



Raising a Ranch from the Dead

By ED MARSTON

As we have screened our documentary film Green Fire around the country over the past year, we've found that one of its best-loved characters is New Mexico rancher Sid Goodloe. We thought we'd give you the opportunity to learn a little more about him. Ed Marston wrote the following article for High Country News in 1996, more than fifteen years ago. Today, Sid continues to follow the path Marston has described: listening to his land and caring for it the best he can.

For almost four years I have been biting down on Sid Goodloe's story as though it were a suspicious gold coin. I have also been telling bits and pieces of it to audiences, testing ideas I wasn't ready to put on paper.

Putting it on paper meant confronting the audacity and complexity of Goodloe's story, and the fact that so many experts dispute his conclusions. Goodloe's story is about land. It is about a ranch in New Mexico that he has spent his working life transforming from a tree-covered, waterless scrub land into a savanna—an open grassland dotted by stands of trees, ponds, and a flowing stream.

The land speaks for itself. The audacity comes in the conclusions that Goodloe draws from his work as a landscape gardener on a large scale. He says that the Southwest has been deprived of fire for a century, and that now, before it is too late, we must move against the piñon-juniper forests, P-J, as they're called, that have come to cover much of New Mexico and Arizona. He says we must also act against the neighbors of P-J, the upland thickets of ponderosa pine. Unless we move decisively, he warns, the region's watersheds and wildlife will be lost as surely as we have lost those of Los Angeles and Phoenix.

The West in these unhinged times is not short of radical thinkers. But Goodloe is different. His ideas, instead of flowing out of some fevered ideology, flow off his six square miles of land.

Goodloe is anything but a New Ager—he's an Aggie, with two degrees from Texas A&M and a deep Texas twang to prove it. Nevertheless, he was led to his vision of the land by 600-year-old drawings Indians had incised into rocks on his land. Any doubts he had about the meaning of the petroglyphs were erased by a sign from the more recent past—notes from 1880 left by federal surveyors.

There is another audacious thing about Goodloe: He apparently developed a working grasp of ecosystem management long before he, or most of us, had heard the phrase.

We live our lives by the stories we tell. Goodloe's story is powerful because he promises us, and the land, redemption.

If you ask Goodloe why he bought a 3,500-acre, beat-to-death, unfenced ranch with 50 starving mother cows in south-central New Mexico exactly 40 years ago this month, he gives a careful answer.

"This ranch was badly abused, so I could afford it. But I also saw the potential. I knew I could make a living cutting firewood to buy food and clothes. I knew the soil was good. It was close to wildlife, so I could rent the land out to hunters in the fall. I knew if I integrated all the resources, I could make a living. I wasn't going to operate the way they taught us at Texas A&M. If I'd have been a purist cattleman, I'd have starved to death."

When Goodloe says the ranch "was close to wildlife" he is being euphemistic. In plainer language, his ranch had so little grass



"I knew if I integrated all the resources, I could make a living. I wasn't going to operate the way they taught us at Texas A&M. If I'd have been a purist cattleman, I'd have starved to death."

that wildlife stayed away. And what had been Carrizo Creek when Anglo settlers came to the area in the 1880s was by 1956 a deep, eroding arroyo that ran only when the snow melted or rain fell.

Goodloe could use windmills to make up for the lack of flowing water. But lack of grass was a much more serious problem. One of his first acts after taking ownership was to evict a team of archaeologists exploring an Indian village. Researcher Jane Kelley, recalling that event 40 years later, says, "I worked on the ranch in 1955. In 1956, we went back. Goodloe had just bought the ranch. He said to us: 'I can't stand it. You're running over blades of grass.' So we left."

The archaeologists didn't go far. The region is thick with ruins, and they found research sites on neighboring ranches. Kelley, now professor emeritus at the University of Calgary in Canada, came back to the area year after year. She kept an eye on Goodloe's ranch, and says that it became clear that his land, bit by bit, was becoming healthier.

"He let us back on the ranch in the 1980s. He had been incredibly successful in turning a raw arroyo into a stream with grass and sloping banks—it was hard empirical evidence of what he's done."

