

MY NEVADA TRIP – OCTOBER 2010

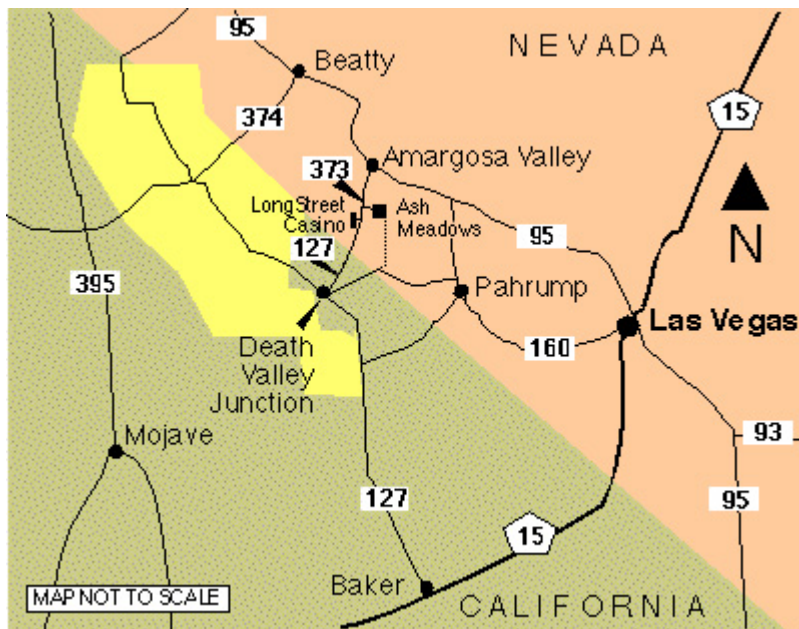


October 14 – Prior to landing in Las Vegas we flew alongside the Grand Canyon and then Lake Mead and Hoover Dam with that brand new spectacular bridge. But this photo is about all of that city I saw and cared to see. I met Rudy at the airport, got our rental car and headed to the desert, northwest of Vegas.



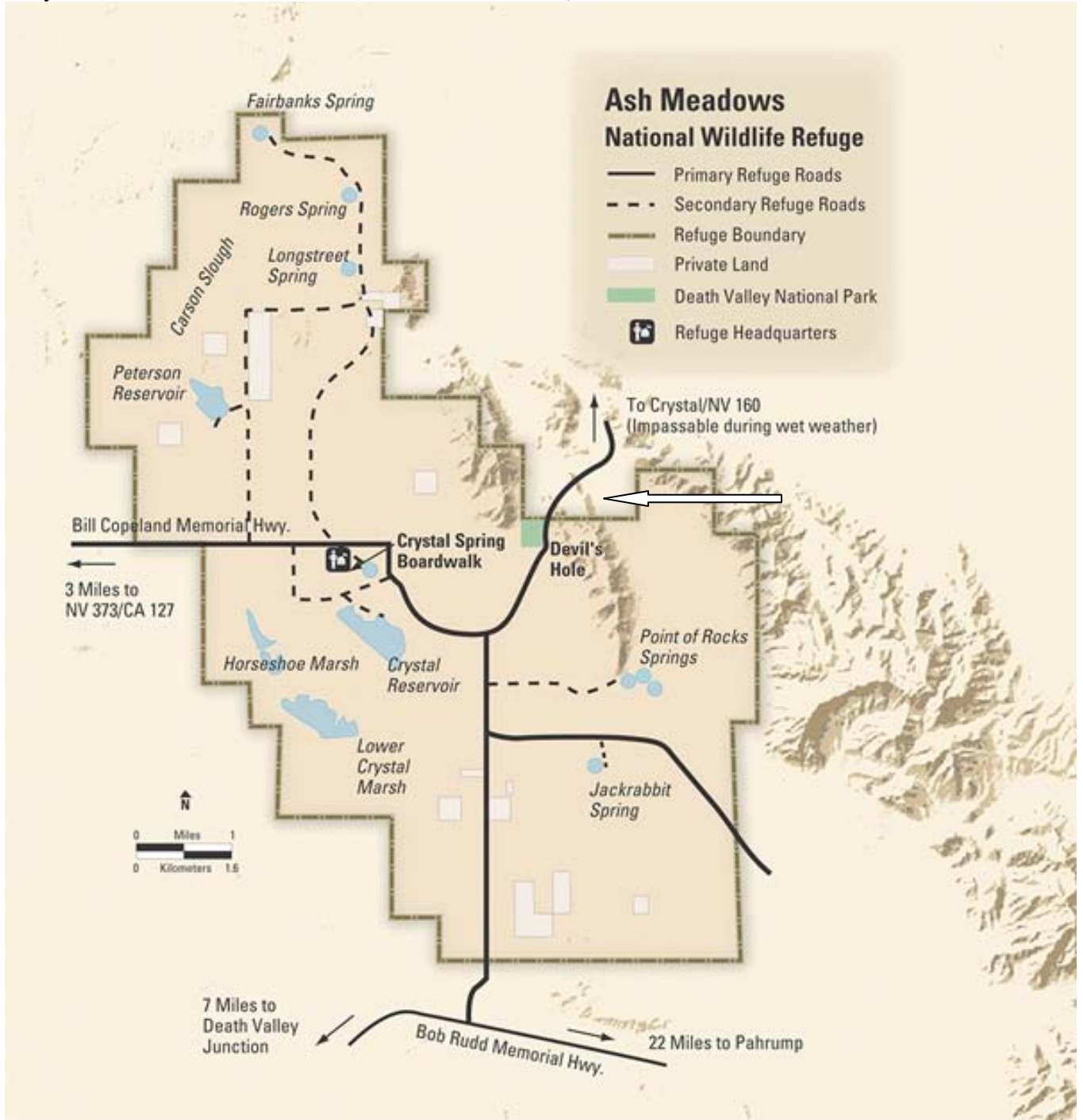
This map of Nevada shows all the places that we visited on the trip.

