



GHOSTS OF THE PLATEAU

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(Sojourns

summer/fall 09) THINGS SELDOM SEEN



The Splendid Fractions

Yes, we have memory,
we have foresight,
but this daylight world,
this sensory present—
a goodly place, to be sure—
is not everything.
It is just a splendid fraction.

BY CHRISTOPHER COKINOS

I'M HIKING AT DUSK in Arches National Park. It is January, and I see the air purple itself once the sun sets. As I work my way along a trail nestled behind a cliff, I come to a garden-like opening. An elderly couple looks up, smiles, says nothing, and walks back along the route I just came. They've given me this place. Curious, I step a few paces ahead to where they were. There, framed by an arch not quite thirty feet high and thirty feet wide, is a stunning view far above the country. Another smaller arch lurks in the stone. Under the main frame of Partition Arch, a bright moon lifts into the sky, washing soft light and shadows across rocks and ridges. The snow-capped La Sals rise in counterpoint. The sight sends me into ecstatic silence.

For a few moments, what I see becomes all I am.

Another journey south from my home in northern Utah's Cache Valley, a touristy trip with my partner Kathe. She's never seen the Grand Canyon, and it's been decades since my



mother took my sister and me there. Though it's early March, the rim is crowded with watchers before dawn; the sunrise does not disappoint. But it's the memory of the breakfast afterwards that I conjure up right now—steak and eggs at Bright Angel Lodge. Kathe comments on the gusto with which I attack the meal. Years, I say, it's been years since I've had steak and eggs for breakfast. I still remember the taste.

The snow-capped La Sal Mountains as seen from Delicate Arch, Arches National Park. Photo by Dave Hammaker.



because
it is
underground

Sinkholes and other works of water

Below there is water—streaming, percolating—
dissolving solid rock.

A

HUGE QUANTITY OF GROUNDWATER is stored in limestone formations beneath the Colorado Plateau, but it is not contained in underground reservoirs. Rather, water moves through a catacomb of interconnected waterways that more resembles Swiss cheese than solid rock. Rarely is this phenomenon visible, but a float trip down the Colorado River through the Grand Canyon provides a rare glimpse. Thirty-five miles downstream from Lees Ferry, just below Vaseys Paradise, a cliff of Redwall Limestone reveals its inner structure.

When limestone dissolves in groundwater, the result may be the creation of caves, springs, and collapse structures such as sinkholes. The major factors that control solution activity are fractures and composition of beds. Fractures provide vertical channels through which water can easily move downward, dissolving rock and enlarging the fractures. Some individual rock layers within the Redwall are more susceptible to solution activity than others. A series of caves may form along specific beds. In time, solution activity enlarges the fractures and holes in bedding planes, resulting in a complex subterranean network of caves that can extend for many miles through the rock body.

Caves in Redwall Limestone, seen from the Colorado River. Photo by Kenneth Hamblin.



Photo by Adriel Heisey

L. GREER PRICE

On a remote high desert plain an array of carefully arranged telescopes makes visible the workings of the cosmos.

The Very **Large** Array

FOR THOUSANDS OF YEARS, astronomers and their prehistoric counterparts have scanned the night skies, looking to find order in the lights that shined above them. Using only the naked eye, these early astronomers discovered an enormous amount about the cosmos. As technology advanced, and our ability to refine our glimpse of the visible features in the night sky increased, the search for order and meaning was carried to new heights.

But until the middle of the twentieth century, even the most advanced astronomers with the most sophisticated optical telescopes were able to see only a small fraction of the electromagnetic spectrum, whose waves—long and short, visible and invisible—bombard our planet continuously, from a variety of sources. What they missed were those invisible waves, the greater portion of that naturally occurring, broad spectrum of electromagnetic radiation of which visible light is only a small part.

A panorama section of the Milky Way in the constellations of Scutum and Aquila illustrates the dynamic interplay between the birth and death of massive stars in our Galaxy. Image courtesy of NRAO/AUI and (Rick White, STScI) (Bob Becker, IGPP/LLNL & UC-Davis) (David Helfand, Columbia)



Ghosts on the Colorado Plateau

TERESA JORDAN

THE COUNTRY WAS VAST AND FOREBODING and they were all alone in an isolated adobe hut in Yeso Canyon, a patch of high desert in northern New Mexico, surrounded on three sides by the Piedra Lumbre's Cliffs of Shining Stone. Far in the future, the homestead would be known fondly as Ghost Ranch and would nourish such luminaries as Georgia O'Keefe, but in the 1890s it was referred to as El Rancho de los Brujos, the ranch of the witches, where a young mother and her little girl were held captive by evil spirits—or rather by the stories about evil spirits that the Archuleta brothers told them.

Put yourself in that young mother's place. You know your husband and his brother are not only cattle rustlers but also murderers, men so cruel they are known as "*los animales*." You want to return to the safe embrace of your family in San Juan Pueblo, but the brothers won't let you. They tell you that they will slice you if you try to leave, and if the brothers don't get you, the witches will. Day after day, the men talk about the spirits: the earth babies, red-haired beasts who live in the cliffs and howl like tortured infants; the flying cow who brings death to anyone who sees her; and most fearful of all, Vivaron, the thirty-foot rattlesnake who lives under Mesa Huérfano, Orphan Mesa. You know that the witches are real and so does your daughter: You both hear them in the wind at night, and in the coyote's howl.

Your husband is the less brutal of the two men, and you cling to the hope that your wedding vows can keep you safe. But in an instant he is dead, slain by his brother who accuses him of hiding gold. The brother says you know where it is, but you don't. You must escape; your life and that of your daughter depend on it. The brother sees flight flicker in your eyes. "*Nunca pienses en eso*," he spits: Don't even think of it. He tells the stories of the witches one more time, and in his rage they loom more terrifying than ever. He leaves you quivering in your hut and stomps off to get drunk.

