



U.S. Fish & Wildlife Service

# San Lorenzo

## Sevilleta National Wildlife Refuge

### Welcome to San Lorenzo Canyon

A scenic area of sheltered caves, sandstone cliffs, arches and hoodoos, San Lorenzo Canyon is rich in history and natural beauty. The geological formations make it an excellent spot for hiking and photography. The Canyon is jointly managed by the U.S. Fish and Wildlife Service and the Bureau of Land Management as a primitive recreation area. There are no restrooms or drinking water. All trash must be packed out!

A large rock face divides San Lorenzo into lower and upper sections. You can drive through the lower section. When it appears that the canyon ends at a rock face, climb over or around and hike the upper canyon until it too ends at another rock face. Each section can be hiked in about 30 minutes, but allow yourself the benefit of several hours for exploration of the small springs and streams in the arroyo bottoms and the cave site.

### Geology

San Lorenzo Canyon, itself less than a million years old, reflects millions of years of earth history in a complex landscape formed by the interplay of tectonic plate movements and erosion.

Just before the mouth of the canyon on the right is a textbook example of the Rio Grande rift called an “angular unconformity.” It is a small, isolated mesa looking much like a tilted, sliced loaf of bread with a cap on top. The tilted beds

of sand and mud-stone (ancient surface layers faulted and tilted by erosion; once buried, now exposed) are about 7-10 million years old and the horizontal (naturally “cemented” gravel) cap is about 0.5 million years old. This happened long before the formation of the Rio Grande when this area was an extremely large plain. Layers of sediment were being laid down (a process of filling and wearing away) on the plain and, over time drainage channels cut into it. In addition, tectonic plate activity deep beneath the surface tilted the plain and this angular unconformity distinctly shows the various layers of the sediment build up - now visible at a tilted angle. This pattern is reflected on a bigger, less obvious, scale within the canyon itself. As you hike, keep watching for the various colors and tilts of the layers. The geologic strata tilt in various directions due to the combined effects of several faults that mark the tectonic history of north-central New Mexico. The fault blocks slip and tilt much like books on a shelf.

You will also see the effects of wind and water erosion which have sculpted sandstone, mud, volcanic ash and the conglomerates of volcanic-rich gravels (many of which look like poorly cemented gravel deposits) into narrow chimneys, towers and formations called hoodoos. The depressions and holes you see in the composite were formed by water erosion and the freeze/thaw cycle.



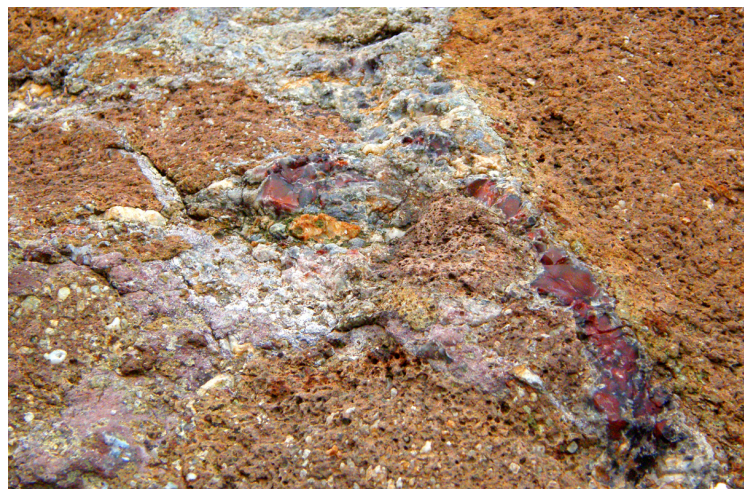
*Stream winds through the canyon.*  
Photograph by Sandra Noll

The entire area also reflects a volcanic past. Volcanic strata in the canyon range in age from 32-27 million years old. Red, gray and brown conglomerate beds were eroded from the up-thrown sides of fault blocks of the older volcanic strata. Stream-deposited conglomerates contain light grey ash beds that range in age from 12 to 15 million years old. The reddish cast of rock surfaces is a result of iron oxidation and reflects their iron-rich nature.

On closer inspection, many rock faces yield glimpses of ash impregnated with tiny crystals. These appear as lovely veins within the lava rock where water seeped through and minerals in the water crystallized. The most prevalent veins are composed of calcite/calcium carbonate (white), jasper/quartz (red) and selenite (blue-green to green). There are no copper-related turquoise deposits. Rock collecting is expressly prohibited.



*Left,  
Hoodoos and rock  
formations at San  
Lorenzo Canyon.*  
Photographs by  
Sandra Noll