We crossed over the foothills into Amargosa Valley which parallels the California border. A quick stop at Pahrump, the only sizeable town on that side of the state, for supplies (alcohol) and then up the road to the Longstreet Inn and Casino.



The casino and inn is in the middle of nowhere but only 4 miles from the Ash Meadows Wildlife Refuge. Behind the inn was a large pool with ducks and other waterfowl and a RV campground. They also had a pen with a cow, burro, and some other noisy animal that I can't remember. The "town" of Amargosa Valley is nothing but a series of isolated roads with a few homes on them. That night in the restaurant we met up with a number of other folks that were attending the annual North American Native Fish Association (NANFA) convention.

We headed over to the refuge headquarters early the next morning (well not really early since my body was eastern time and it is 3 hours earlier out there).



The organizers had set up some cook stoves underneath the trees and were busily cooking us breakfast – scrambled eggs, sausage, bacon, pancakes, etc.



(Casper photo)



(Ed Scott photo)

After breakfast the group (about 30) headed up the road to Devils Hole which is actually part of Death Valley National Park and which was established long before Ash Meadows. Located here is the Devils Hole pupfish, *Cyprinodon diabolis*, arguably the rarest vertebrate in North America since it's total range is this tiny pool.

Devils Hole Pupfish

Death Valley National Park
California

The Devils Hole pupfish is on the U.S. Department of the Interior list of endangered species.

The world's entire population of Devils Hole pupfish—*Cyprinodon diabolis*—lives in this small, hidden pool. The pool is actually the mouth of a water-filled cave system. In summer, when nutrients are abundant and when pupfish eggs hatch, there may be as many as 500-600 pupfish here. In winter the population drops to 200 or fewer.

At Devils Hole, the pupfishes' struggle to survive continues. So far these pupfish have successfully adapted to the slow, natural changes of their habitat, but more rapidly occurring human impacts—like the pumping of groundwater—could quickly send this rare species into extinction.

The actual size of a Devils Hole pupfish (male), 2.7 cm long.

Several species of pupfish, all closely related, live in the American Southwest and northern Mexico. The ancestors of Death Valley's pupfish lived in lakes and marshes that were once common in the valleys. As the climate grew more arid, these wetlands dried and pupfish populations became isolated from one another.





What I had not realized that it was at the base of this mountain. It is not spring like the other water bodies on the refuge but rather it's groundwater that is exposed by the fissure in the ground. When earthquakes occur in California the level in the pool rises and falls.



They conduct population estimates twice a year and the most recent estimate was 130 individuals. It's not apparent in the photo but there is a shelf about 4 ft below the surface in the front section where most of the activity takes place. It's completely fenced in but we were allowed to descend and listen to a Park Service biologist tell us of the history.



