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The Quivira Coalition

Sharing Common-Sense Solutions to the Rangeland Conflict

Valle Grande Grass Bank

by Bill deBuys

The Valle Grande Grass Bank on Rowe Mesa is a project of The Conservation Fund designed to assist family ranchers in northern New Mexico. Its strength comes from the partnership of organizations supporting it, including the Fund, the Northern New Mexico Stockman's Association, the NMSU Cooperative Extension Service, and the Forest Service. Before attempting to explain how the grass bank works, I should say a word about the overall context in which the project has developed.

Operators of small farms and ranches in northern New Mexico face many challenges. Some are ecological; some are social and legal. All are ultimately economic.

One of the ecological problems is the steady encroachment of trees and shrubs into grasslands. Dr. Craig Allen's detailed study of the landscape history of the Jemez Mountains in north-central New Mexico (see p. 6) indicates that only 45% of the montane grassland, meadows and grassy savannahs present in the mid-1930s still existed in the mid-1980s. Fully 55% of the Jemez grasslands had been replaced by the expansion of forest, woodlands, and shrublands. That is a loss of about one percent a year. It is not unlikely that another 10% has been lost since Dr. Allen completed his study, for the process of grassland and savannah succession continues.

Equally detailed information does not exist for other portions of northern New Mexico, but various studies, including comparisons of historical photographs with contemporary views of the same landscapes, indicate that the loss of grasslands throughout the region is extensive. The experience in the Jemez is probably not the exception but the rule.

This successional trend, incidentally, is not restricted to northern New Mexico but is common throughout the Southwest and the West generally.

Reasons for these successional changes include past grazing practices, fire suppression, and,

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From The Founders

Jim Winder
Courtney White
Barbara Johnson

In mid-May, the Quivira Coalition had the distinct pleasure of co-hosting the National Riparian Service Team for a three-day workshop in Silver City. We worked closely with the Jornada Experimental Range to bring the Riparian Team to New Mexico, a state they had not officially visited before.

We spent one day inside, looking at slides and listening to scientists from the Forest Service and the BLM explain hydrology, ecology, grazing, and proper stream function. Then we spent a day on the Mimbres River and a day on Macho Creek putting our new-found knowledge to work.

We worked hard to gather a diverse group of workshop participants. They included ranchers; members of the Sierra Club, the Nature Conservancy, the Southwest Center for Biological Diversity and the Upper Gila Watershed Coalition; biologists from the State, the Forest Service, and the Middle Rio Grande Conservancy District; land managers from the State Land Office, and the BIA; a forest supervisor, scientists from the Jornada, and the New Mexico cadre of the National Riparian Team.

Using a 17-point checklist we learned how to assess the functionality of riparian areas. Before a stream can support wildlife, fishing, grazing, endangered species, recreation, or any other "value," it must be functioning properly. Making an assessment of a stream's "Proper Functioning Condition," or PFC, is the first critical step.

We talked about floodplains, stream width-to-depth ratio, plant vigor, composition and distribution of riparian vegetation, channel characteristics, point bars, vertical movement, and sinuosity. We also evaluated our streams; one stretch of the Mimbres, for example, was judged to be "Functioning, but At-Risk, with an Upward Trend."

We also talked about grazing and its impact on riparian recovery. In many cases, a simple change in management strategy had dramatic results. In a 21-year study on Bear Creek, in central Oregon, Dr. Elmore, the Team's leader, resurrected a degraded stream with a simple adjustment of the grazing regimen. The science was as dramatic as the photos. The three-day workshop was a very successful blend of science, dialogue, learning, looking, **(con't on page 19)**

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Converting to the "*New Ranch*" Convincing The Boss

by John M. Roybal

Although my father's family has been involved in raising cattle for several generations and I have been helping my father with our cattle since I was a young boy, I did not become genuinely interested in ranching until five or six years ago. Since then I have grown to love my parents' small ranch located in the Nutrias Valley just south of Tierra Amarilla (TA) in northern Rio Arriba County. I spent most of my spare time last summer and fall at my parents' ranch clearing piñon and juniper with a dozer, discing sagebrush, seeding, building stocktanks, and making new roads in order to gain better access to various parts of the ranch.

Sometime last August, some friends gave me a copy of the Quivira Coalition's first newsletter because they knew that I was looking for information concerning ranching techniques. I read the newsletter and wanted to see if the Quivira *New Ranch* really worked, so I attended a tour of Jim Winder's ranch last September. What I heard and saw made so much sense that I couldn't wait to get back and discuss the New Ranch with the "Boss" (i.e., my father).

"Waste of Time"

The Boss listened attentively as I tried to summarize what Jim Winder had told our group about keeping cows together, constantly moving them, keeping them out of the creek, grazing during the dormant season, and giving the land a rest for the majority of the year. However, when I told him that I wanted to fence off the creek that runs through a portion of our ranch in order to allow vegetation to re-establish itself, he commented that the creek had always looked the way it does now [with very little vegetation] and that he thought it was a waste of time, energy, and money to put up a fence just to keep our cows out of the creek. I had heard similar comments many other times when we had discussed possible changes in the way our ranch was managed. Most years we take our cattle to the ranch in mid-May, allow them to graze the meadows along the creek until mid-July, move the cows to higher country and keep them there until mid-September and then move them back into the meadows along the creek until November when we sell our calves and move our cows to our winter BLM allotment.

