 10 weeks old, moving to foraging grounds in the west where they stay until they begin their southward migration.

Each spring, pelicans gathering at the base of Marble Bluff Dam and at the mouth of the Truckee River are an indication that the cui-ui spawning migration is underway. These fish are an important food source to the pelicans, particularly during the breeding season.

The number of fish moving up the river to spawn has a direct affect on the number of pelican chicks raised each year at Anaho Island. The success of the pelicans reproduction is directly correlated to the success of the spawning migrations. If there is a good spawning season for cui-ui, there is high reproduction success for the American white pelicans.

## Desert Tortoise Taxonomic Change

This June, U. S. Geological Survey announced a new study that shows that the desert tortoise, thought to be one species for the past 150 years, now includes two separate and distinct species. The study, which validates previous suspicions that tortoises west and east of the Colorado River were separate species, is based on DNA evidence and biological and geographical distinctions.

The newly recognized species (*Gopherus morafkai*) represents populations of desert tortoise naturally occurring east and south of the Colorado River, from Arizona extending into Mexico. These tortoises have been managed as the Sonoran population of desert tortoise.

In December 2010, the Service determined the Sonoran population of desert tortoise warranted protection under the ESA, but that listing was precluded by higher priority listing needs, placing them on the candidate list.

The originally recognized species (*Gopherus agassizii*) will now only represent desert tortoise populations occurring west and north of the Colorado River in Arizona, California, Nevada, and Utah. These tortoises, managed as the Mojave population of desert tortoise were listed as endangered in 1989 and reclassified as threatened in 1990.

The recognition of Morafka's desert tortoise as a new species will not change the way the Mojave and Sonoran desert tortoises are managed. The range of both



the Mojave and Sonoran desert tortoises remains the same. Status evaluations of each species was conducted independently of each other. Likewise, conservation

actions for both species (populations) have been, and will continue to be, managed separately.



## Building Schoolyard Habitats

Teachers Lynn Clifton (right), from Crestwood Elementary School in Las Vegas, and Janie Lampron (left), from Ober Elementary in Summerlin, NV, plant native Mojave plants in a raised bed for a pollinator garden at CT Sewell Elementary School. Both CT Sewell and Ober Elementary Schools have received Service funding for School Yard Habitat projects. Crestwood Elementary is in the planning process and hopes to have a project in the near future.

These trained facilitators developed and provided Mojave Desert restoration and Great Basin and Sierra Nevada restoration program training to teachers in both southern and northern Nevada this spring.

natural habitats, their studies of science, math and related subjects will be enhanced by experiencing “hands-on” learning outdoors.

These student-driven projects are ecologically sound, enhancing the wildlife habitat and aesthetics of their campuses. Typical projects created through this program include: wetlands, meadows, forests and variations among them based on specific ecoregions. Many projects are planned through multiple phases and become more dynamic over time as children from various classes build upon the existing work of past students.

As part of the Service’s continuing commitment to connecting people with nature, Michelle Hunt, the Service’s Schoolyard Habitat Coordinator, and 12 teachers and partners attended the Earth Partnership for Schools Institute Train-The-Trainer last summer.

The facilitators are hopeful the teachers that attended the training will return to their schools and together, with their students, create a schoolyard habitat project on school grounds that they can use for years to come. By having students transform school landscapes into

## Duckwater Shoshone Tribe Honored As 2010 Recovery Champions

Four members of the Duckwater Shoshone Tribe of Nevada were named Recovery Champions for 2010 by the Service earlier this year.

Ren Lohofener, the Service’s Region 8 Director, presented the award during a meeting of the Southern Nevada Public Lands Management Act (SNPLMA) Executive Committee. Tribal Vice-Chairwoman Annette George-Harris received the award as part of a team responsible for restoring habitat for the threatened Railroad Valley springfish. George-Harris also accepted the award for tribal members Virginia Sanchez, Jerry

Millett, and Lisa George-Millett. Ruby Sound accepted an award letter on behalf of the tribal council and the entire Duckwater Shoshone Tribe.

The Tribe restored the Railroad Valley springfish in the two thermal springs on the reservation, establishing self-sustaining populations of the tiny desert fish. The projects required removal of an irrigation infrastructure and aquaculture facility, reconstruction of a springhead and historical stream channel, and installation of a public education boardwalk for viewing the springfish in its natural habitat.



Region 8 Director Ren Lohofener (right) congratulates Duckwater Shoshone Vice-Chairwoman Annette George-Harris (left) and Tribal Court Secretary Ruby Sound (center).



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## **New Deputy State Supervisor**

Jill Ralston, originally from upstate New York, near the southern border of Adirondack Park, arrived at the Nevada Fish and Wildlife Office in November 2010. Jill came to the Service from the Bureau of Land Management, Jarbidge Field Office in Twin Falls, Idaho, where she served as the Assistant Field Manager.

Jill has a Bachelor's degree in Geology from Minnesota's Winona State University and a Master's degree in Hydrology from the University of Nevada, Reno. She began her federal career with the Forest Service as a hydrologist for the Bly and Lakeview Ranger Districts in Oregon. She then moved to the BLM in Roseburg, Oregon as a hydrologist and later transitioned to a supervisory position as a multi-resource specialist.



"I am proud of the role that federal agencies play in public land management and species conservation," said Jill. "I feel fortunate to work with people who are passionate about the work that they do."

Jill will be serving as the State Supervisor until a new State Supervisor arrives to replace Bob Williams who retired in December 2010.