

U.S. Fish & Wildlife Service

Moapa Valley

*National Wildlife
Refuge*



*Warm water springs
from the hillsides,
giving life to the Moapa
Valley.*

A Home for the Moapa Dace

The National Wildlife Refuge System is a 150-million acre network of public lands and waters managed by the U.S. Fish and Wildlife Service to conserve and protect America's fish, wildlife, plants and their habitats. The Moapa Valley National Wildlife Refuge, established September 10, 1979, is the first refuge created to protect an endangered fish, the Moapa dace.



Moapa dace



The "Blue Goose" insignia, designed by Ding Darling, is the symbol of the National Wildlife Refuge System. Moapa Valley NWR is part of a nationwide system of over 520 refuges set aside for the conservation and management of fish, wildlife and plant resources for the benefit of present and future generations.

With less than four inches of rain per year, water is a unique and rare resource in the dry Mojave Desert. Plants and animals balance on the edge of existence. The Warm Springs area, historically known as the Moapa Valley, is a desert oasis with five major thermal springs. Two of these springs are on the Refuge.

Where does the water come from? Water moves through the White River Ground-water Flow System, which stretches to the northwest from Coyote Springs to Ely. The "fossil water" in this aquifer takes thousands of years to move underground towards Warm Springs where it is forced to the surface.

Above ground, the water—averaging 88° F—bubbles up into springs and streams forming the beginning, or headwaters, of the Muddy River. The entire population of Moapa dace are found here and nowhere else in the world. No longer than a human finger, the olive-yellow dace fight for survival in this harsh desert environment.

History of the Moapa Valley

For thousands of years, the Nuwuvi (Southern Paiute and Chemehuevi Native Americans) have been part of the landscape now called Moapa Valley. Nuwuvi villages originally stretched from the Warm Springs area to the Virgin River. Here the people grew corn, sunflowers, and other crops in the floodplain nourished by the valley's springs, and their communities thrived with minimal impacts to wildlife before European Americans arrived.

Today the nearby Moapa Band of Paiutes and their relations

continue Nuwuvi cultural tradition and spirit of place. Generations of Nuwuvi have respectfully used the plants growing on the stream banks and upland desert, including the area now designated as the Refuge. They still value these resources and maintain strong ties to the living landscape of which people, wildlife, and plants are all an integral part.

The late 1800's brought Mormon settlers to Moapa Valley. As development continued, streams were diverted and channelized. Throughout the early 1900's, Moapa Dace were still common.

The area that is now the Refuge was operated as a resort with snack bars and recreational vehicle hook-ups. The springs and streams were chlorinated and concreted into swimming pools. Only a few hundred dace remained by 1977. When it was purchased from a willing seller in 1979, there were no dace left on-site.

Why are they endangered?

The Moapa dace population remains low. Endangered means that the entire population is close to extinction—never existing on Earth again—and indicates that something in the environment has changed.

Water is their home. Adult dace lay eggs year-round near the springheads and use the warm water to incubate their eggs. After hatching, the juveniles move into the stream and historically, as adults, the dace migrated into the Muddy River. The omnivorous dace feed on both plant and animal material. When it is time to reproduce, similar to salmon, they swim back upstream.

Past and present human activities and a growing human population's need for water have changed the habitat. Sometimes these result in less water overall or cooling and pooling of the water making it unsuitable for the dace to feed or breed in. Non-native fish such as tilapia, mosquito fish, and shortfin molly thrive in these altered conditions. This competition for available habitat (food, shelter, space) threatens the dace's survival.

In an effort to save the dace from extinction, the Service, with the help of local citizens, non-profit

organizations, county, state, and federal officials, started the long and difficult process of reconstructing and restoring this unique habitat.



Southern Paiute Men, 1873.



USFWS



USFWS

Non-native tilapia.

Removing cattails — part of the restoration process.



Shawn Goodchild/USFWS

Restored channel.



USFWS



Abandoned concrete pools at Moapa Valley.