Jane Kelley says she wondered why Goodloe was almost the only rancher in the area to transform his land. In the course of her research, she had become good friends with one of Goodloe's neighbors and she asked him why he didn't restore his ranch. He agreed that Goodloe had improved the valley and the hydraulic system, but Kelley says he had no interest himself in changing how he did things.

It wasn't his way, the rancher told Kelley.

Goodloe sympathizes. He says he was able to turn his land into a productive ecosystem only because he was an outsider, and saw things freshly. Even so, "It wasn't an overnight deal. It took me 15 years before I could see what to do. And if I had been an old-timer, it'd never have happened."

One of the first hints about the true nature of the land came from archaeologists who told him 1,000 people had lived in a village on his land.

"It didn't strike me for years—the meaning of all those people living on my land 600 years ago. In the 1950s and 1960s, I was working for New Mexico State University or for the neighbors 10 to 12 hours a day. I had five little kids and a little ranch. I left home at dawn and came home after dark. I didn't have time to meditate on things."

Goodloe recalls that "it finally hit me some time in the mid-1960s, when I saw fish and beaver petroglyphs at the village." He realized that not only had the land supported hundreds of people, where he was having trouble supporting seven, but that there had also been live, year-round streams with fish and beaver.

Archaeologists say that just because the Indians were drawing fish and beaver doesn't mean fish and beaver were on the ranch. It could have been wishful thinking, like the Norman Rockwell paintings many Americans

are still so fond of. But Goodloe takes the village and its art literally. His next insight into the land came when he decided to fence the ranch in the 1960s. To find the property lines, he got the notes the U.S. survey team had made on its trip through the region in 1880. With their help, he found the brass caps set in concrete that mark the section, or square-mile, corners.

But he also needed the quarter-section corners. The surveyors' notes said they were marked by cut stones because there were no witness trees nearby. When Goodloe, starting at the section corners, used a compass and tape measure to find the quarter-section corners, they were in the middle of a piñon-juniper forest that looked as if it had been there forever.

"The penny fell from my eyes right there. I said: 'There's something drastically wrong here.'"

It took 10 years, Goodloe says, but he finally put it all together. His ranch had once been an open grassland with a stream and fish and a village housing several hundred people. Now he had to figure out how to bring back that lost landscape.

He had made one major attempt at improvement the year after he moved onto the ranch. With help from the U.S. Soil

Conservation Service, he brought in a crew to drag a huge anchor chain, hung between two bulldozers, across half of his 3,500 acres, knocking down the piñon and juniper trees. The same thing was being done all across the Southwest. Ranchers and federal land managers were trying with varying degrees of urgency to turn back the "brush" that was invading the region's federal and private grasslands. All efforts depended on the same thing: generous help from the U.S. Treasury.

The chaining worked for Goodloe. Grass grew and wildlife moved onto the ranch. He expanded his herd. And, he got another clue. After the chaining, the arroyo started to run. With the piñon and juniper trees no longer soaking up and transpiring all the rain and snowmelt, and with grass now on the land, the water table had risen and was emptying into the arroyo. The arroyo was still eroding and rockbound, but it was no longer dry.

Then, in the early 1960s, about five years after he had chained, Goodloe got a shock. He realized that the big trees the anchor chain had knocked down and left for dead were alive. "The chain had just pulled the trees over, but some roots were still in the ground."

Even worse, the smaller piñon and juniper trees had been bent over by the chain, and then had snapped back up. With the big trees barely alive, the smaller trees were "released," as foresters say. They began to grow quickly. Goodloe realized

that if he didn't do something, the land would soon be worse than before it was chained.

Using all the time he could spare from working jobs off the ranch on the task, he bulldozed down trees into windrows and burned them. When he wasn't bulldozing and burning the big trees, he was on his tractor, "popping the small trees out of the ground" before they grew too large to handle.

It took him four years, from 1962 to 1966, to clean up the mess that the 1957 chaining had left. He hasn't chained since.

