



Nature Notes

Zion with a Capital “W”

“We need wilderness preserved because it was the challenge against which our character as a people was formed.”

– Wallace Stegner

In the United States certain words stand as emblems of the ideological roots of the country’s essence: liberty, freedom, democracy. But there is another word, perhaps less political, which also speaks of an equally significant aspect of America’s roots, and that word is wilderness. We define wilderness as uncultivated and uninhabited regions; as empty, desolate, and pathless tracts; as wastelands. But in the supposed emptiness of these wild spaces are often found natural landscapes which are essential to the preservation of our roots as American people and to our roots as living, sentient beings on this planet.

Between our civilized lives and nature lies a rift, a space of disconnect. Due to this disconnect, we no longer know the nature or names of the plants and trees which surround us in our lives. The life cycles of animals are wholly foreign to us. The sound of a freely flowing river is awkward in our buzzing ears. The still and silent grandeur of a rock fails to impress upon us the scale of infinite time at work around us, which has slowly given us the forms of the landscapes on which we live. In losing this connection to the natural world, we have lost a vital aspect of what defines us as Americans and as human beings. To be whole we must regain that which we have lost. Perhaps the most effective way to regain a connection to the trees, the rivers, and the rocks is through direct exposure to, and experience in, natural environments, such as those preserved and protected in national parks—lands which are largely and essentially wild. It is in returning



Zion Wilderness Areas, like those found along the Wildcat Canyon Trail, offer visitors places in which they can reconnect to wild nature. Photo by Sally Wier

to these wild spaces that we can most closely begin to feel, hear, smell, and touch that which we, through civilization, have so effectively forgotten. It is in coming back to wild nature that we can begin to regain a sense of our existence free of civilization and remember that we, too, are part of the wild earth.

Zion National Park offers us spaces to explore in which we have opportunities to reconnect to wild nature. It has areas of wilderness largely influenced by natural and dynamic processes which have been changing and shifting the land’s form and appearance for millions of years. All of these processes have taken place regardless of the area’s national park designation by the United States Congress. But the legally designated and protected areas of Zion that we see today have also been growing and changing over time. Zion National Park was first

set aside as a federally protected area on July 31, 1909, as Mukuntuweap National Monument; it then contained 16,000 acres of land, including Zion Canyon. On November 19, 1919, the monument became Zion National Park, and with the change in status came more land, another 60,000 acres. In 1937, a second monument was created and subsequently incorporated into

Wild spaces are vital to preserving our roots as sentient beings living on this earth.

Zion National Park in 1956. Today, this northern section of Zion is known as the Kolob Canyons. More legislative changes came to the park in 2009.

-continued on page three

What's Blooming in Zion?

Desert-marigold (*Baileya multiradiata*-Sunflower family) blooms from March through November if given plenty of rain. Grayish basal leaves covered with thick hairs reflect ultraviolet rays to reduce light intake. The plant's intense yellow flowers can be seen along roads and trails in lower Zion Canyon.

Cardinal-flower (*Lobelia cardinalis*-Bellflower family) gets going in late summer. The blossoms have shocking red lips that seem to reach out to pollinators such as hummingbirds. Watch for these water-loving plants in wet environments, especially at the Middle Emerald Pools area and in The Narrows.

Yellow Beeplant (*Cleome lutea*-Caper family) colonizes along the road approaching Zion Lodge. When the park has a wet summer, bee-plants can grow up to four feet tall. The flowers are bright saffron-yellow, and their many stamens shoot upward to give bees more opportunities to pollinate the entire plot.

Blueleaf Aster (*Aster glaucodes*-Sunflower family) doesn't rush to bloom. They wait until summer's end to show off their yellow disks and lavender rays. Look for these waxy-leaved plants under taller shrubs and trees, soaking up the shade around the Visitor Center. They also tolerate a full-sun environment along the Lower Emerald Pool Trail.

Remember, it is against park policy to pick flowers. Please heed signs that say, "Stick to the Trail," and give plants a chance.



