

Introduction: Physical Setting and Cultural Context of Albuquerque's Open Space

by Matt Schmader

"To those devoid of imagination a blank place on the map is a useless waste; to others, the most valuable part." Aldo Leopold

Albuquerque is blessed with an extraordinary physical setting. Viewed from above, the major landforms that make the city recognizable can be seen in their vastness and beauty: it is how you know you can only be in Albuquerque. It is these features that Open Space advocates realized early on-- from the 1950s at least—and which have been the subject of many conservation efforts. Success in the preservation movements laid the foundation for one of the country's true open space gems, a proud legacy that is still growing and whose story we hope to unfold in the following chapters.



*West face of the Sandias looking up Pino Canyon.
Photo: Rex Funk*

Like No Other Place: Albuquerque's Physical Surroundings

The steep granite face of the Sandia Mountains rises nearly a mile above the foothills to form the eastern backdrop of the city. The Sandias are not especially old in geologic time but hurtled to the sky within the past ten million years, exposing truly ancient rock nearly 11,000 feet above sea level. The limestone layers along the crest are over 300 million years old, while the exposed granite core of the

mountains exceeds a billion years in age. The Sandias are part of an extensive uplift through central New Mexico that includes the Manzanos to the south, but are not technically part of the Rocky Mountain range. There is no consensus as to why the mountains are called Sandia, meaning "watermelon" in Spanish. Some say that the common pink glow that lights up the granite at sunset gave the mountains their name; others attribute it to the presence of wild melons first described by Spanish explorers. For the Southern Tiwa pueblos who are ancestral to the area, the Sandias are known variously as the turtle mountain, or sometimes as Bien Shur, the "big mountain."

To the west, a much younger geologic horizon is framed by the aligned cones of five small volcanoes. Formed by a fissure that poured out extensive sheets of molten basalt, the cinder cones went dormant about 150,000 years ago. The fissures are part of a much broader volcanic field of geologically young



*View west of the northern volcanoes (Butte, Bond, and Black).
Photo: Bill Pentler*

and active features that extend throughout much of central New Mexico. In fact, scientists who study

volcanoes often state that New Mexico has more volcanic areas than Hawai'i! The West Mesa lava flows covered more than 25 square miles, flowing gradually eastward down former arroyo courses in at least six different mappable units. The ancestral Rio Grande once flowed over the top of the lava and created steep cliffs before the river became entrenched. These cliffs are locally known as the "volcanic escarpment" and are an eroded feature that extends for 17 miles and can be seen from virtually any place in the city.



View across the Rio Grande from the west bank near Paseo del Norte. Photo: Matt Schmader

Through the center of these city edges runs one of the longest rivers in all of North America-- the Rio Grande. Known by other names during the past centuries, including Rio de Nuestra Senora and Rio Bravo del Norte, the Rio Grande has also been called the "Nile of the Southwest" because it is the most important source of permanently flowing water in the high desert environs of central New Mexico. It is home to the largest continuous cottonwood forest (or

“bosque” in Spanish) in North America. The ancestral river flowed much higher above its current base level when the lava flows first formed, but faulting that caused the Sandia uplift and the volcanic fissures also resulted in a down-dropping of the valley. In fact, the Rio Grande flows through one of just a handful of true rift valleys found in the world. The sinking rift valley has filled with thousands of feet of alluvial sediment over the millennia, deeply burying the same sediments that are visible on the crest of the Sandias—a vertical displacement of geologic layers several miles thick.

Cultural Context and Legacy

This amazing physical setting is perhaps only matched by an equally remarkable cultural setting. People have lived in and around Albuquerque for well over 12,000 years, since the time of the last continental ice ages when glaciers topped the Sandias. In that era, abundant rainfall created shallow lakes or playas on the West Mesa, an important water source for now-extinct exotic animals such as giant ground sloth, camels, mastodons, ancient horses, and enormous bison. As these creatures gathered at watering places, they were hunted by the earliest bands of people called PaleoIndians by archaeologists. Since the West Mesa lava flows are much older than the peopling of North America, and so little soil has built up on the mesa top, this old ground surface shows evidence of material from every cultural time period dating back to the PaleoIndian. A 10,000 year-old spear point might be found not far from an 1800s sheep herder camp.

As the ice ages ended and massive climate change occurred, the entire southwest transformed into the deserts we see today. People had to adapt to these changes as well, hunting smaller game in ever-decreasing territories and following the ripening of wild plants and grasses. This period was called the Archaic, a very long and stable adaptation that lasted for an astonishing 7,000 years with little change. The oldest petroglyphs, or images pecked into stone, are found on the West Mesa escarpment and are estimated to date about 1000 BCE. As Archaic populations increased or as territories decreased, droughts and scarcity of wild food eventually meant hunting and gathering groups needed a different way to feed themselves. The first horticulture in the Rio Grande valley was born out of this necessity, sporadically at first but finally taking hold by 400 or 500 CE. Some of the earliest corn known in the area was found in Boca Negra cave, a lava tube in the northern Albuquerque volcanoes.

Small villages with dwellings dug halfway into the ground, known as pithouses, began to appear along the banks of the Rio Grande by the 600s but the biggest change occurred by the late 1200s when devastating droughts took hold all across the southwest. Mass movements of peoples meant that areas like the Rio Grande valley, with its precious reliable water, saw rapid growth by 1300 CE. Along the river, large new villages made from adobe were built by the direct ancestors of today’s Pueblo people. Population levels may have reached 10,000 to 20,000 and with them came new forms of social structure, belief systems, and religion. These cultural changes are clearly reflected in the sacred rock images seen all along the volcanic escarpment in Petroglyph National Monument. Over 20,000 petroglyphs are found in specially

selected locations used by the most sanctioned individuals of ancestral pueblo society such as priests and medicine men. One of the great virtues of open space is that not only are the sites where people lived and worshipped in the past are protected, but so are entire sacred cultural landscapes and contexts of those sites.

These cultural landscapes contain the continuity and change, the mixing of peoples and beliefs, and evidence of the most momentous events in our local history. And they are preserved to their greatest extent because open space landscapes are large enough to contain them. From the beginning of written documents, with first European contacts by Francisco Vázquez de Coronado in 1540 to the early Spanish colonies, from the settlement of Albuquerque and surrounding lands in ranchos, traditional



*Hand petroglyphs at Piedras Marcadas Canyon.
Photo: Matt Schmader*

communities, and land grants, to statehood and World War II, many features of this timeline can be found in open space. We hope to tell the tale of these places, how they came to be saved, the local heroes and advocates who played a part in the open space story, and how the legacy continues in the upcoming chapters of A Blank Spot on the Map.

What I Learned:

“What is special about Albuquerque can be found in its Open Space legacy.” It is perhaps all too easy for people who live in a place to take the depth and nuances that make it unique for granted. But when you see the wonder expressed by a visitor to Albuquerque and look closely at what we have that makes us special, there is much to be grateful for. The beauty of our surroundings, the majestic views, clear skies, and wide open spaces make us who we are. And they entice people to come, and sometimes never leave. That is also the case for our multi-cultural heritage, for people have been drawn to this area since the beginning of human time. We are made all the more rich by the intersection of culture and physiography, more fortunate by the actions of many advocates who worked tirelessly and succeeded in preserving much of what makes Albuquerque special.

Further Reading

Albuquerque's Environmental Story (1996) edited by Hy and Joan Rosner. City of Albuquerque, <https://albuqhistsoc.org/albuquerques-environmental-story>.

Albuquerque's Parks and Open Space (2011) by Matt Schmader. Images of America series, Arcadia Press, Charleston SC.