The springs of Ruby Valley

The marshes in evening light

The closer we got to the rock face of the mountain, the more the air filled with the sound of rushing water. Cool air washed over us as we walked/slid down the steep slope into the mouth of the cave. We were in the first room of the cave, where water gushed out of the back wall, through a locked grate. A water pump hummed, supplying cold, clean spring water to the Ruby Lake Wildlife Refuge buildings.

We had parked in front of the refuge's visitor center and walked the half-mile long Cave Creek trail. This short walk is one we often do while visiting Ruby Valley.

During the walk, Cave Creek itself remained hidden among aspens and brush. These aspens are the only ones found anywhere on the refuge.

This spring water gushes out of the cave and runs down the short Cave Creek into the marsh's collection ditch. The spring may be the

largest in Nevada and emits 50 cubic feet per second of water in spring, water at a constant 40 degrees Fahrenheit.

In 1846, the Donner Party camped beside this creek as they traversed the Hastings' Cutoff of the California Trail. The group had recently suffered terribly hardship crossing the 75-mile waterless stretch of the Utah Salt Flats. The water and grass of Ruby Valley was a welcome relief.

The Ruby Lake Wildlife Refuge wetlands, known to most of us as the Marshes, are here because of a large network of springs like Cave Creek. There is a good reason why the Marshes are located beside the Southern Ruby Mountains and not farther north.

The northern Ruby Mountains, including Lamoille Canyon, are made up of metamorphic rock, rock that is quite impermeable to water. Water flows across the rock surface rather than sinking into the rock. Because of this, the northern mountains have numerous streams and about 40 lakes. Snow melt flows off the mountains and into streams that supply water to ranches and communities outside of the mountains.

In contrast, the southern Ruby Mountains are made up mainly of limestone and dolomite, which are permeable to water. Much of the rain and snow melt sinks into the rock. This water travels downward through solid rock and finally emerges in over 150 springs. Due to the tilt of the rock, much of the water emerges in Ruby Valley. These southern mountains have no perennial streams and only one lake.

A U.S. Geological Survey map shows the springs of Ruby Valley as blue circles. Along the southern Rubies, these circles are so numerous they merge into a solid blue. The refuge feeds much of this spring water into the collection ditch and then into the 17,000 acres of wetlands.

After walking the Cave Creek trail and standing among the roar of water, we like to drive into the marshes and take in the quiet of Ruby Valley. Surrounded by the sparkling water and numerous waterfowl offers an experience showing the importance of springs in Ruby Valley.

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