Green Light

After several months and much discussion, the Boss finally gave me the green light to implement New Ranch concepts at our ranch. Consequently, I've contacted several knowledgeable individuals in our area (i.e., County Agricultural Agent, BLM representative, NRCS agent and Game and Fish Department officer) to assist me in inventorying the plants and animals found on our ranch and developing a long-term management plan for our ranch.

My long-term goal is to increase the food supply on the ranch for both cattle and wildlife in order to sustain more animals. With the increase in the elk and deer population in the general area (**con't on page 19**)

Editor's Note: The Quivira Coalition has donated fence posts for the electric fencing Mr. Roybal is putting up to keep cattle out of his riparian area. We will carry further updates on his progress to convert his ranch to a "New Ranch" in upcoming issues of this newsletter.

Valle Grande Grass Bank

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Ponderosa pine and Douglas fir tree invasion of a montane grassland in the Jemez Mountains. (Photo by Dr. Craig Allen)

quite likely, climate change.

Absent measures to arrest or reverse woody encroachment, the continued loss of grassland ecosystems guarantees that the productive capacity of livestock ranges, a large portion of which are on public land, will continue to decline. This loss of capacity is creating serious problems for the region's public land grazing permittees, whose livestock must seek subsistence from a dwindling grassland base. This situation also creates serious problems for land management agencies like the U.S. Forest Service, which are responsible for maintaining the ecological health of public lands. As a fixed number of cattle crowd into shrinking forage producing areas, conflicts and damage are certain to occur. The loss of grasslands hurts all grassland-dependent species, from juncos to jackrabbits and curlews to cowboys.

Additionally, regulations and court decisions to enforce environmental laws, while badly needed, add considerable complexity to the situation. Their cumulative effect has been to raise steadily the standards of environmental performance required of both public land managers and public land grazing permittees.

Taken together, these developments place increasing pressure on operators of small ranches in our region and make their economic survival more difficult.

The Valle Grande Grass Bank was developed to address these issues in a collaborative, non-confrontational manner.

What We've Done

Here is what we've done: last August, The Conservation Fund bought 240 acres of base property qualifying it to become the permittee of the Valle Grande grazing allotment atop Rowe (or Glorieta) Mesa within Santa Fe National Forest. We have since been issued the grazing permit for the allotment, which encompasses about 34,000 acres and has a capacity of 325 cows year long.

After a full environmental assessment is complete, the Fund will place its permit in a status called "non-use for resource recovery and development." This will allow the Forest Service to reallocate forage on our allotment for the use of other National Forest permittees from northern New Mexico.

By moving their cattle to the Valle Grande allotment, permittees will be able to rest their customary allotments and, for example, to grow a crop of grass that may then be burned in a controlled fire. Such a fire can check and even reverse the encroachment of trees and shrubs into grasslands. Continued rest for one or more grazing seasons following fire or following such other treatments as

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small-diameter timber removal or brush control and reseeding will allow the establishment of desired new vegetation prior to the return of livestock to the rested allotment.

Ordinarily, the prolonged rest from grazing that extensive land restoration treatments require would penalize permittees economically by requiring them to reduce or suspend their normal ranching operations. Use of the grass bank, however, will make it possible to increase the capacity and vigor of the permittee's allotment while maintaining the cash flow and economic viability of his or her ranching operation.

Last winter, we met with various groups of permittees to discuss these ideas and to explain that permittee cattle would be well cared for on the Valle Grande allotment, under the supervision of the Fund's full-time range rider, Tim Stasel, whom we hired last November and who has worked like a demon since then getting the allotment's waters and fences in operating shape.

So much for plans and theory.

The Challenge

The challenge of putting these ideas into practice has been considerable, not least because organizations with names like ours do not instantly inspire confidence and trust among the ranching community. We were fortunate, however, to be able to work with outstanding partners. Various directors of the Northern New Mexico Stockman's Association, especially Palemon Martinez, have spent scores of hours helping to design the grass bank program to suit the needs of participating permittees. Gerald Chacon, Edmund Gomez, and Pat Torres of the NMSU Cooperative Extension Service have also generously given of their time and expertise. Jerry Elson, of Santa Fe National Forest, is as much the architect of the overall project as anyone is, and his colleagues, including Forest Supervisor Leonard Atencio and the range staff of the Pecos-Las Vegas Ranger District, have given the project outstanding support.

Even so, if anyone had asked us six months ago how heavily we expected to be stocked in our first summer of operation, we would have said we'd be happy if only one or two permittees elected to put their cows on the allotment in this first year. We thought it would take a long while to win acceptance for the grass bank program. As things now stand, however, it looks like we'll be fully stocked before the end of June. Close to a dozen permittees from four or five allotments will participate in the grass bank during the coming season, and, as a result, their allotments will benefit from prescribed fire, fencing, and other improvement projects in connection with rest afforded by the grass bank. Nine additional permittees from two other allotments are considering placing cattle on the grass bank during the upcoming winter and spring.