By 1966, Goodloe had some open meadows and a fair amount of grass. But he knew the ranch wasn't healthy. And economically, it still couldn't support him and his family. Looking back, he says, he just didn't have the knowledge to see what had to be done.

"When I was in the university the first time, there were no words 'riparian' or 'ecosystem.' I had no background that would help me. I didn't know anything but to get rid of brush and rotate cattle."

So in 1966, in search of cash and education, Goodloe leased his ranch—with strict limits on how many cattle the tenant could graze—and headed for Kenya with his family to manage a ranch.



Curt Meine, Sauk City, Wis.



Curt Meine, Sauk City, Wis.

There, he says, “I learned the true meaning of a savanna that functioned properly.” On Kenya’s wildlife preserves, he saw how periodic grass fires kept the land free of small trees, while allowing the large trees and grass to remain healthy.

He also heard in Africa of a remarkable game warden in Rhodesia (now Zimbabwe), so he flew to that country and met Allan Savory. At that time, Savory’s holistic resource-management approach to grazing was unknown in the U.S. Goodloe wrote the first American paper about Savory’s methods.

In 1968, Goodloe and his family returned to the U.S. with \$10,000 they had saved. Goodloe still didn’t feel ready to tackle the ranch. He didn’t know enough, he says, “so I decided to invest that money in me.” He went back to Texas A&M for a master’s degree in range science. This time there were courses on ecology and watersheds and hydrology.

In 1970, the Goodloes returned to the Carrizo Valley Ranch. “By then,” he says, “I had things figured out.” The phrase probably didn’t exist at the time, but Goodloe was about to try ecosystem management.

What Goodloe had doped out was how cattle had altered the balance of the land, allowing trees to conquer grass, not just on his land but throughout much of the Southwest. He saw that it began with the fact that a 30-year-old piñon or juniper stands only a few feet high. It has spent most of those years putting down roots. The trees grow so slowly, it takes much of a ranching generation for them to become noticeable. By the time the rancher sees what’s happening, it’s too late. Thousands, or tens of thousands, of trees would have taken over, the grass would have disappeared, and the rancher and his cattle could be starved off the land. By the time this had happened, even the federal treasury was of little help. As Goodloe had learned, sloppy chaining practices of the 1950s and 1960s were no match for the trees.

From the rancher’s point of view, the worst thing was that he had done it to himself by grazing the land too heavily.

In pre-Anglo times, Goodloe thinks, grass fires started by lightning swept away the seedlings, keeping the land open.

Because the trees stay small for so many years, the fires wouldn’t have to come too often, or burn too hot, to kill them.

There had always been piñon-juniper trees in the area, trees that by luck, researchers say, had escaped fire. These had regularly seeded the grasslands, and then the seedlings, except for a few lucky survivors, had been burned off. But then came enormous herds of sheep and cattle to slick off the range, stop the wildfires and allow trees to take over.

Goodloe says that once established, the trees are fierce competitors, sending roots out long distances just below the surface, crowding out grass. As a result, he says, the ground is bare in a mature piñon-juniper forest.

He has spent a lot of time on the land, digging fence holes, stretching barbed wire from post to post, searching for cows. Sometimes—not often enough, he complains—he has been caught in thunderstorms.

“I’ve watched the water flow out from under the piñon-juniper. Trees are supposed to halt erosion. But this water comes out brown. It’s heavy with soil.” Soil-laden water flowing off of grassless land led Goodloe to see the trees, or at least too many trees, as his enemy.

Because of what he had seen in Africa, Goodloe no longer wanted to totally clear his land. He cored each tree before he decided to cut it. If a tree were older than a century or so—if it had been around when the first Anglo settlers arrived—he let it stand.

“If I was a purist cattleman, I’d want to get rid of all of them. But I leave corridors for the wildlife. And I leave trees for me, for the aesthetics. A place that’s completely cleared off is the pits. I want to look out on beauty.”

