

Doing What Works

Sloppy science is damaging rangelands and wildlife.

What's missing is a complex functioning whole. By Chris Gill

I am a businessman for whom ranching and wildlife/habitat restoration are avocations. Because I married into a landowning family 38 years ago, at one time or another, and to varying degrees, I have been responsible for the management of ranches in Uruguay; near Austin, Texas, in the Texas Hill Country; in West Texas; and even a 3,600-acre river-delta/marsh ranch on the Texas coast.

I never had even a minimal understanding of what I was doing. I wasted hundreds of thousands of dollars. I was anti-cattle. I thought desert grasslands could best be restored by removing all cattle, and that if one had to make a living off their ranch, this would require very conservative stocking to protect soil and vegetation.

Then a neighbor introduced me to Allan Savory. Touring our 32,000-acre high-desert mountain ranch together, Allan used simple gardening analogies: To grow plants on hard, bare soil, one does not simply rest it and hope! Break the soil surface to let water and seeds

in, and cover soil with plant litter and manure to provide a seedbed. This gets plants growing. It improves the soil's ability to absorb and store rainfall to grow more plant life. This in turn supports more animal life in an ever-widening cycle.

Allan showed me to my dismay that most of our perennial grass was dying. There were not enough large animals grazing to keep it alive by cycling the annually dying leaves and stems. Past seasons' old grass material that should have rotted through grazing was instead turning gray-black—oxidizing—through gradual chemical breakdown. Shown

and explained logically, on my own land, it all seemed such common sense.

Savory explained that on ranch-scale ranges, preparing soil for plant life and water retention could only be done as nature intended: by large herds of grazing animals. Not by resting the land, using machines, chemicals or fire, as recommended by almost all range scientists. Historically, before humans arrived in the Americas 10,000 years ago, these soils, plants, and vast numbers of large herbivores with their pack-hunting predators all developed together as one complex functioning whole.

He tied these explanations to a solid base of scientific research concerning overgrazing of plants and resting of seasonal, low-rainfall land. Fifty years ago, a French pasture scientist discovered that overgrazing of plants was due to either the plants being exposed to grazing too long or reexposed to animals too soon to allow sufficient time for roots to regrow. As this Frenchman's research established, overgrazing has nothing to do with animal numbers but everything to do with how many days a plant is exposed to grazing and how long it is allowed to recover between such grazing. Savory told me of the many research plots in deserts all over the world which totally exclude livestock, established to "prove that overgrazing causes land degradation" and how these exclosures turned grasslands to desert, contrary to what range experts expected and predicted!

Allan explained why we need to disturb our range to stimulate plants, why we need to plan how to move our cattle, and why we need to minimize overgrazing plants in ways that mimic what used to happen for millions of years. Such disturbance and timing is, he explained, regulated in undisturbed wild situations by pack-hunting predators forcing large numbers of grazers to bunch for protection and by the seasonal availability of forage and water. Together, these force constant movement. The result is that animals neither grazed plants too long nor returned too soon.

Finally, Savory talked to me about how complex this would be for my family as ranchers. I'd have to think of timing of grazing, re-grazing, and animal numbers so as not to run out of grass, synchronizing the cattle moves with calving, lactating, and breeding requirements. This had to be done economically, while generating income from sunlight, through plant growth.

Our ranch is in a very erratic rainfall area, so we needed to plan continually for droughts. Allan explained that most ranchers



PHOTOS COURTESY GILL FAMILY

About one-third of the Circle Ranch herd at water. Allan Savory told Chris, "To grow plants on hard, bare soil, one does not simply rest it and hope! Break the soil surface to let water and seeds in, and cover soil with plant litter and manure to provide a seedbed. This gets plants growing. It improves the soil's ability to absorb and store rainfall to grow more plant life. This in turn supports more animal life in an ever-widening circle."



Circle Ranch is owned by Laura and Chris Gill and their children Christopher, Richard, Carolyn and Josephine.

plan for drought by setting grazing areas aside. This decreases production of all grass and cattle every year. He advised instead that we plan for droughts in terms of days of grazing reserved. This keeps animal and grass production high every year, including in the droughts.

Allan explained we would never be able to manage this complexity using any rotational grazing system. “How,” I asked, “can we as ranchers, concerned about our land and wildlife, graze our cattle correctly?”