Various instruments, lights, supplemental feeding station. They don't know how deep it goes since they stopped at 300 but obviously it is much deeper and spreads out laterally. The water surface isn't always that scummy. They have motion detection cameras installed and a few years ago they caught someone trying to lower a basket over the edge and "dip" up some of the pupfish. Many people asked why not move them to another site or breed them in hatcheries. Well, that has been tried and has been unsuccessful. Not really sure why.



Me standing at the fence above the pool. (Casper photo)

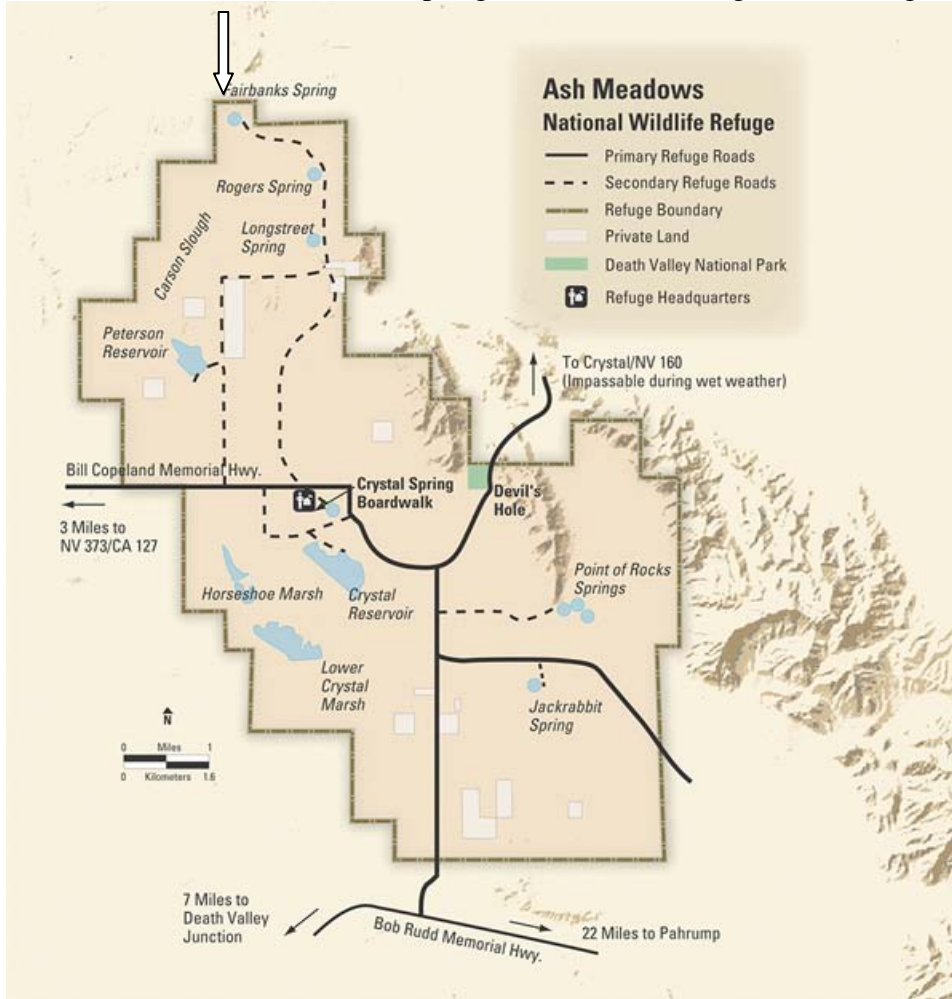


Another view of Devils Hole from above and looking towards the parking lot. That's private land over across the valley and one big issue is pumping of the groundwater for irrigation and lowering the water level in the Hole.



Some pricklies.

After leaving here, Rudy and I along with a F&WS biologist we met from Wyoming (Alex Schubert) headed to Fairbanks Spring on the northern edge of the refuge.



FAIRBANKS SPRINGS

During 1905 Dad Fairbanks and his sons finished their grading contract on the Salt Lake and San Pedro Railroad in Las Vegas. Since most knowledgeable people saw little future in Las Vegas, population 300, with no mining and little ranch land, Ralph J. "Dad" and Celeste "Ma" Fairbanks, with eight mostly grown children, moved to Ash Meadows. Here the Fairbanks family opened a stage station to provide beds, food, whiskey and poker to travelers, which supplemented their primary business of freighting from Las Vegas to the boom towns. The Tonopah and Tidewater Railroad opened for business in 1907 and undercut their freighting business, causing the Fairbanks family to sell Fairbanks Springs and to move to the boomtown of Greenwater, California.