Zion National Park
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On August 1, 1929, the first issue of *Nature Notes* was published. Written and produced by the Education Departments at Zion and Bryce Canyon, its purpose was to provide information to "those interested in the educational opportunities, the natural history, the scientific features or the scenic beauties of this region." Eighty years later, *Nature Notes* continues this tradition by covering subjects pertinent to Zion National Park and its employees.

The Condors Are Coming

On Monday mornings my job is easy. So easy, in fact, I don't have to say anything at all. As an interpretive park ranger, I bend over backwards, jump around, tell stories, do practically anything to help visitors connect to Zion every day. On Monday mornings, however, something different happens. The game changes. I give a ranger-led program called "Canvas of Cliffs." This involves standing at Big Bend with a spotting scope helping visitors visually tour the vertical world. This may mean peering at hikers tackling the Angels Landing route, or rock climbers scaling the canyon walls, but some curious seekers come for something more. Some arrive hoping to glimpse the rarest bird in North America: the California condor.

One Monday morning I was stationed out at "Canvas." As the sun climbed over Cable Mountain and began to heat the air around me, I could almost feel the warm columns of air (thermals) starting to rise. Craning my neck to scan the horizon over 1,000 feet above me, I saw a huge shape crest the cliff walls, casting a massive shadow on Angels Landing. It spiraled around and upward with a steady deliberation, coasting so close it appeared to almost scrape the wall. "Is that a condor?" a bright-eyed, gray-haired woman gasped. "Yes, ma'am," I told her. As she turned to embrace her son, I saw the tears in her eyes. "I've been waiting my whole life to see this bird," she said.

Back from the brink of extinction thanks to captive breeding programs, these huge vultures have been soaring southwestern skies since 1996. Populations are centered around the release site at Vermillion Cliffs National Monument, the "natal area" where these birds return every winter to breed. With a wingspan topping nine feet and the ability to soar over 150 miles daily, they easily reach Zion, a stone's throw at 75 miles "as the condor flies." Like so many other species, the plight of the condor began with human settlement and expansion. Currently the greatest threat to condor recovery in the wild is poisoning from lead. These gentle giants are scavengers, and as they glean dead deer and gut piles left behind in nearby forests lead they ingest poisons them. Voluntary nonleaded ammunition programs have been started in Arizona and Utah with about an

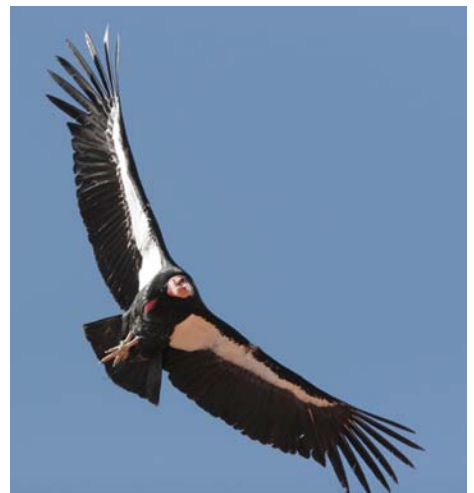
80% success rate in the last three years. Still, condors continue to fall victim to lead poisoning, including number 27, one of the only females to breed successfully and multiple times in the wild.

Since the first area release, Zion sightings have been increasing in frequency and duration. As many as 42 individuals have been seen at one time, and it seems these birds have found a home here. High, sparsely vegetated cliffs provide exceptional thermal

The California condor is the largest flying land bird in North America.

updrafts that condors rely on for soaring (the wings of these birds are suited for gliding). Plenty of potential food sources may be found because of Zion's large population of mule deer, and the nearby sheep ranches provide plenty of expired ewes for these carrion eaters. Condors have been sighted all over the park, but common haunts include Big Bend, Lava Point, and Kolob Canyons. This year a mating pair was observed searching for a nest site in Kolob, and though no nest was found by surveyors, they remain optimistic. When it comes to the question of condors nesting in Zion, it seems to be a matter not of *whether* but of *when*.

