

# The Meaning of Wilderness

*Catastrophe at Sage Creek, South Dakota. By Philip S. Hall*

**T**he White River Badlands in southwest South Dakota is a land of barren pinnacles, twisting canyons, grass-covered mesas, saw-toothed ridges, and dry-wash gullies. Within these badlands is the Sage Creek Basin, 64,000 acres of contrasting, spectacular beauty, rimmed by a stark serrated ridge that rises up to form an impenetrable wall, and cradled by gentle, grass-covered hills creased with cedar-filled draws. Sage Creek runs through the basin. Here and there, if you know where to look, are springs. From the north rim, looking south clear to the horizon, there are no telephone poles, barbed-wire fences, or tire tracks. The only sounds are the songs of meadowlarks, the shrieks of red-tailed hawks, the whistles of prairie dogs, the whispers of wind, and solace.

Sage Creek Basin was designated a wilderness area in 1974. Employees at Badlands National Park erected a six-foot-high, woven-wire fence along its west and north perimeters. Given protection from hunters, mule deer proliferated. By 1980, every cedar-lined draw harbored a half-dozen mule deer. Then came the hot, dry summer of 1984. The fence built to protect Sage Creek kept the mule deer confined in the basin. Congregated and stressed by heat, the mule deer were killed by a virus that turned their tongues a telltale blue. By fall, rotting carcasses punctuated the air with a putrid stench.

The Park Service reintroduced a small herd of buffalo into Sage Creek Basin in 1963 and the vastness and ruggedness of the wilderness swallowed them. Even though a horseback rider might search all day to find the buffalo, Sam Lone Hill, an Oglala Sioux park ranger, always knew where they were grazing. Sam watched over them like a proud parent. The buffalo prospered and soon reached the wilderness area's calculated 300-head carrying capacity. Then they surpassed that number by a considerable amount.

Initially, the buffalo relied on three sources of water: Sage Creek, three dams, and a watering tank at Quinn Spring. Sage Creek is a wash that dries up in the summer heat. The three dams each hold a broad expanse of water in the spring, giving them the appear-



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*ABOVE: A healthy mule deer before overpopulation in the confined wilderness led to a die-off by a contagious virus. OPPOSITE: Rim or "wall" at the northeast corner of Sage Creek Basin.*

ance of veritable oases. But this is deceiving. They were built in 1919 to water cattle. Since then, the reservoirs have filled with silt. At their peak in early June, the dams are little more than knee deep. By July, they are mud holes. By August, they are bone dry, waiting for a gully washer that may or may not come.

The watering tank at Quinn Spring is spring fed. The water is cool and sweet, but the collection pit is small, shallow and inadequate, and the tank is not large enough. When a herd of buffalo comes to drink, only the first get to drink their fill before the tank is sucked dry. Water dribbles in so slowly that it takes a week to refill the tank. When it empties, the remaining parched buffalo bunt the tank with their armor-plated skulls, trying to knock the water loose. In time, they give up and wander away. Some die of dehydration.

In recent years, Badlands National Park purchased land along the west-central edge of Sage Creek Basin that came with a good dugout that always has water. It also acquired several sections of land on the north edge of the wilderness area that have a deep well equipped with an electric pump. The pump brings water to several large stock tanks.

The new, reliable water sources were boons, but they did not solve all the buffalos'

water problems. In the drought years from 2001 to 2008, they stayed close to the three water sources, grazing only in early morning or cool evening. When nearby grass was destroyed, they ventured farther from the water.

On Aug. 21, 2007, the sun came up ominously red. By nine a.m., it was already 100 degrees. By three p.m., the heavy-coated buffalo became desperate for water. A bull stuck its nose into the wind. A southerly breeze carried the faint smell of life-sustaining water from beyond the badlands wall. The bull scaled the steep wall and slipped and slid down the precipitous slope still heading toward the smell of water. It came to a barbed-wire fence. Stopping meant dying. The ton-and-a-half bull leaned against the fence, driving the barbs into its thick, tough hide until the wire snapped. Continuing south, its pace quickened until it finally reached the water. The bull dipped its shaggy head into the stock tank and drank its fill, then lay down to chew its cud.