This plaque dedicated February 5, 2006, by the Queho Posse and Billy Holcomb Chapters of the Ancient and Honorable Order of E Clampus Vitus in cooperation with the Nevada Boom Towns History Event





Ash Meadows Pupfish, *Cyprinodon nevadensis mionectes*, eating a dead crayfish (an invasive species).

We left here to return to the Refuge Headquarters for a lunch – sandwiches, chips, etc. While we ate, the Refuge biologist gave us a history of the refuge, the struggles to get it established, and the bumper stickers that said “Kill the pupfish”. The refuge which was established in 1984 provides habitat for 24 plants and animals that are found nowhere else in the world. The 23,000 acre refuge is staffed with only three full-time people.

After lunch there were a number of options. Some chose to cut invasive cattails out of one of the spring streams. Others visited other springs while some of us chose to visit Crystal Spring near HQ. One of the staff had minnow traps in the spring and would let us photograph the pupfish. Since they are federally protected, none of us could legally touch them or swim in these springs. Except for two of our guys who were allowed to do so since someone had spotted an invasive green sunfish in that spring and they were going to try and kill it. Pupfish had evolved without any predators so have no fear from sunfish, bass or anything else that might want to gobble it up.



Travis Haas (LA) and Casper Cox (TN) demonstrating proper spearing technique.



Searching. Casper floats perfectly while Travis sinks.



Onlookers. Actually this is before they go in since both are in the photo.



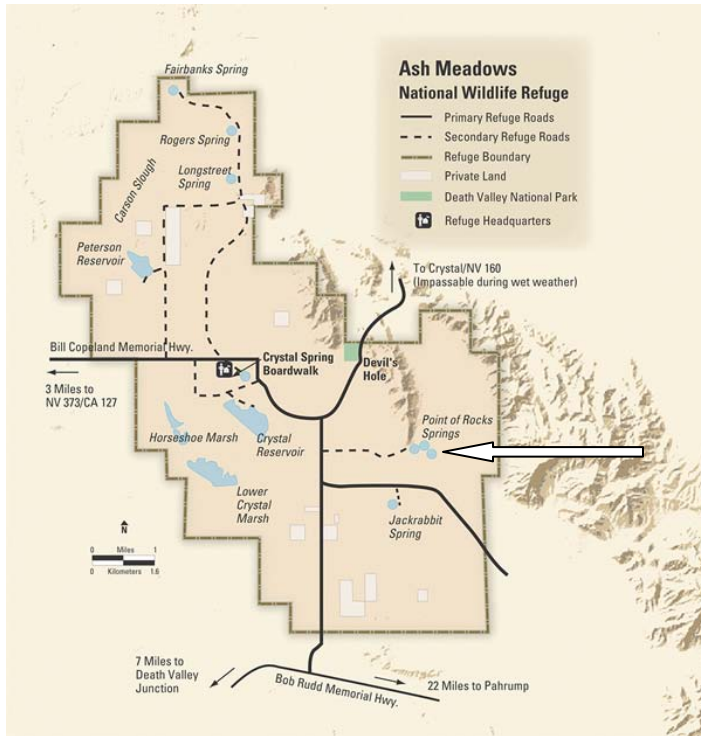
Male Ash Meadows Pupfish.



Casper afterwards

They never did see the green sunfish so it survived to eat some more.

After this Rudy, Alex and I headed to Point of Rocks to visit more springs.



Kings Pool at Point of Rocks



Those blue specks on the rocks are pupfish.



This is what you saw when you pivoted away from the spring.

Later that evening we returned to the Refuge to have steaks, potatoes and lots of vegetables under the stars. Afterwards we had our auction to raise money for the research and conservation grants that NANFA funds. Even though there were only 35 or so of us, we raised over \$1200.

Saturday morning we headed over to Death Valley National Park to listen to our speakers.



Descending into Death Valley



Zabriskie Point – the Badlands of DV



Rudy thinking deeply about fish ecology (and resting after the hike up from the parking lot.)



After this we headed to the DV headquarters for the talks. I think about 45 people attended which is pretty darn amazing



All very interesting. At lunch we ate MREs , US Military “Meals Ready to Eat”. You can apparently heat them up but I never figured that part out. Also saw this little guy below eating bugs in the parking area.



Beep beep!