“Very simple,” explained Allan. He then proceeded to tell me of a British military planning process, developed over 300 years, to deal with the ever-shifting complexity of battle, the need to train men rapidly in time of war and to always produce the best plan at the moment, no matter how stressed and exhausted the officer might be. Allan had been taught this process as a young lieutenant in Rhodesia, and later adapted it to ranch and wildlife management. As he explained, the range and wildlife professions had never dealt with complexity, but rather sidestepped with grazing formulae like rotational and other systems. For decades, Allan has advocated this grazing planning process and taught it to thousands of people in many countries, including the United States.

This made sense. It appealed to our family’s heritage as ranchers. We made a plan to move our herd so that we would know where they were going months ahead, always locating them for the right reasons, at the right time, and with the right behavior. We could now see how our cattle might produce better habitat for all wildlife. To get “animal impact,” we would need, at times, to carry two or three times as many cattle and concentrate them. It would also help the ranch be more profitable.

“How,” we pondered, “can it hurt to take

the same amount of grass in a shorter time, using more animals?” So we decided to try it. Three of us completed Holistic Management International’s (HMI) Ranch and Rangeland course. For eight years HMI consultants have coached us with our grazing and strategic planning.

We have excellent records of what we have done. Based on regular monitoring, our land has measurably improved through planned grazing, increasing our livestock 400 percent and our densities sometimes 250 times. Forage taken has tripled. Our problem is getting the increased grass eaten. We are bottlenecked in trying to water the ever-growing herd this requires! All our wildlife has benefited greatly from the increase in cattle numbers, and so has our profitability.

So it surprised me when, at a mule-deer seminar, a member of Texas Parks & Wildlife field staff gave me the latest book on mule deer, “Habitat Guidelines for Mule Deer.” It was written by eight range and wildlife experts (the “authors”) for the Mule Deer Working Group, and sponsored by 24 state wildlife departments (the “sponsors”). To my astonishment, I read that what we do with such success at Circle Ranch harms plants and water function.

I read the book’s citations and identified 20 peer-reviewed research papers which had “proven” Savory’s claims were untrue! On the basis of this scientific evidence, the authors and sponsors strongly advise that ranchers

have nothing to do with holistic planned grazing or Allan Savory. I was perplexed. We at Circle Ranch, as described above, were doing what they claimed to be impossible! So I obtained and read every study used in the book in its conclusion.

What I found was that Savory’s holistic planned grazing had been redefined by the authors as a short-duration grazing (SDG) wagon-wheel system, with shared water, no fewer than eight paddocks, five days or less grazing and four weeks or more nonuse—about 10 full cycles a year. Further, this definition or something similar had been accepted by every range scientist on whom the authors relied. I already knew from my HMI range training that Savory had never recommended anything remotely like what these researchers were testing and attributing to Allan.

I wondered: were the scientists reading old texts? So, I reread several of Savory’s old papers and his early textbook (later editions of “Holistic Resource Management” are in use in more than 20 universities and colleges). Thousands of times he had warned that all such short-duration grazing systems, grazing rotations and other grazing management systems would fail to reverse land degradation in seasonal rainfall environments worldwide. One was a 1983 Society of Range Management paper cited by the authors themselves!