Buffalo carry brucellosis, a disease readily transmitted to cattle. A cow with brucellosis aborts its calf, but even worse, the entire herd must be quarantined, which can bankrupt a shallow-pocketed rancher. A cowboy report-

ed the bull to the Badlands National Park headquarters and a ranger was dispatched. The ranger could not chase the buffalo back into the wilderness, so he shot it. In the Sage Creek Wilderness, the fittest buffalo do not survive.

In 1964, park personnel also released 22 bighorn sheep into the Sage Creek Wilderness. They staked out their range on the steep-sided tables in the northeast corner of the basin and seemed to adapt. However, 10 years later not a single ram had a full-curl rack. The bighorn occasionally wandered out of the wilderness, bringing them into contact with domestic sheep. When they returned to Sage Creek Basin, some were carrying lungworm. It takes eight years for a ram to develop a full-curl rack, but in the Sage Creek Wilderness, they do not live that long. Lungworm kills its host within five years.

In 1965, there were two small prairie dog towns in Sage Creek Basin. Once the basin got its wilderness designation, prairie dogs markedly increased. It seemed like a sign of ecological sustainability because the prairie

dog is prey for rattlesnakes, coyotes, badgers, hawks, and eagles. By 2000, there were prairie dog towns on every grass-covered flat in Sage Creek Basin, roughly 7,000 acres, and that gave conservationists an idea. Why not bring back the nearly extinct black-footed ferret?

The Black-Footed Ferret Restoration Project was launched in 1995 when 34 ferrets were released in Conata Basin and 26 were released in the Sage Creek Wilderness. Ranchers were banned from poisoning prairie dogs, so the population in Conata Basin exploded. As a result, the entire basin was reduced to dirt and starving prairie dogs cannibalized their own young.

In 2009, the prairie dogs in Conata Basin started to die and biologists sent a few to a lab for analysis. It turned out to be the same plague that swept through Europe during the 14th century, killing half the human population. Now it was killing black-footed ferrets. Wildlife biologists tried to eradicate the plague, feeling compelled to justify the two billion dollars that had already been spent trying to save the creatures from extinction.

Prairie dog towns were dusted with a flea-killing powder, traps were set for any survivors, and every captured ferret was vaccinated. But Mother Nature scoffed at the bribe. The plague spread into the Sage Creek Wilderness.

“How did the fleas get from Conata Basin to the Sage Creek Wilderness?” the biologists asked.

“Look through my binoculars at that cottonwood tree four miles off yonder,” a trapper told them, “and tell me what you see?”

“It’s a golden eagle,” the biologists replied. “What’s the point?”

“When the eagle catches a prairie dog, he carries it to that tree. He is not just carrying the dead prairie dog. He is carrying the fleas that weakened the prairie dog and made him easy prey. That is your answer. The fleas did not jump to Sage Creek Basin, they hitched a ride.”

The transport system was a good one. By 2011, the once thriving prairie dog towns in Conata Basin and the Sage Creek Wilderness were ghost towns.







The story does not end with mule deer dying by the hundreds, brucellosis-carrying buffalo being shot, bighorn sheep being eaten internally by lungworms, or prairie dogs being killed by the plague. The next blight came through the air—so small and silent that for years it went unnoticed. Canada thistles invaded the Sage Creek Wilderness, their wind-borne seeds finding the soft, loose dirt in the 7,000 acres of empty prairie dog towns a good place to take root. The four-foot-tall thistles put down vertically deep and horizontally extensive root systems that suck up any available moisture. Nothing eats these tough, fibrous weeds. Horticulturists usually kill Canada thistles. But not in the Sage Creek Wilderness, because it is protected.

The plight of the mule deer, buffalo, bighorn, and prairie dog, and the emergence of noxious weeds begs the question, “What went wrong in the Sage Creek Wilderness?” What went wrong is that calling 64,000 acres a wilderness does not make it one. Despite Badlands National Park’s proudly posted sign proclaiming Sage Creek Basin a wilderness, Mother Nature doesn’t read.