The work load shows no sign of letting up. In the months ahead we will focus on:

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Where Have All The Grasslands Gone?

Fire and Vegetation Change In Northern New Mexico

by Dr. Craig D. Allen. U.S. Geological Survey, Jemez Mountains Field Station, Los Alamos, NM 87544. (505)672-3861 ext. 541. E-mail: craig_allen@usgs.gov

Passing through the majestic landscapes of northern New Mexico today one finds valleys thick with sagebrush, dense woodlands of piñon and juniper amidst eroding foothills, crowded forests of ponderosa pine and fir cloaking plateaus and mountain slopes, and a variety of grasslands and meadows densely fringed with young trees. Most people think of these wildlands as "natural," pretty much the ways things have always been. Yet old-timers and even older documents tell of pine forests and woodlands with grassy understories open enough to drive a wagon through, while ecologists and environmental historians compile ever-increasing evidence of major vegetation changes over the past century. A repeated theme of these ecological histories is the decline in herbaceous vegetation (grasses and non-woody flowering plants) while forests thicken and brush invades. The details of species and timing vary a bit between studies, but everywhere woody plants (trees and shrubs) are increasingly dominant. Why has this been happening?

The Role of Fire

The main reason for this increase in woody plants in northern New Mexico is human-caused changes in the role of fire in our landscapes. Vegetation patterns are determined by many factors, with climate, topography, and soils often considered paramount. It is less well recognized that disturbances like fires and floods may be equally influential. Particularly here in the Southwest, fire is a key process that determines the ecological structure and function of most ecosystems. In general, fire favors grassy vegetation over woody plants. Trees and shrubs can be killed or severely damaged by fire, while perennial grasses not only survive and quickly recover (the same way they regrow from basal growth points after being grazed), their growth may even be enhanced by fire. A variety of scientific studies show that fires have been frequent and widespread in the lands of Rio Arriba since before the Oñate entrada, shaping the vegetation in ways that favored herbaceous life-forms. About 100 years ago, the occurrence of fire greatly diminished across this region, resulting in major vegetation changes that included declines in grassy vegetation and increases in woody plants—a trend that continues today.

How do scientists learn about these changes? Researchers have been using a variety of methods to study the history of landscape change in the Southwest, ranging from ecological studies of soil and vegetation to historic records and photographs. Additional details on some of these methods and a variety of results for New Mexico are graphically displayed and referenced at a "Land Use History of North America" website, assembled by Julio Betancourt, Tom Swetnam, and myself, located at: http://biology.usgs.gov/luhna/southwest/southwest.html

Tree and Shrub Invasion of Open Grasslands

Consider the decline of montane grasslands in the Jemez

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Mountains, which are found on the upper, south-facing slopes of nearly all of the larger summits and ridge crests. These are the most productive grasslands in New Mexico, and their deep, prairie-type soils indicate that grasslands have persisted for thousands of years on these sites. Yet today a tidal wave of young ponderosa pine, Douglas fir, and aspen are observed to be invading these grasslands (see picture on page 4). By coring and dating hundreds of trees, I found that the tree invasion began in the 1920s. Vegetation mapping from a time sequence of aerial photographs confirms the timing of the tree invasion and reveals the extensiveness of the tree encroachment. Between 1935 and 1981, tree invasion reduced the area of open montane grasslands by 55% across the 250,000 acre mapped area that covers the southeastern Jemez Mountains. Several small montane grasslands present in 1935 have disappeared, while the larger grasslands have become fragmented.

Similar tree and shrub invasions are also observed in many other open vegetation types throughout northern New Mexico, including blue spruce encroachment on moist meadows, Engelmann spruce invasion of subalpine parks in the Pecos Wilderness, and the spread of juniper and sagebrush and snakeweed into valley grasslands. These patterns of woody invasion into formerly grassy environments are tied to changes in land use history, primarily livestock grazing and fire suppression, that are described below.

Tales That Trees Tell: Fires in the Forests

One particularly useful approach to uncover local ecological histories has been to use dendrochronological (tree-ring) methods to reconstruct patterns of fire occurrence and forest change over the last several hundred years, primarily in the Jemez Mountains but also in the Sangre de Cristos. Old trees can tell many stories if one knows how to decipher the information contained in their wood. This tree-ring work is being accomplished through a cooperative effort involving the U.S. Geological Survey's Jemez Mountains Field Station (located at Bandelier National Monument), Professor Tom Swetnam's group at the Laboratory of Tree-Ring Research (University of Arizona), and the Santa Fe and Carson National Forests. Since 1988 we have determined over 4,000 prehistoric fire dates from fire scars on more than 550 sampled trees, snags, logs, and stumps at 30 sites in the Jemez Mountains. In the Sangre de Cristos we have about 170 prehistoric fire dates from over 50 sampled trees at four sites. Elevations of sampled sites ranged between about 6,500 and 11,000 ft; vegetation varied correspondingly from piñon-juniper woodlands up through ponderosa pine to mixed conifer and spruce forests. Each scar is dated to its precise year of formation and, in most cases, even the season in which the fire occurred was determined. Fire dates extend back to 1422 AD in the Jemez Mountains and to 1230 AD

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in the Sangre de Cristos.