Once Goodloe had created meadows by cutting down the post-settlement piñon-juniper, he went into the stands of old growth to cut out the younger trees. In the old days, he says, periodic lightning fires would have protected the large trees by burning out their youthful competitors. But even on Goodloe’s ranch, fires are rare, and he plays the role fire once played; he cuts down the young trees before they can kill the older trees by taking



Curt Meine, Sauk City, Wis.

their water and nutrients.

By the mid-1970s, Goodloe had much of the ranch under control: he had cleared out much of the brush and created open meadows. The ranch was looking more and more like the savannas he had seen in Africa. Speaking to groups, he likes to include an African landscape, complete with wildebeests, among slides of his ranch. It takes a moment or two for even a professional audience to realize that they are no longer looking at New Mexico.

But, though the macro-landscape was in good shape, down on the ground, the ranch was still in trouble, with only one kind of grass. "Ninety percent of what I had was sod-bound blue grama grass."

Blue grama, he says, grows only in hot weather. Over the decades, the cattle had wiped out all the grasses and legumes that grow in the cool seasons. Goodloe's cattle and wildlife had enough to eat in the summer, but were on thin rations in spring and fall.

Ranchers with irrigation water and a summer grazing allotment in the mountains solve the lack of natural year-round feed by growing grass or alfalfa hay on their irrigated valley land, and putting it up in bales to feed cattle during the winter.

Goodloe, however, has no federal grazing permits and no irrigation water. Buying hay from other ranchers would bankrupt him. To survive, he needed to convince his land to produce grasses for all seasons.

It was a situation made for Allan Savory's short-duration grazing method that Goodloe had brought back from Africa. In 1970, he divided the ranch into 12 paddocks. The paddocks allowed him to move the cattle around, protecting the cool-season grasses from overgrazing. And all the time, he kept cutting trees, waiting a year or two for the grass to grow and dry, and then burning the cut-over land and seeding it with native grasses. Gradually, Goodloe says, he created a diverse array of grasses.

Today, unless he is hit by an exceptionally heavy winter, he

survives most years without having to feed much hay. His cattle get through the winter because he keeps them off two of his hot-season paddocks during the summer. These grasses grow high, where high means about 10 inches, and then dry out. When the snows come, he turns the cattle into these paddocks to feed all winter. It's not totally free, he says. He still has to feed them supplements. But it beats having to feed hay all winter.

Come spring, Goodloe turns the cattle onto the ranch's higher elevation paddocks (the ranch runs from 6500 to 7200 feet), which are dominated by cool-season grasses. "I let them start eating that about late April. Then they go to oak brush from about May 10 to June 15." Goodloe loves the oak brush, which he burns each year. New oak brush, he says, is very nutritious, and "every bite of oak brush is one less bite of grass."

By June 15, however, the cattle are done with oak brush. "That's when I usually get in trouble. Our monsoon rains don't start until July 10, and then we get our warm-season grasses. But from June 15 to July 10, things are tight in this country."

With the trees under control, and with a broad array of grasses on the ground, Goodloe turned his attention to a riparian area—to the eroding but now flowing gash in the ground known as Carrizo Creek.

The arroyo was flowing because Goodloe—unlike almost all land managers—had started his restoration project by healing his watershed, rather than by protecting his stream. His theory, he says, is that it makes no sense to restore a riparian area if the watershed above it is sick.

"The first big rainstorm will send enough water and mud down to simply rip out your new stream and its vegetation."

Goodloe says he began protecting Carrizo Creek in 1970 through cattle rotation. He fenced off the stream in the early 1980s, keeping the cattle out completely. Then grasses grew in the eroded streambed each spring and acted like the teeth of a comb,

screening dirt out of the flowing water and gradually building the arroyo back into a stream, with a flat bed and grassed-in banks.

Goodloe says his downstream neighbor was not happy about his improving land. Before Goodloe brought his watershed back to life, the land had shed the spring snowmelt from the Lincoln National Forest the way concrete would, giving his neighbor a nice burst of irrigation water each spring. Now Goodloe's land sops up the spring flood, releasing it only gradually into Carrizo Creek.