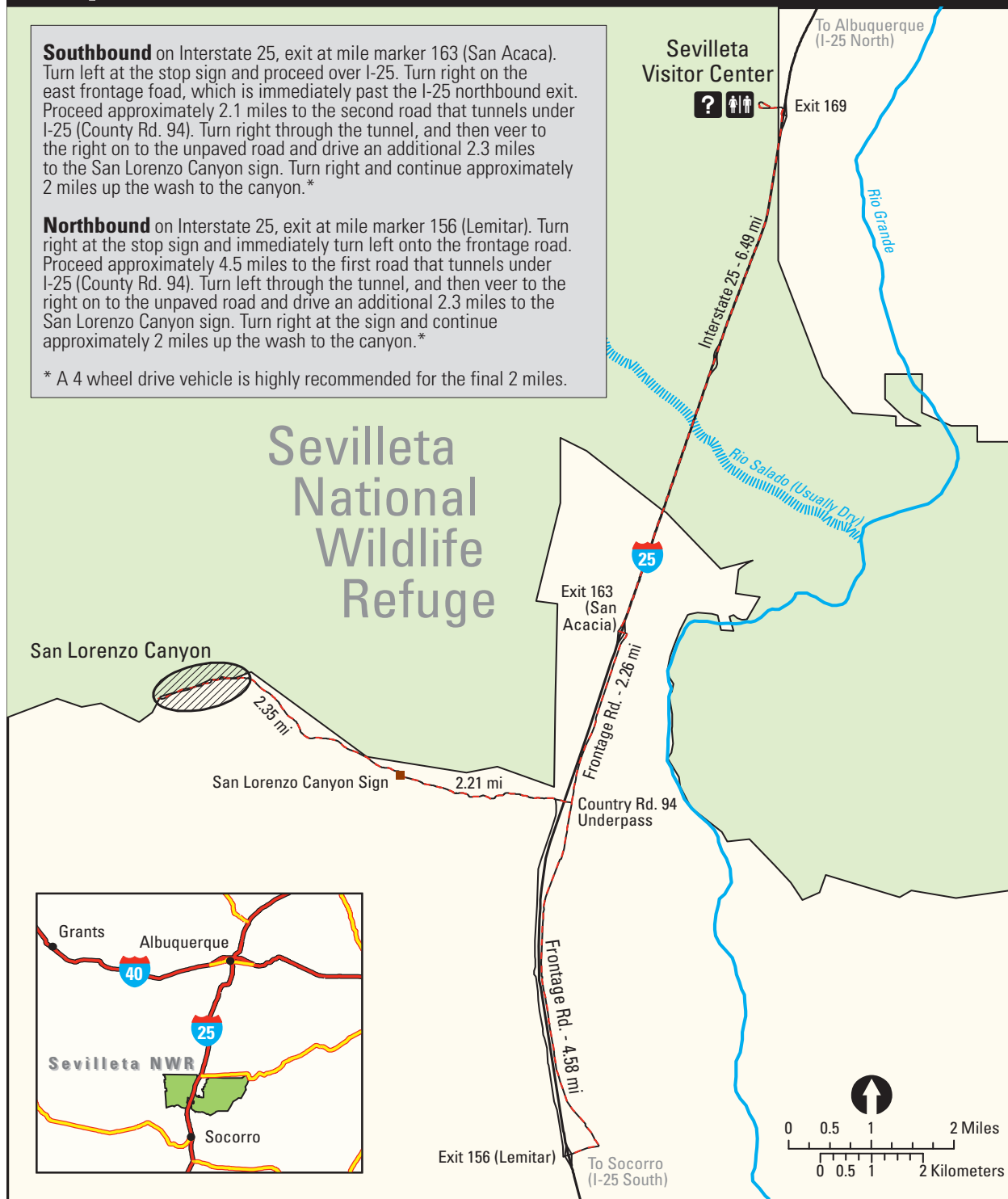
*Right,  
Rock veins of  
calcite and jasper.*  
Photographs by  
Sandra Noll

# Map to San Lorenzo Canyon

**Southbound** on Interstate 25, exit at mile marker 163 (San Acacia). Turn left at the stop sign and proceed over I-25. Turn right on the east frontage road, which is immediately past the I-25 northbound exit. Proceed approximately 2.1 miles to the second road that tunnels under I-25 (County Rd. 94). Turn right through the tunnel, and then veer to the right on to the unpaved road and drive an additional 2.3 miles to the San Lorenzo Canyon sign. Turn right and continue approximately 2 miles up the wash to the canyon.\*

**Northbound** on Interstate 25, exit at mile marker 156 (Lemitar). Turn right at the stop sign and immediately turn left onto the frontage road. Proceed approximately 4.5 miles to the first road that tunnels under I-25 (County Rd. 94). Turn left through the tunnel, and then veer to the right on to the unpaved road and drive an additional 2.3 miles to the San Lorenzo Canyon sign. Turn right at the sign and continue approximately 2 miles up the wash to the canyon.\*

\* A 4 wheel drive vehicle is highly recommended for the final 2 miles.



## Plants and Animals

The canyon is home to Chihuahuan Desert plant and animal life. You will notice a variety of grasses, four-wing saltbush, sage and cacti. You may see several kinds of lizards, snakes, rabbits, and birds including hawks, quail, roadrunners, sparrows and cliff swallows whose mud-daub nests you can see on the canyon walls near the western end. Deer, coyote, bobcat, bighorn sheep and mountain lion have also been sighted in the canyon although you are more likely to see their tracks.

## Culture/Archeological History

The area of San Lorenzo Canyon contains fences and other remnants of old ranches and homesteads. There is evidence that the area was used long before these residents arrived. The Lemitar Shelter, visible in the north wall of the lower canyon, has been the subject of archeological research over the past 50 years. All evidence of prior exploration has been removed and what one sees today is simply a shallow cave with carbon deposits on the roof.

Digging, tampering with, or removal of any artifact, plant, animal or mineral is strictly prohibited.

## For Further Information

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