The fire scar histories show that fire was frequent and widespread at most sites prior to the 1890s. For example, fire scar samples from El Valle (near Las Trampas) record 35 different fire years between 1607 and 1890 AD (Figure 1), while Monument Canyon in the Jemez Mountains records 47 fires from 1591 to 1892 AD (Figure 2). It must be emphasized that these were largely surface fires burning with low-intensity in primarily grassy fuels. These low-intensity fires thinned the forest by killing some of the younger trees, while most mature trees survived unscathed, protected by their thick bark. Trees that were damaged but not killed by a fire often developed an open wound which was subject to repeated scarring by subsequent fires—some Jemez trees recorded over 30 fires without being killed. The frequent fires stimulated the growth of herbaceous plants in the open forests, prevented the buildup of thick layers of needles and excessive amounts of dead wood, and promoted the rapid cycling of nutrients for plant growth.

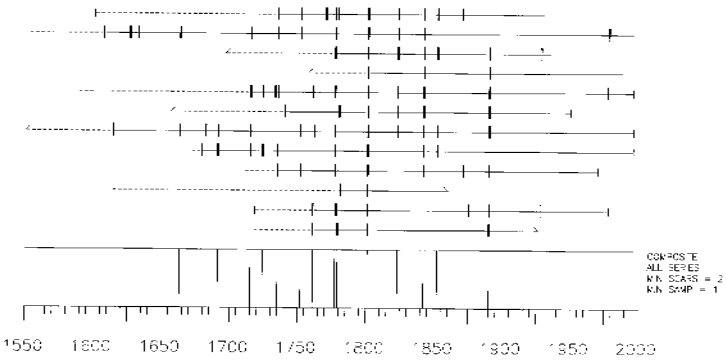

Figure 1. Fire scar chronology for El Valle (near Las Trampas). Horizontal lines represent the life spans of individual trees, while fire scar events are shown by short vertical bars. The longer vertical lines at the bottom of each chronology indicate the dates of fire events in which at least two sampled trees recorded a fire.

Widespread fires occurred about every 5-20 years wherever ponderosa pine grew, with somewhat lower frequencies on the order of 15-40 years in the bracketing piñon-juniper woodlands below and mixed conifer forests above. Although some small, patchy fires certainly occurred, note how in some years almost every tree recorded a fire scar, indicating widespread fire occurrence (Figures 1 and 2). Indeed, in many years climate-synchronized fires burned throughout whole mountain ranges, and about four times per century most of the mountain ranges across the entire Southwest burned in the same year. With few barriers and without human efforts to contain them, pre-1900 fires may have burned for months in some of these dry years. The position of the fire scars within the annual growth rings indicates that the vast majority of prehistoric fires were occurring in the dry spring period (April-June) before the onset of the summer rains, which is still when most fire activity occurs. Given our dry spring climate and frequent thunderstorms, lightning is believed to have caused the vast majority of these fires. This view is supported by the records of about 4000 lightning-caused fires documented by firefighters in the Jemez Mountains from 1909-1996, and by the over 160,000 lightning strikes recorded over the Jemez country by a lightning detection system between 1985 and1994.

Just like nowadays, the most active fire years occurred after dry winters. The most widespread fire activity in ponderosa pine forests typically occurred in dry periods a year or two after wet years in which herbaceous fuels

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(con't)

would have built up (another clue about how widespread and important grassy understories were in these open forests).

Note that crown fires were a natural occurrence in some of the higher elevation, wetter, forest types (such as spruce-fir and some mixed conifer forests) where surface fires were less frequent and fuel loads greater. Places where aspen stands grow today often reflect a history of crown fire. Crown fires took place in particularly dry years, like the spring of 1880 when the spruce forests on Santa Fe Baldy burned.

What Happened When Surface Fires Ceased

The widespread surface fires ceased throughout northern New Mexico in the late 1800s (Figures 1 and 2). Railroads reached the lands of Rio Arriba in the 1880s, connecting this region to outside markets and capital, which resulted in a massive boom in livestock production. By the end of the 1880s there were over 5 million sheep and more than 1 million cattle in New Mexico, ranging freely over open ranges; numbers stayed high into the 1920s (in contrast, today there are only 1.6 million cattle and sheep total in New Mexico). This intense, landscape-wide grazing apparently reduced the grassy fuels to the point that surface fires ceased to spread, inadvertently resulting in de facto fire suppression. Active fire suppression by the U.S. Forest Service became an emphasis after 1910 as woody fuels and forest densities began to build up. Today over a million dollars are spent in an average year to fight fires in the Jemez Mountains alone (the 1996 Dome Fire cost around $10 million), and the cost of fire suppression in the West is now averaging almost $1 billion a year!