In addition to the roadrunner, we saw jack rabbits and golden eagles.

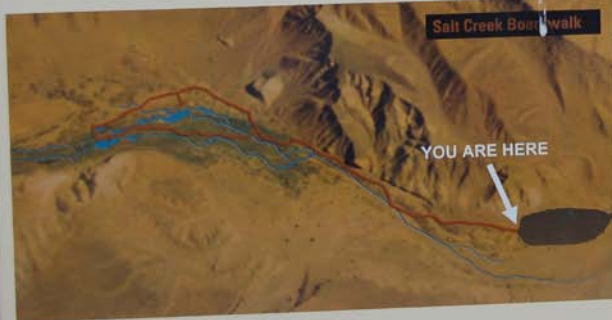
When the talks were over we had time to head to Salt Creek, home of the endemic Salt Creek Pupfish, *Cyprinodon salinus*. As we were driving I stopped to video the Valley, not realizing that I also captured a coyote on the tape.

Salt Creek Trail

Death Valley
National Park

Most people imagine Death Valley to be an arid wasteland, devoid of water and life. Few expect to find a stream flowing on the valley floor, more than 200 feet below sea level. Like all desert oases, plants and animals congregate around its life-giving waters. Even more surprising, the rare Salt Creek Pupfish (*Cyprinodon salinus*) has thrived in its seasonally fluctuating waters for thousands of years, despite all odds. Originating from brackish springs and marshes more than a mile upstream from here, the water becomes increasingly salty due to evaporation as it

flows downstream. The section of creek that flows beside the boardwalk during winter and spring can be more saline than seawater. At peak flow, the stream meanders out onto vast salt flats of Cottonball Basin before finally sinking into valley fill and evaporating into the desert air. Although Salt Creek is too salty for humans to drink, it is a source of life for many plants and animals. Watch for tracks and burrows in the sand along the boardwalk to get an idea of the wildlife activity taking place out of sight.







Before You Start...

Distance: ½ mile round-trip

Difficulty: Easy. Wheelchair-accessible.

Safety: Bring drinking water.


-  STAY ON BOARDWALK. This area is fragile.
-  NO PETS. Wildlife lives here.
-  NO SMOKING. Cigarette butts are litter.
-  DO NOT FEED WILDLIFE. Keep them wild.




Pupfish Castaways

Death Valley National Park

The pupfish of Salt Creek have a difficult life, but it was not always so. Ancestors of the Salt Creek pupfish lived in streams flowing into a huge freshwater lake that filled the bottom of Death Valley more than 10,000 years ago. Lake Manly—as it is known today—was the end of a drainage system that at that time included water from as far west as the Sierra Nevada Mountains. As the climate became more arid over time, the Ice Age lakes and rivers dried up and the pupfish were stranded in permanent water holes scattered across the desert.





Today, these isolated “islands” of water vary drastically from freshwater warm springs and marshes to Salt Creek’s seasonal briny stream. To survive in the different habitats, the original pupfish species evolved into ten distinctly different species and subspecies, each with their own shape, markings, habits and survival strategies. Two of the subspecies have gone extinct in historic times, and three—including the Devils Hole pupfish—are federally listed as Endangered Species.



Not much water



Found this little horned lizard as we were walking.



Awh, there is some water after all – but no fish visible.



I did spot one pupfish in this pothole – very skittish. No one else saw any.



Sunset at Salt Creek.

End of a perfect day – well not quite the end. Back at the Longstreet, turns out Saturday night is karaoke night. And as we went down to eat we heard this pleasant voice belting out a country tune. Much to our surprise it was soft-spoken Alex. Also turns out that the Longstreet had the only action in the entire valley on a Sat night – well, except for the occasional brothel scattered here and there. This was the end of the regular convention but Peter Unmack, our host, had planned an extended convention for those of us who wanted to see more.

Sunday, we were heading back east, through Las Vegas, to get to Lake Mead and the east side of Nevada.



But we decided to detour back into Death Valley to ascend up to Dantes View with its fabulous view of the Valley. Dante View is at 5,500 ft and you look down into Badwater which is -282 ft. Across the Valley is Telescope Peak at 11,000 ft. Death Valley is a rift valley formed by the sinking of the bedrock lying between parallel, uplifted, tilt-block mountain ranges (got this from the guide book).



Looking over a mile down into the lowest spot on the continent – Badwater. Telescope Peak on left.



An old mountain goat.



An even older mountain goat.