USFWS

Restoration aids native species

Moapa pebblesnail.
USGS/Reno Field Station

Channel restoration improves the feeding and spawning habitat for the dace and other native species. Based on research, logs, boulders, soil and rock are strategically placed in springs and streams to provide pools, riffles and runs. Through careful planning, native species, such as the Moapa dace, White River springfish, Moapa riffle beetle and Moapa pebblesnail, who had barely survived, were reintroduced to the Refuge. Barriers were built to keep competitors, such as the tilapia, out.



Moapa riffle beetle.
USGS/Reno Field Station

Palm trees along the stream channels are removed to keep streams flowing and reduce the risk of wildfire.

As restoration continues, ash trees, willows, screwbean mesquites, and other native plants will take their place. These restoration efforts increase the chances for the survival of native aquatic species. Working

together with the community, Moapa Valley National Wildlife Refuge will once again be flourishing with native plants and animal life...to be enjoyed by all. Due to its small size, fragile habitats, and on-going restoration, the Refuge is only open Saturday and Sunday from Labor Day weekend through Memorial Day weekend. Weekday visits—especially for groups—are scheduled on request.

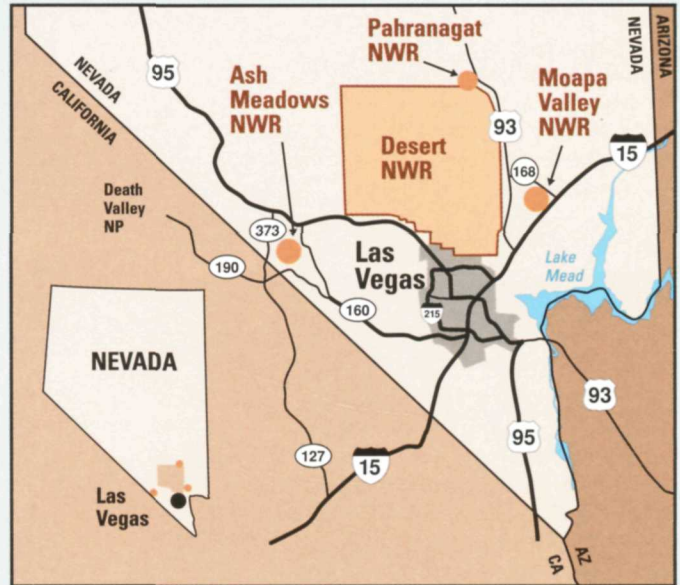


Palms bring fire risk.

Desert larkspur.



USFWS



National Wildlife Refuges of Southern Nevada

Desert National Wildlife Refuge



USFWS

The largest refuge in the lower 48 states with over 1.6 million acres holds many opportunities. Drive through scenic desert bighorn sheep habitat, watch birds at Corn Creek, view the endangered Pahrump poolfish, hike in the backcountry or spend a night camping under the stars.
702/879 6110

Ash Meadows National Wildlife Refuge



© Tom Baugh

Silvery blue pupfish dart between swaying strands of dark green algae. A haven for rare wildlife, the 23,000 acres of spring-fed wetlands and alkaline desert uplands support a great number of endemic plants and animals.
775/372 5435

Pahrnatag National Wildlife Refuge



Dave Menke/USFWS

This “valley of shining waters” borders the Mojave and Great Basin deserts and offers a resting spot for migratory birds, waterfowl and people. Enjoy this desert oasis while camping, fishing, hunting or observing wildlife.
775/725 3417

U.S. Fish & Wildlife Service

Moapa Valley National Wildlife Refuge
4001 W. Warm Springs Road
Moapa, NV 89025

Mailing address:
Moapa Valley National Wildlife Refuge
4701 N. Torrey Pines Dr.
Las Vegas, NV 89130
702/515 5450

<http://www.fws.gov/desertcomplex/moapavalley>

Nevada Relay Service
TTY 1 800/326 6868
Voice 1 800/326 6888

Visit the U.S. Fish & Wildlife Service
on the internet at <http://www.fws.gov>

For Refuge information
1 800/344 WILD

Visitors with disabilities
may be reasonably
accommodated upon
request and/or receive
an alternative format
publication.



May 2011

Moapa Valley

National Wildlife Refuge