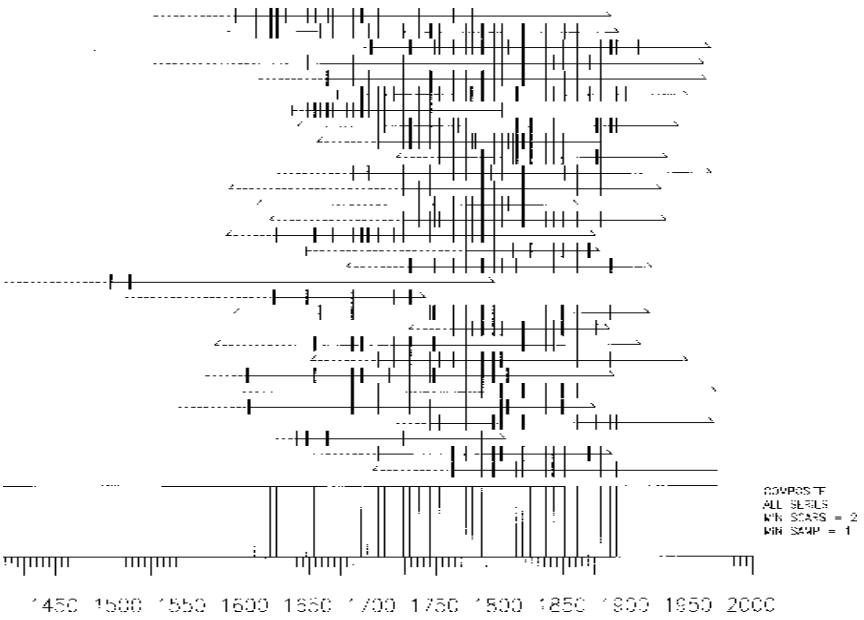

Figure 2. Fire scar chronologies for Monument Canyon Research Natural Area, in the Jemez Mountains. Horizontal lines represent the life spans of individual trees, while fire scar events are shown by short vertical bars. The longer vertical lines at the bottom of each chronology indicate the dates of fire events in which at least two sampled trees recorded a fire.

Tree rings also record how local forests have changed over the past century since the widespread surface fires ceased. Age studies show increasing numbers of trees establishing during the 20th century in most forest types, ranging from ponderosa pine and mixed conifer forests down through piñon-juniper woodlands. For example, some ponderosa pine stands now have well over 2000 stems/acre, in contrast to 120 years ago when only about 50 stems/acre were present. Piñon-juniper woodlands are also characterized by higher tree densities today, contributing to losses in herbaceous vegetation cover and associated increases in soil erosion (note

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Cooperation The Key To Restoring Habitat at Macho Creek

by Dutch Salmon

[reprinted from the Silver City Press, May 8, 1998]

In January, [the Silver City Press] reported the efforts of the Quivira Coalition to bring ranchers, environmentalists and others together to restore range lands through new, innovative grazing techniques on New Mexico ranches. A seminar at that time on this "New Ranch" concept drew more than 100 people to the local Holiday Motor Hotel.

This past week, some of those techniques were put to use on the ground along a 2 1/2-mile stretch of Macho Creek northwest of Nutt in Luna County. Participants in the project included the Quivira Coalition, the State Land Office, the Jornada Experimental Range (of the U.S. Department of Agriculture), the lessee and sublessee of the land, and a variety of volunteers.

Funding for the electric fencing used comes from the Quivira Coalition, the Lessee and the SLO, according to the Quivira Coalition's Courtney White.

Everybody I met along the creek this past Monday was taking a turn at pounding posts and stringing wire. They have their work cut out, for Macho Creek along this reach is dry, with little riparian vegetation along the banks.

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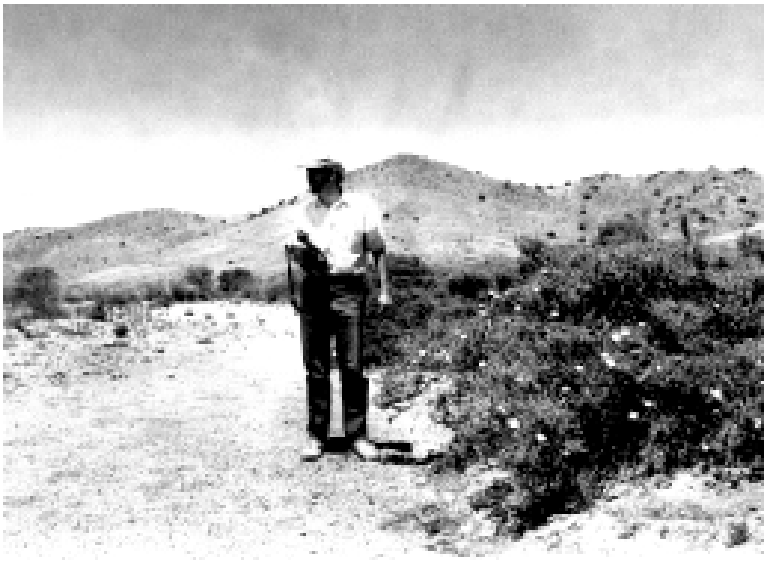
Top left: Bud Salmon (right) helps a friend unroll fencing; **middle:** Gilbert Borrego cuts a bush; **bottom:** Hammering in a fence post. **Top right:** A tired worker; **middle:** Hands at work; **bottom**: Courtney taking pictures of Macho Creek. (All photos by Courtney White, except bottom right by Dutch Salmon.)



"All but 40 acres of the 1,800 acres we're fencing off is owned by the State Land Office," said Gilbert Borrego, range conservationist with the SLO. "The project has the full support of the commissioner (of State Lands, Ray Powell)."