Some cool and pretty plants.

So after leaving Death Valley, we headed back to and through Las Vegas to the north shore drive along Lake Mead. We had discussed visiting Hoover Dam and the new bridge but it was Sunday and traffic would be miserable so we opted for scenic instead. That drive, geologically, was spectacular with different rock formations and colors.





Our goal was Rogers Springs where the only fish present were exotics. As we arrived, we noticed a number of NANFA folks already there but no one was snorkeling even though the water looked inviting. As we walked to the spring, this sign explained why.





Rogers Springs.

Finally our leader, Peter Unmack, showed up and said that all the thermal springs had this amoeba so “no problem”. At this point about 6-8 folks did get in. I decided that if I was going to die from an amoeba, I wanted it to happen while looking at some unique endemic springfish and not lousy introduced cichlids and mollies.



The smart ones. Note the dinosaur floatie – they were part of our group also.



Mollies nibbling on my leg hair.

After this, we headed to Valley of Fire State Park. An awesome place with beautiful vistas everywhere you looked. A number of movies had been filmed here, including *The Professionals* and *Star Trek Generations*.











There was a lightning storm behind us and over Las Vegas. We all spent too much time trying to capture images of the bolts.



Wyoming Alex

The White Domes Area

Welcome to the White Domes area. With its multi-colored sandstone formations as a backdrop, White Domes is a spectacular place to experience the stark beauty of Valley of Fire. The White Domes trail leads hikers through a Mojave Desert wonderland of ever-changing scenery. The trail is not wheelchair accessible.

Camping is not allowed at White Domes.



Valley of Fire Goes Hollywood

Over the years, Valley of Fire has become a very popular area for professional film makers. Featured in hundreds of commercials, Valley of Fire can also be seen in music videos, educational films and the following movies:

- The Good Son
- Breakdown
- Star Trek - Generations
- Beast Master
- When Fools Rush In
- 1,000,000 Years B.C.
- Stephen King's "The Stand"
- Kill Me Again
- Father Hood
- Ballad of Cable Hogue
- The Professionals (Remains of the set can still be seen along the White Domes Trail.)

Play it Safe!

Your experience at the White Domes area and throughout Valley of Fire State Park will be enjoyable if you observe a few common-sense precautions.

Flood floods are dangerous. Avoid ravines, drainages and low-lying areas during heavy rainstorms. Never drive a vehicle into areas filled with water.

The weather can change quickly so check with park rangers at the visitor center about weather conditions before venturing too far into the backcountry.

There are no safe water sources in the backcountry. To avoid dehydration, always carry plenty of water while hiking or enjoying outlying areas.

Before venturing into the backcountry, let rangers at the visitor center know where you are going and when you will return.

Do not climb on rocks!

Rattlesnakes, gila monsters and scorpions live throughout Valley of Fire and are poisonous. Give them plenty of room!

At Valley of Fire, sunburns can occur with only minimal exposure so protect your skin with hats, clothing and sunscreen.



Once again darkness had approached and we exited the park in the dark and in the RAIN. It rained all the way to our destination of Overton, a rather small town in eastern Nevada. There were about 25 of us at this point and we all managed to find the single open restaurant in town.

Good food and companionship. My highlight that evening was listening to Rudy and Casper debate proper eating habits and diets.



By the morning the skies were clear and we were heading out to the Moapa National Wildlife Refuge. Being impatient, Rudy and I left earlier than the others confident that we could find the place. Well, these places are not too well marked and after several miscues, we did end up finding it plus a dead Great Basin gopher snake.





Moapa Springs home of two endemic fishes. Former Howard Hughes endeavor.



Another lecture from another F&WS biologist.

If You Were a Moapa Dace...



➤ If you were a dace, you would be a slender fish, up to five inches long, with a bright black spot on the base of your tail.

➤ You would not know that you lived in a desert. Your entire life would be spent in the wet, warm springs.

➤ Your body would be covered with smooth, leathery scales. The Latin name for Moapa dace, "coriacea," means "leather."

➤ You would eat throughout the day, picking at whatever swam or drifted by. Dace eat insects, worms, snails, crustaceans, plants, and algae.

➤ You would like warm water! Dace need water temperatures of 79-90 degrees to survive. You can feel the spring water for yourself—but be careful not to damage plants or fishes.