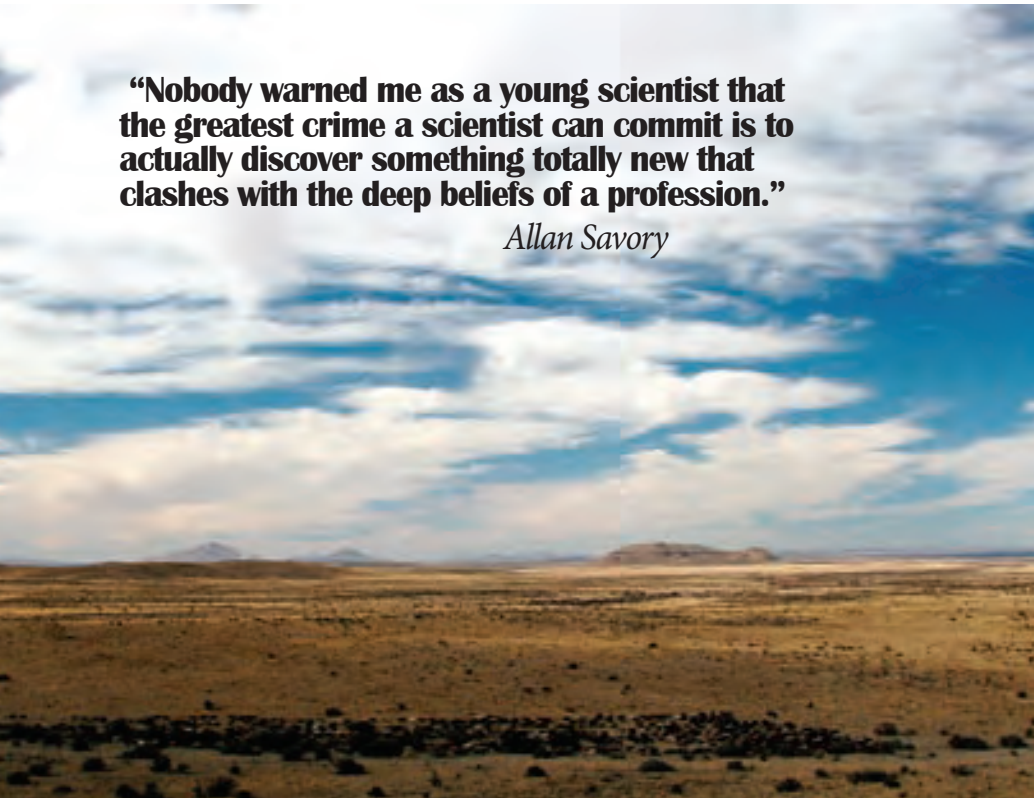
Curious whether this was deliberate misrepresentation, I contacted Savory and asked about it. He pointed out that new discoveries



A “tinaja” (seasonal water hole) showing regrowth typical of planned grazing intense/brief animal impact. “We have excellent records of what we have done,” Chris says. “Based on regular monitoring and measurement, our land has improved through planned grazing, increasing our livestock 400 percent and our densities sometimes 250 times. Forage taken has tripled. Our problem is getting the increased grass eaten.”

“Nobody warned me as a young scientist that the greatest crime a scientist can commit is to actually discover something totally new that clashes with the deep beliefs of a profession.”

Allan Savory



More than a thousand head of cattle being moved to new pasture on Jan. 2, 2009. “I am pro-habitat and pro-wildlife,” Chris says. “I strongly advocate holistic planned grazing because it works. If it didn’t work, I would say so and look for something better.”

are often fiercely resisted. He wryly explained that while innovators used to be burned at the stake, this treatment of deviant scientists is now illegal. “Nobody warned me as a young scientist that the greatest crime a scientist can commit is to actually discover something totally new that clashes with the deep beliefs of a profession.”

What of the 20 research papers? Savory laughed that range scientists in Texas had plagiarized his work in the 1970s and, in so doing, dropped the planning, converting it to a short-duration grazing rotation system. And ever since, American range scientists have been proving to one another that the plagiarized form doesn’t work, and cussing Allan for proposing it!

So, I wrote the authors and sponsors (20 in all) a 20-page paper challenging their scholarship. I also wrote an article which was published in HMI’s “In Practice.” All this went on the Web (www.holisticmanagement.org). Now some folks were mad at me, too. One scientist said I was “bowing to Mecca [Albuquerque],” HMI’s home base. But most were silent. Not one sponsor or author asked for our records or plan or accepted our invitation to visit and observe. Finally the authors wrote back and said they were just talking about the SDG systems that Savory recommends. No

kidding!

I am a pragmatist with no professional agenda. I strongly advocate holistic planned grazing because it works. If it didn’t work, I would say so and look for something better. I am pro-habitat and pro-wildlife. While I respect the ranching life very much, the sad fact is that cattle ranching is a marginal business looked at alone. But if ranchers all over the West could, as our family has, greatly increase their cattle numbers, improve profits and experience range improvement, what a wonderful thing it would be for the United States. What a wonderful thing for our wildlife.

Why not give this open-minded and honest consideration? Anyone who tells you Allan Savory sells snake oil has never seen this in practice. Ask them for a document wherein he has ever recommended any unplanned system under any name. Ask for any actual test that disproves planned grazing. If you can find one, Allan will give \$1,000 to the wildlife organization of your choice and Circle Ranch will match it! ■

Chris Gill continues to learn about land and livestock. He ranches with his family in Texas.

Dimbangombe: Success in Africa.

Story and photos by Allan Savory.