Suspended silt and minerals give a ghostly appearance to Havasu Creek. Photo by Mark Lisk.
Ghost image: Photo by Slyadnyev Oleksandr/Shutterstock.



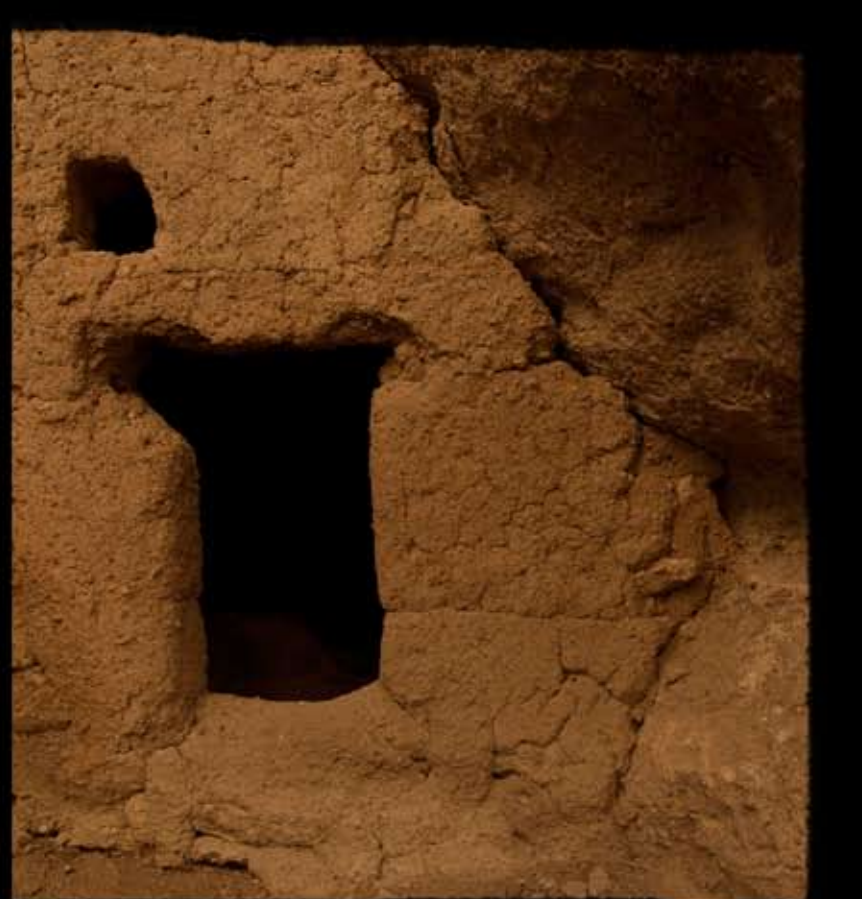
Through a T-Shaped Door

TEXT AND PHOTO COLLAGES
BY RAEHEL RUNNING

A single line defines space, time, countries. Crudely or delicately drawn, it becomes the contour of a man, a woman, a bird, a snake, a fish, a butterfly, the sun, moon, and stars. Patterns emerge, disappear, and are redrawn. The dark and light of it illuminates our human passage. It can be seen as a violent scar or rendered into a beautiful form dividing or uniting our perceptions. It is the foundation of history, a map that is often indecipherable but that links us to our past and our future. Our lives were connected to the landscape of spiritual, artistic, and cultural exchange long before lines were imposed on a map.

I am a photographer migrating across a line between my birth home in northern Arizona and my adopted home in northern Chihuahua, Mexico. My interest in the cultural connections of the Greater Southwest—the *Gran Chichimeca*—began when I was a child and has continued in my adult life. I made my first journey south to photograph a story about a village of potters in Mata Ortiz—the legacy of Spencer MacCallum and master potter Juan Quezada, two people worlds apart, each inspired by the beauty of ancient pottery— where a rare expression of art has changed a community. Despite distance and “foreignness,” I discovered that northern Mexico was closely related to my homeland. What began as a four-day editorial assignment has grown into a two-year visual odyssey. It continues to unfold in surprising and unexpected connections between what have become for me two homes.

It is said that the ruins of mythic Aztlan lie at the bottom of Lake Powell. If that is true, I wonder what they can tell us of connections that have been lost. Aztec ball courts are found throughout northern Arizona. Mexican agaves grow at the bottom of the Grand Canyon; scarlet macaws have been found in ancient burial sites and are still used in ceremonies from the Hopi mesas to the Rio Grande. As a child I was taught to respect the San Francisco Peaks as a sacred mountain, as the home of katsinas who brought the rain. As I learned about the cultures of the Colorado Plateau I wondered about the people who once occupied the living dioramas of the Four Corners region at Mesa Verde, Canyon de Chelly, Walnut Canyon, Wupatki, Tuzigoot, and Montezuma Castle and Well. I walked through canyons and dry washes where I saw their cliff dwellings, turkey pens, lookout towers, and kivas. I traveled on the San Juan and Colorado rivers where *pahos* (prayer feathers) still carry prayers from the holy shrines of the *Sipapu*, and the sacred salt mine. The breath of the ancient world has swirled throughout my life in warm winds and thunderstorms.



Rain appears in the middle of the plateau and the sierras. The old traditions continue; It is a prayer for life's continuation and fruitfulness. Katsinas dance, grandmothers light candles, people and clouds migrate across the land. Everything is connected to the call of rain.