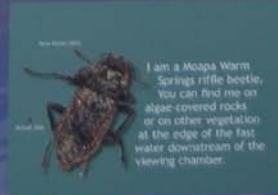
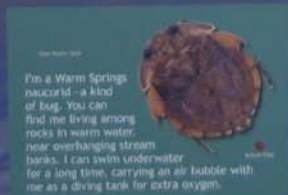
➤ You would move fast! Dace dart back and forth all day, like a human running wind sprints—in the sweltering desert heat!

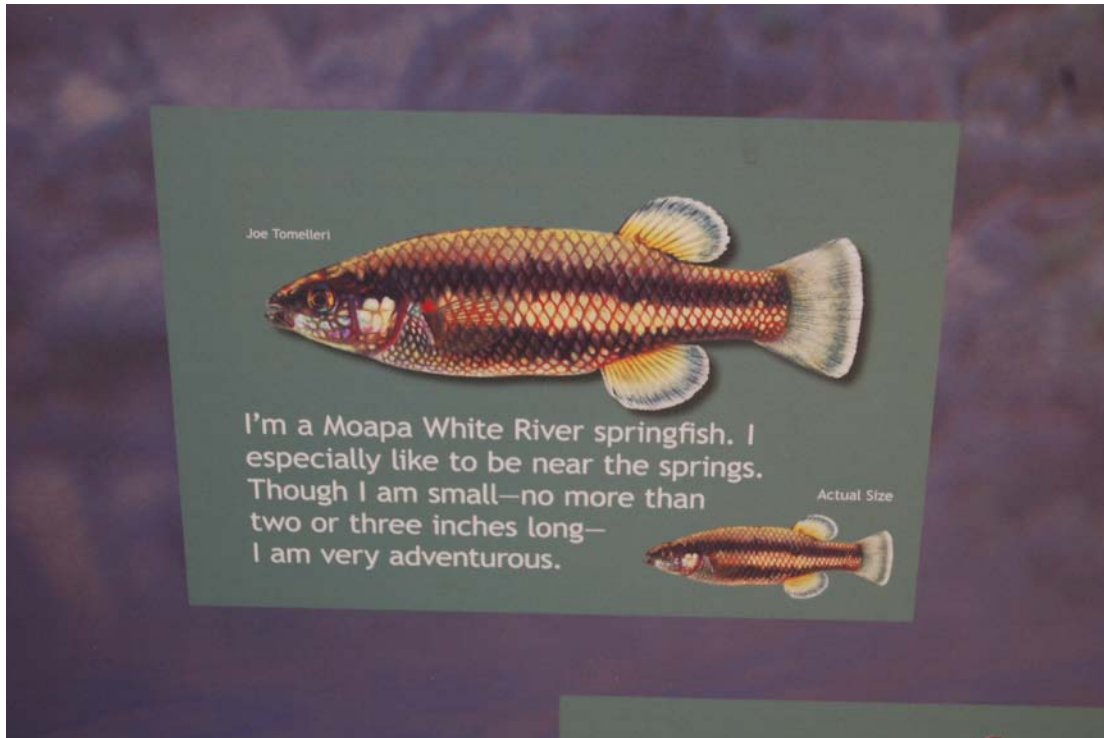
➤ You would have your teeth located in your throat! Dace have four or five hooked teeth that they use for grinding plants and animals.

Who Shares Space with the Dace?

The dace shares its habitat with other animals who love the warm spring waters. Can you find some of the dace's neighbors?

Lift the doors to see who you can discover!





They have built viewing windows into the stream as it exits the spring.