When Goodloe fenced his riparian area, he planted willows. "Once the willows get bigger, I will bring some beaver in and they can dam the stream. It will be a complete reconstruction job."

That will give Goodloe what he thinks the Indians on his land had 600 years ago. In the meantime, Goodloe plays the role of beaver. He has dammed the stream next to his house, and created a pond that is home to ducks and fish.

For years, Goodloe says, he was grateful to the Forest Service for sending the soil that rebuilt Carrizo Creek. But now he no longer needs more dirt, and he has been campaigning for a land restoration project on the forest. He has even helped out, cutting firewood and vigas off the forest, hoping to repeat on federal land what he had done on his land.

Originally, Goodloe recalls, it was a tough fight. The gods are ironic, and they gave him as a neighbor the Smokey Bear Ranger District—home place of the small, burned bear cub that became the Forest Service mascot. Goodloe's talk of thinning trees and reintroducing fire did not go over well. But over the past few years, the local Forest Service office has become a believer.

"They're working on it," he says, "but they let this thing get so far ahead of them that they'll never catch up."

Would a major flood off the national forest wipe out Carrizo Creek? Goodloe says it won't. "I think my watershed is strong enough that I can be physically wounded but not destroyed."

Goodloe was wounded in 1994. The forest's thickets of ponderosa pine above his ranch burned. Heavy rains then washed a river of mud onto his land. He used a bulldozer to divert the mud away from Carrizo Creek, but it filled seven of his 35 ponds with silt. He was disgusted.

"A stream," he warns, "is no healthier over the long term than its watershed. It's like everything else in nature."

This, then, is how Sid Goodloe has spent the last 40 years of his life: using energy and brute mechanical force to shove his ranch out of one ecological state and into another.

While Goodloe is worse for wear—one hip is now artificial—

the same can't be said for his land. "When I bought it, the ranch was overstocked with 50 cows. I now run about 100 head and I could run more in average years. But I stock for drought years.

"In my first year on the ranch, my calves weighed about 375 pounds on average. Last year was a dry year, but the steer calves weighed 640 pounds. I won't tell you what the heifer calves weighed; no one would believe it." That means Goodloe is getting almost four times as much beef off the land as it was producing 40 years ago.

He is also getting beams called vigas, firewood, Christmas trees, live trees for landscaping, wood for the small kiva ladders he makes when he can't work outside, increased numbers of wild turkeys and mule deer.

It's a holistic system, he says. The deer do better because he cuts and peels young ponderosa pine trees for vigas in the winter.

The mule deer eat the tree tops he throws away. That green browse, he estimates, has increased the fawn crop by 30 to 50 percent. It pays off for Goodloe in the fall, when hunters rent a cabin and the right to hunt his ranch.

Turkeys are also a game crop in New Mexico, but not on the Carrizo Valley Ranch. If you want to see Goodloe angry, ask about the turkey season.

"This is where the game department is stupid. The season is too long and too late. They're interfering with reproduction."

Why does he care about the native Merriam turkeys? "They absolutely keep my ranch free of grasshoppers. And they go through the (ponderosa pine) needles and scratch them up so they burn better. They're more important to me than anything else in the way of wildlife."

Goodloe's mantra is "not all trees are good and not all fires are bad." But he is no more a purist when it comes to fire than he is a "purist cattleman." He uses fire where he can—he religiously burns oak brush, and he'd love to see the ponderosa pine forests above him thinned enough to allow for cool fires.

But when it is too wet or dry and windy to burn, Goodloe climbs on a four-wheeler and rolls from seedling to seedling, administering a drop of herbicide to each.

Goodloe estimates that his job at home is done; he has brought almost all of his land back to its pre-settlement condition. But he says the entire Southwest is at risk of losing its watersheds, and that if the watersheds go, the rivers and cities won't be far behind. ■

ED MARSTON was the longtime publisher of High Country News (hcn.org). He lives in Paonia, Colorado. This article originally appeared in High Country News on April 15, 1996 and was reprinted with permission.



Curt Meine, Sauk City, Wis.