The Dimbangombe Ranch in Zimbabwe is the oldest, most advanced holistic management learning/demonstration ranch in the world. This is where the Africa Centre for Holistic Management runs its College of Agriculture, Wildlife and Conservation Management, training and assisting thousands of impoverished people alongside large populations of Africa’s wildlife.

Recently, after hearing about Dimbangombe at a major Water Summit conference, Zimbabwe’s new minister of Water Development, Sam Nkomo, came to see it for himself. At the summit, he witnessed scientists and politicians, united as never before, agreeing that water is the lifeblood of the nation, that wells are going dry, that dams are filling with silt, and that no local or foreign experts know what to do. Sam now sat in the African bush with me, drinking tea on the edge of a clear pool covered with flowering water lilies. In the distance, a herd of elephant, having slated their thirst and coated their hides with fresh mud to ward off insects, wandered away across the grassland toward the forest.

Sharing a dented tin mug and joining us for tea were two Ndebele cattlemen invited to sit with the minister. They work on the ranch and are in charge of the cattle herd that is the single most-important tool used to manage the wildlife habitat and health of the river and underground water supplies. From his fellow tribesmen, Sam heard that this pool was new, having only appeared in the upper river catchment in the last two years. They told him water had come and stayed through the dry season higher up in the river system than it had ever been known before.

“What witchcraft is this?” asked the minister. “You must have had a lot more rain because how else can water appear where it has not existed in a hundred years?”

There had been no more rain. Rather than give a long scientific explanation, I enjoyed my tea, while two barely literate old herders talked to the minister and his permanent secretary in their own language. They explained how we had increased the cattle and goat numbers 400 percent, and how they ran them in one herd, constantly moving to a

plan to fit the wildlife needs, grass needs and more. They told him they did this so the hooves, dung and urine would cause more plants to grow, covering more soil; how more water now soaked into and stayed in the soil; how the boreholes were now more reliable; and the river is now flowing longer in the year and water is arising higher than they have known up the river drainage, where we were sitting.

As a result of that simple demonstration of what is possible using common sense and good science, the minister, who had to get on to meet the president of Zambia, left his permanent secretary behind to start planning a partnership between the Africa Centre and government to restore all rivers in the nation so that cities, industry and agriculture can look to a brighter future. We are now drafting a concept paper to jointly present to American, or other government development agencies, to begin training people in government agencies and eight universities and colleges. The goal is exciting—to stop biodiversity loss and land degradation so that the nation can begin restoring the health of all its rivers running through forest reserves, communal pastoral lands, ranches, national parks and farms because the watersheds of the rivers involve all land uses.

I have always been passionate about Africa's wildlife and people. Our cattle/goat herd is run without fencing that is so damaging to wildlife, which needs to move freely. The livestock are herded daily to a carefully managed grazing plan that integrates their moves with the sable antelope, buffalo, elephant, waterbuck, kudu, bushbuck and zebra. And because we protect and need the predators—lions, cheetahs, leopards, wild dogs and hyenas—the management herd sleeps securely at night in portable lion-proof corrals sur-



The Dimbangombe River has been restored by livestock on holistic planned grazing over its watershed and along its banks. Elephants now drink in new pools a mile above their traditional water hole, due to a healthier river system.

rounded by the herders with their cooking fires.

Even though the portable lion-proof corrals were developed for protection, we found by accident that we had developed a powerful soil-restoration and crop-production tool. Where the corrals are placed for about five nights on the worst of gullies—bare-capped eroding soil or other problem areas—and the animals trample the ground to death and cover it with dung and urine, the recovery is amazing. And where we have trained local starving people to place the overnight corrals on their crop fields, they have achieved levels

of corn production on average threefold, some fivefold, higher than control fields using traditional practices.

Suddenly our learning/demonstration site is taking on greater significance than we anticipated. Because of this, we hope we can serve many nations. ■

Allan Savory is chairman of the Africa Centre for Holistic Management. He and his wife Jody Butterfield founded the International Center for Holistic Management in Albuquerque, N.M. He can be reached at allansavory@gmail.com.



Bare, hard eroding ground for 30 years, over a foot of soil loss at base of trees. This land was subjected to extremely high impact from cattle spending the night on it in 2007. Subsequently, it has been only subjected to holistic planned grazing and wildlife use and no range management, reseeding or any other practice.



Same land in 2009 (note bent-over lower branch of tree on the left). Erosion has stopped. Vastly more feed and cover for wildlife has grown and more water and carbon are being absorbed into healthy soil. Using holistic management, amazing recovery takes place.