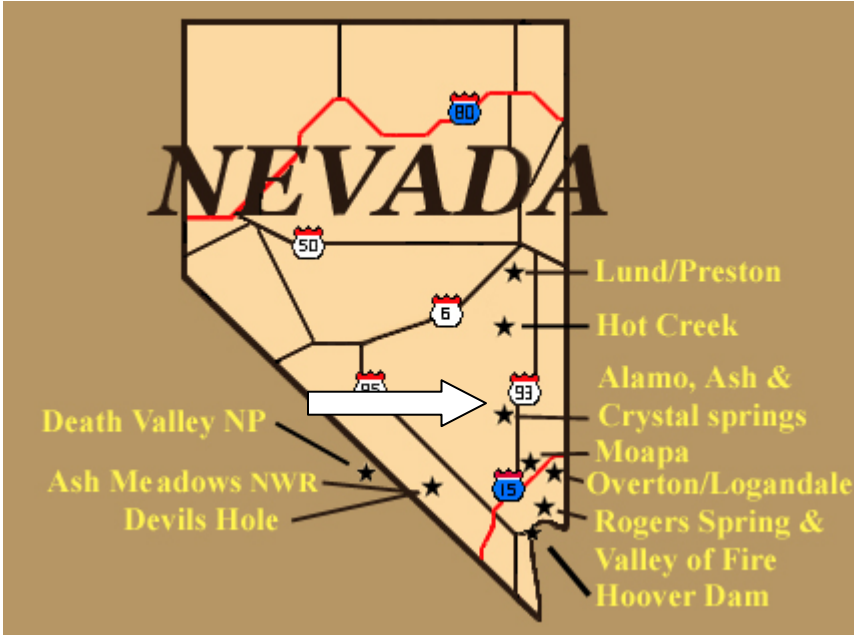


Photo by Ed Scott



About my best photo of the springfish.

Then it was up the road to Alamo where we would spend the night plus dive two springs.



Alamo is a modest sized town and we stayed in the Windmill Inn on the outskirts. There was a nice restaurant associated with it but they kept running out of things. At lunch Rudy and I got the

last of the onion rings. Then at dinner they ran out of baked potatoes and calamari. And at breakfast it was eggs they were short on. Don't know where they would get more since we never saw a grocery store anyway along highway 93.

After lunch we went up the highway about 5 miles to Ash Springs. It was a good thing we had a guide on this trip because nothing was ever marked.





The water was very warm especially in the “hot tub”. Snorkeling was great with mollies, cichlids and the Ash White River Springfish, *Crenichthys baileyi baileyi*. I didn’t get any good photos but others did. The air temp was around 70 and the water 88 but since it was so dry and there was a light breeze, I was quickly shivering when I emerged. This was the only spot I wore a t-shirt for sunburn protection. Better sunburn than hypothermia.

Then off again up the road another 5 miles to Crystal Spring, home of a different subspecies, the Hiko White River Springfish, *Crenichthys baileyi grandis*. This spring was absolutely gorgeous with abundant vegetation and many colorful springfish.





Photo by Scott Schlueter at Crystal Spring



Scott S hand feeding the springfish.



Another Scott S photo



Rudy contemplating the good life.

Dusk was approaching as we headed back Alamo for our last night in the desert.

The next morning some headed back to civilization while maybe 20 of us ventured further north into the vast Great Basin.





The caravan (Casper photo).

Today's initial destination was Hot Creek, home of yet another subspecies, the Mormon White River Springfish, *Crenichthys baileyi thermophilus*. This place is definitely off the well beaten path and even our two guides were unsure where the turn off was, but we made it.





Spring at Hot Creek. Surprisingly few springfish here – only found in the shallow side branches. Big Bob shown snorkeling here discovered why – he saw an 8 inch or so largemouth bass. (Scott S photo)





Hot Creek, about 90 degrees and loaded with springfish. (Ed Scott photo)



Upon hearing about the bass, Casper inquired around and found a kick ass spear that someone had along. He then proceeded to search for the marauder while everyone else was eating left over MREs and other items. I was snorkeling in the creek when I saw him strutting down the path from the spring – bass firmly impaled on the spear. He said “One look, one shot, one kill!” The group gave him a round of applause as he approached. A stomach examination revealed 3 springfish in its belly.



After lunch the group broke up. Most made the right turn and headed to Las Vegas. Nine of us in four cars decided to finish the trip as originally planned and visit the 3 springs in Preston and Lund to the north for the Preston White River Springfish, *Crenichthys baileyi albivallis*. These are not thermal springs with temps in high 60s and low 70s so snorkeling was out. We saw nothing in the first spring except lush aquatic vegetation.



I did spot the springfish at the second spring but they were too skittish to photo.





As we were staring at the water, one of our members screamed “SNAKE”. Rudy rushed over and nabbed it. A beautiful Great Basin gopher snake. Fortunately he was quite docile as Rudy poked and prodded it into a good photo position.







(Ed Scott photo)

The trip was winding down but we gamely went to the last spring in Lund. What a downer. It was situated in a horse lot with lots of barbed wire.



After one last group photo and hug we separated. Rudy settled in the passenger seat for the 205 mile drive south to Vegas. I made it in about 2-1/2 hours – straight highway with no one on it.

I left the next AM in clouds but it cleared as we were over the Appalachians – aglow with red foliage.



Was it a good trip? Darn tootin! It was a great trip, well-organized, and highly interesting.