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Wing tags and radio telemetry track the birds' flight patterns. Photo by The Peregrine Fund

Zion's Zesty Colors

Autumn is my favorite time of year. From my childhood in western New York, it means apples and cider, sweaters and school days, sunny skies and crisp air. Most of all autumn means color. The world suddenly becomes more vibrant. The sky seems to turn a deeper, darker shade of blue, and green leaves slowly turn to bold new colors: crimson, burnt orange, and gold. Now, as a ranger working in Zion National Park, I find autumn is no different. The temperatures cool, the days grow shorter, and the colors change. And while the desert is not a place many associate with autumn colors, I believe it rivals New England any day. Against the blue skies and red rocks of Zion Canyon, the changing leaves are bursting fireworks of yellow, orange, and red. But why all these magnificent colors? And why now?

As I lazily lounge beneath the shade of a cottonwood tree near the Zion Lodge, I gaze at those shiny green leaves rustling above my head. They are absorbing almost all of what we call visible light, which includes every color of the rainbow. We see color because all objects in the world absorb and reflect



Zion's changing leaves look like fireworks bursting against the red rocks. Photo by Amy Gaiennie

different sections of the rainbow, and our eyes see what is reflected. The chlorophyll pigment in leaves absorbs all colors except green, so green is what we see. During spring and summer the cottonwood leaves are producing chlorophyll. But as the summer draws to a close, the shorter days and longer nights signal the plant to slowly stop producing that pigment. Luckily for us, that's when the other pigments in the leaves become unmasked. Each green leaf will develop splashes of yellow and brown, a result of carotenoid pigments, present in the leaf all year but seen only in the fall after the chloro-

phyll disappears. Carotenoids give vegetables like carrots and corn their color and gradually turn all the cottonwood trees and box elders along the banks of the Virgin River into a vibrant gold. Because of another pigment called anthocyanin, produced only in the fall, the shiny green big-tooth maples along the Emerald Pools Trail will leisurely morph into crimson. Anthocyanins color fruits like apples and cherries. These are the pigments that paint the autumn landscape. Depending on the rainfall and the temperatures, Zion Canyon's fall colors usually peak around mid-November.

Sitting under a cottonwood tree on a blistering 100 degree day, I find it hard to imagine it will ever be fall. Inevitably, though, the sun will rise a little later and set a little earlier. I will stop feeling as though I might melt when I walk out the door. And those shiny green leaves keeping me cool will slowly turn gold. Right now, though, as I lie beneath the fluttering leaves, I will keep dreaming about autumn, its cool temperatures, and its palette of colors.

- Sarah Stio

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Lead from human hunting operations is barring a completely successful reintroduction of a wild and free-flying condor population. We can be hopeful that area deer hunters will follow the ways of their duck hunting cohorts who have become champions of the wild things, but it is a comfort to know that these birds are protected within the boundaries of a national park and that their populations are expanding. As long as these winged wonders continue to soar the skies of Zion, we too can find refuge within this place: the refuge that comes from a Zion that holds always the promise of life, revival, and hope.

- Caitlin Ceci

"Wildness reminds us what it means to be human, what we are connected to rather than what we are separate from."

Terry Tempest Williams

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On March 30, President Barack Obama signed into law the Omnibus Public Lands Management Act. This act designated 124,406 acres within the park as Wilderness, making 83.7 percent of Zion National Park a Wilderness Area.

In a legal sense, Wilderness with a capital "W" is distinct from lower-case "w" wilderness and its associated meanings of uninhabited emptiness. The Wilderness Act of 1964 states that "A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." Legally designating an area as Wilderness means that certain policies are applied to the management of that land area. These policies are put in place in order to best maintain the inherently wild qualities and characteristics of the area.



Blooms in the high desert. Photo by Sally Wier

Putting legality aside, however, the essential part of having Wilderness in our country is that wild and open spaces are being preserved for us to experience in their free and natural states. When we go into wilderness, and spend time in wild spaces, we give ourselves the opportunity to reconnect to the earth from which we have become so separated. When Henry David Thoreau so eloquently noted that "Wildness is the preservation of the world," he spoke not only of the power of wild space to preserve the integrity and beauty of the natural earth, he also addressed the need for our own souls to be touched by wildness and wilderness, whether it comes with a capital "W" or not.

- Sally Wier