"The idea is pretty simple," said Kris Havstad, supervisory scientist with the Jornada Experimental Range near Las Cruces. "In order to improve the riparian habitat along the creek we have to gain control of when the livestock graze the creek bed." Havstad added, "It's not that the rancher has too many cows on this ranch, but they're down in here (the creek bed) all the time."

Borrego agreed, saying, "Really, there's very little use of the uplands at this time."

So, about 1,800 acres of the 5,500-acre ranch leased by James Hopkins and subleased to Pat Laney is being fenced off, with water from windmills and from the creek bed pumped to watering tanks in the pastures in the surrounding hills.

"We don't want to keep the cows out of the creek bed entirely," Borrego said. "At first, until the plants get a good start, we'll allow very limited grazing during the dormant season. Later, we may be able to allow more, depending on how it looks."

Borrego said the dormant season is roughly November through March. "I think we'll see some new growth of cottonwoods and other plants this year, as soon as we get some good rains," Borrego said.

"With the grazing controlled, the new shoots won't get nipped off in the bud," Havstad said. "Then, with dormant season grazing, you need to get them out when the first buds show in the spring."

Havstad said they also hope to improve the flow of water along the creek. "Right now, the flow is very seasonal," he said. "We don't know if we can create a perennial flow. We think that, historically, the flow was perennial, but we're not sure. But we can certainly improve the regularity of the flow."

Havstad said that among the plants they hope to regenerate along the creek are cottonwood, ash, and hackberry trees, and a variety of grass and shrubs. "It's important to note that this is state land," Havstad said. "There's a good potential here for a recreation benefit, for birders, hunters and the like."

White of the Quivira Coalition added, "Among the volunteers we had out here yesterday were three hunters from Quail Unlimited."

A couple of miles downstream of the Macho Creek demonstration project, neighboring rancher Jim Winder has had a portion of Macho Creek on his ranch fenced off for 10 years. Where the land along the creek upstream of Winder has little riparian vegetation, the Winder section is lined with a solid grove of trees, grass, and shrubs.

"This can work," Winder said. "Ten years ago, my part of the creek didn't look much different than

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Examples Of Good Stewardship: Virgil Trujillo and Ghost Ranch

Virgil at Ghost Ranch. (Photo by Courtney White)

To many ranchers, the bottom line is all about values, not profit. Hard work, love of land, family, community, neighborliness, faith, and respect for the natural world, are values that should not be replaced by mere money. But it is a struggle.

Some ranchers, such as Virgil Trujillo, are keenly aware of the fight between the spiritual and the material. "Society," Virgil likes to observe, "as a whole is suffering because it is on bended knee to the almighty dollar." He sees it in the children especially.

Virgil is the supervisor of ranch lands for the 21,000-acre Ghost Ranch, located just west of Abiquiu, New Mexico. It is his job to manage a large herd of cattle, maintain the health of the land, and administer an educational program, among other duties.

Part of the Culture

As a lifelong resident of Abiquiu, and with a family history that traces its roots back to the earliest period of Hispanic settlement in the area, Virgil takes pride in the values inherent in his work.

Cattle have been a part of the landscape of northern New Mexico for 400 years. As a result, the rhythms of ranching, and the values attached to it, have become embedded in the culture of the region. "Independence is a big part of the cultural aspect to ranching," Virgil says. "Take it away, or try, and you'll get desperation."

Ranching never became an "industry" in the north, as it did elsewhere in the West. The average permitted herd size is less than 30 head. The average rancher works part-time, and the average private ranch is less than 1000 acres.

The impact of ranching on the region's history and culture, however, is huge. Almost anyone who can own a cow, does. Some own cattle out of economic need, but most ranch for the pleasure of it, and for the values ranching instills.

Ghost Ranch, in fact, does not own a single cow. Instead, it offers its winter pastures to 55 local ranchers, who pay a fee to graze nearly 900 cattle. This helps economically and environmentally in a hard-pressed area, but Virgil also considers it the neighborly thing to do.

To this end, Ghost Ranch, which is owned by the Presbyterian Church, has developed an education program for children; they are given a "permit" for two cows for a season and learn all the aspects of a ranching life. Virgil views this program as a keystone for the future. "How will ranching continue if we don't teach the kids?" he says.

"Keep the Land Healthy"

Another value Virgil

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Examples of Good Stewardship
(con't)

teaches is respect for the land. "Land can teach us," he says, "and can continue to teach us, but we need to listen." Land, people, cattle, and wildlife are all connected in the landscape; one can not be separated from the other. "Keep the land healthy," says Virgil, "and it will keep you healthy."

To keep the land healthy, Virgil employs a variation of holistic ranch management. Using over 20 miles of electric fencing, the ranch is divided into 24 pastures through which Virgil and his two cowboys rotate the cattle every 14 days. Cattle never return to a particular pasture twice in one year. The grazing season begins on November 1 and ends on May 31, which means that the plants get a rest during the summer growing season.

Cattle Tripled

Since it switched to holistic management in 1986, under the guidance of former manager Jim Shibley, the number of cattle that Ghost Ranch can sustain ecologically has tripled. Virgil thinks it can go higher. He is also considering shortening the amount of time the cattle spend in a pasture. The goal is good stewardship. "I like elk a lot," says Virgil, "I also like cows a lot, but it doesn't mean I put a thousand cows on the land."