To really be a wilderness, an area must meet three criteria. First, it must be untouched, or, at most, only lightly touched by modern man. One such example is Glacier Bay Wilderness in southern Alaska. Man’s only impact here are a few remaining stones from John Muir’s cabin, some scarring of creek beds from placer mining in the



1890s, and the foundations of an abandoned fish cannery.

Second, the animals and plants that existed when man first encountered that land must still survive in it. Again, Glacier Bay serves as an example.

Third, the wilderness must be a complete ecosystem. This usually requires a huge tract

of land. Glacier Bay is 2,777,000 acres. Most animals there live their entire lives within its borders, but if one does reach the edge of the wilderness, there is no fence to hold it in.

The Bob Marshall Wilderness in north-west Montana also meets these criteria. Fur trappers came to the area in 1827, built small log cabins, occupied them for a couple of years, and then moved on. When cattlemen came to Montana, the ruggedness of the mountains kept them out. So there are few traces of man here. It is also huge, encompassing 1,009,356 acres which support a healthy population of elk, bighorn sheep, mountain goats, deer, wolverines, mountain lions, and bears—the same wildlife that trappers found 184 years ago.

Sage Creek Wilderness does not meet any of these criteria. Modern man has left indelible footprints here. There are building foundations, cookstoves, barbed-wire fences, crop furrows, a well-preserved gravestone, and a hand-dug well. Indeed, the buffalo could not survive were it not for the man-made water tank at Quinn Spring, the dam, and the deep well pumping water by electricity.

The Sage Creek Wilderness is only 64,000 acres. It is a self-contained ecosystem perhaps for the frogs living in Frenchie Bessette’s dam. If the buffalo weren’t fenced in, they would migrate south in the winter to the Platte River and north in the summer to Canada. Similarly, it is not a complete ecosystem for the mule deer, antelope, bighorn, coyotes, or other animals that pass through.





FROM TOP: Looking west toward the northeast wall of Sage Creek Basin, a natural barrier. ► Newly transplanted bighorn sheep don't live long enough to develop a good curl. OPPOSITE: Buffalo bulls sparring during mating season in late August. ► Antelope could also use more room to roam. ► Bald eagles and other raptors help spread the plague for miles by transporting fleas on their lunch.

The Sage Creek Wilderness also does not meet the third and most important criteria of a wilderness. Only 130 years ago the basin was prowled by black bears, grizzly bears, and wolves, which kept the ecosystem in balance. These predators put the wild in wilderness. The black bears were exterminated first. In 1893, Henry Gannon killed the last grizzly in the badlands. Fred Hansen killed the last gray wolf in 1923. Today, the biggest, most dangerous predator in the Sage Creek Wilderness is the mouse-hunting coyote.

There is a patchwork of similar wilderness areas all across the West—each with its own set of devastating, unintended consequences. An egregious example makes the point.

A rainless thunderstorm swept across the northwest corner of Nebraska on July 26, 2006, and the lightning strikes started numerous fires. One started on 20,000 acres of government-owned land that butted up against the south edge of Ted Kjerstad's ranch. Seeing the fire break out, Kjerstad hooked his tractor to a disc and raced toward it. He was taking down the barbed-wire fence to get his tractor through to help contain the fire when a government man arrived. "What do you think you are doing?" the federal agent demanded to know.

"I'm going to disc a circle around that fire before it gets out of control," Kjerstad replied.

"No, you're not. That's wilderness. You can't take a tractor into a wilderness area."

So the Spotted Tail Wildfire burned 60,000 acres and nearly burned down the town of Chadron. The cost of the fire and fighting it exceeded one million dollars—all because someone thought that 20,000 acres constituted a wilderness.

Designating a small tract of land as a wilderness area does not a wilderness make. Calling them that leads to ecological disasters. Instead, these small parcels should be called "protected areas." Protected areas are managed. Managing protected areas will leave footprints, but these can be light. And the government agent in charge must be a good neighbor. ■

*Philip S. Hall lives in a small town on the edge of the Badlands, not far from the ancestral ranch started by his grandfather when the area was opened to white settlement in 1890. He is the author or co-author of nine books, including "Reflections of the Badlands" (\$15) and "An Insider's Guide to the Badlands," a pamphlet that will be sent to anyone who sends \$6 to Box 97, Wasta, SD 57791.*