Virgil's management strategy allowed Ghost Ranch to survive the drought of 1996 in fine style. "I was tickled pink," he says with a smile.

Unfortunately, Ghost Ranch is not isolated from the surrounding world. Poor management by an upstream ranching neighbor caused a flash flood to roar through a colony of beavers who were trying to establish a home on a Ghost Ranch riparian area. The beavers were wiped out and have not returned.

Education

The key to good management, says Virgil, is education. "Ranchers don't wake up and say 'I think I'll overgraze the land this year,'" he observes. They need to learn to be better managers. This is why Ghost Ranch has subsidized scholarships over the years to ranchers who want to attend progressive ranch management classes. Virgil has even offered a scholarship to the local Forest Service range agent (who declined).

Sadly, the scholarship program has fallen victim recently to an ever-shrinking budget.

Not everyone wants to learn. Recently, two vocal anti-grazing environmental activists visited Ghost Ranch to see Virgil's success first-hand. Observing the healthy cover of grass across the ranch, their only remark, according to Virgil, was "There has to be some other reason for this."

Virgil smiles at the memory. He sees it as confirmation of his approach and attitude toward ranching, which flows from his values and love for the land. When asked if Ghost Ranch turns a profit on its cattle operation, Virgil replies "Of course it does. Unless you're talking about money again." He smiles broadly. "What is wealth really?" he asks.

It is a very good question.

Virgil examining grass. (Photo by Courtney White)

The Far Horizon

by Courtney White

"While there is life, there is hope."—Cicero

It is always dangerous to talk about history before it happens.

Heedless, a veritable industry of prognostication has sprung up in recent years, full of pundits, talking heads, analysts, and experts babbling on about the profound import of this or that minor event. With so many people talking at once, it is a wonder history happens at all.

Most talking heads, of course, are not actual players in any drama and are often disdainful when the players speak up.

Nevertheless, a perceptive actor should be able to articulate the deeper themes of a play. He or she may not be able to deviate from the script, or change the ending, but the general flow of a production should be clear.

And I think the drift of the western drama called "grazing" looks promising.

New Ideas

This thought came to me one day while I sat in an old opera house in Socorro, New Mexico, listening to a panel discussion about the future of organic farming in New Mexico. The workshop was entitled "Growing Your Farm/Ranch Into The 21st Century" and it was put on by a group a farmers and ranchers who are determined to see their livelihoods survive into the next century, at least.

The threats are urban development and the spread of monopolistic agribusiness—threats which, according to one speaker, will result in "the end of the rural West and wide open spaces we grew up with. Nobody who loves the West benefits: rural community character and values are lost, wildlife habitat suffers, and our nation's ability to grow its own food continues to erode."

In other words, it was a workshop of new ideas and new hope.

Topics included the high value of conservation easements to ranchers, the economics of organic farming, strategies for keeping the family in the family ranch, and private land trusts. One rancher was so motivated by the discussion that he went off and held his own workshop a month later. Now he is starting his own non-profit land trust.

What I heard encouraged me. People from diverse backgrounds, with diverse goals, were linking hands and mulling new ideas for preserving open space, rural communities, and small businesses. To me, it sounded like history.

Crossroads

At the risk of sounding like another talking head, I believe the intense social and political changes that have rocked the American West since World War II have brought us to a fascinating, and critical, juncture. The fires of conflict, fueled by the friction created when the irresistible force of change rubs against the immovable obstacle of tradition, have cooled down somewhat in recent years, creating an opportunity for hope.

Despite the steady rain of

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lawsuits, the occasional flash of hot rhetoric, and the familiar rumble of angry thunder through the woods, the land and the populace appear ready for reasonable solutions to age-old debates. The extremes have succeeded brilliantly in discrediting themselves and now the "radical center" holds the stage.

Judging from the strong positive response we have received, the timing of the Quivira Coalition was perfect. No entrance could have been possible five or ten years ago; and if we had waited any longer it might have been too late. The "radical center" wants dialogue, collaboration, and new ideas, and we are laboring mightily to deliver them.

We are not alone, fortunately. We fit into the broad sweep of events washing over the West, as individuals and organizations begin to use their brains and their hearts, instead of their fists, to solve problems. This is exactly what the Socorro farm/ranch workshop was all about—innovation, cooperation, and motivation.

Perhaps what is most intriguing about this broad turning of the tide, if I may be so bold, is its populist foundation. The debate about the future of the West is being taken back from the small, and shrinking, pool of gladiators and given to cooler heads. Suddenly, people see a role for themselves in shaping their home and are enthused again.

I see it happening with the Quivira Coalition. People from all over the region, and from all walks of life, have called, or sent money, in support of our efforts. These are good people too, without axes to grind, or chips to knock off. As the word spreads, and it is spreading quickly, the foundation of good will grows bigger and more impressive. This positive populist expression, especially in these days of intense commercialism and deep cynicism, makes my heart glad.

It proves that we are still a democracy and the public is still judge and jury.

Northern New Mexico

A good place to watch the turning of the tide is in the mountains and valleys (and cities) of northern New Mexico. The site of effigy-hanging acrimony between environmentalists and natural resource users, the region has cooled off somewhat as reasonable people begin to explore new ideas to old conflicts.

The grazing debate is a good example. In June a group of ranchers, conservationists, scientists, forest service employees, and members of the public will meet in Peñasco to listen to common-sense solutions, including development of a grassbank, the reintroduction of fire into the ecosystem, and the thinning of the forests—solutions that are cooperative and benefit everyone's needs.

It is an opportunity and a challenge for everyone, including the Quivira Coalition. The economic, ecological, cultural, and governmental differences between ranching in the northern and southern parts of New Mexico are profound. Ideas that work well on a large, dry ranch may not be terribly useful on a 600-acre ranch

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Jim Winder, Radio Star?

KUNM-FM, Santa Fe's public radio station, aired a 30-minute show on Memorial Day, May 25, called "I'd Rather Switch Than Fight," which consisted of a large part of Jim Winder's speech at the January 17 Silver City Workshop on Ecologically Sensitive Ranching: Is It Possible? The May 25 airing, from 5 to 5:30 pm, was a repeat of an earlier, early morning airing of the same program, necessitated by the many requests the radio station received asking for the additional airing. The program was put together by reporter Catalina Reyes, who attended the Workshop and the tour of Jim's ranch the next day.

The Far Horizon

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near Tierra Amarilla, such as the one owned by John Roybal and his father.

On the other hand, riparian areas still need to be fenced, dormant season grazing still needs to be tried, cows still need to be herded together and moved around regularly. The basics of the "New Ranch" sometimes transcend many cultural and environmental particulars and sometimes dovetail.

For example, what is the 21,000-acre Ghost Ranch, with its 900 head of cattle belonging to 55 local ranchers, and its holistic style of management, but an ejido—or traditional commons land? Isn't a grassbank a form of ejido as well? These are new ideas with an old purpose.

The past, as Faulkner once observed, is never very past, especially in northern New Mexico.

My Hope

My hope is for an economic, environmental, and cultural renaissance in the north. Let's help the organic farms get on their feet, let's help people find a way to use their forests sustainably, and let's find innovative ways to keep the family in the family ranch.

The potential exists for "Vermont-style" economic development—family farms and ranches producing high quality food through co-ops and other associations for markets in Santa Fe, Taos, and points beyond. A "Grown In Northern New Mexico" label, assisted by skillful advertising, could very be popular—and profitable.

The return of economic vitality to the villages of the region would stabilize eroding cultural traditions. Kids might desire to stay on the farm, or work in the woods, or raise a cow. The pressure to sell property might be alleviated; and the need for a city job might be reduced. People could get reacquainted with the joys of knowing the land again.

A healthy environment would lift all boats. Holistic ranch management, organic farming, forest restoration, and the availability of grassbanks, all work toward the economic and cultural advantage of every community. And that's just for starters. There are many other environmentally sensitive strategies that work harmoniously with economic goals. We just need to roll up our sleeves and get to work.

Bison Grazing Primes Prairie Biodiversity

According to a story in the May 1, 1998 issue of Science magazine, "Bison appear to help keep grassland ecosystems healthy. Findings from a 10-year study in Kansas linking bison grazing to plant diversity in tallgrass prairie offer hope to land managers trying to preserve the last remnants of native U.S. grasslands. 'Potentially there are ecological solutions to some of these biodiversity problems,' says study leader Scott Collins of the National Science Foundation. . . .The reason seems to be that the taller. . . grasses 'form this big, thick canopy in which a lot of the less common species can't survive. Mowing or grazing shaves open that canopy and allows more light to get through, so a lot more species can coexist.' . . .

"The implications for cattle grazing are unclear, however, Rangeland ecologist William Lauenroth of Colorado State University in Fort Collins says the new findings represent 'the first time a group of ecologists with no clear connection to the livestock community' agree with range scientists that grazing can benefit prairie grasslands." But, the article goes on to say, the impact may differ between bison and cattle or elk.

that recent U.S. Forest Service inventory data indicate the presence of about 1.4 billion piñon trees in New Mexico). These great increases in tree density in multiple vegetation types have caused declines in herbaceous understories, as the grasses are choked by the shade, needle mats, and competition from the dominant trees.

As a result of these changes in vegetation and fuels, fire suppression during this century has promoted conditions that today threaten New Mexico's forests with increasingly large, intense, and uncontrollable crown fires. The past 20 years have been unusually wet in our region, but true drought conditions (like the 1950s) will certainly recur unless global climate has indeed changed recently. The Dome and Hondo Fires that took place after the dry winter of 1996 are just a small foreshadowing of the potential for enormous and unnaturally intense wildfires to burn through our overcrowded forests and woodlands when multi-year drought returns. Such large crown fires will have many undesirable ecological and social effects, from degradation of habitats for endangered species to downstream flooding of human settlements.

Summary

Most forests, woodlands, and grasslands in northern New Mexico evolved with frequent, low-intensity fires. The removal of the natural process of fire by human suppression has disrupted these ecosystems in many ways, including the loss of much grassy vegetation as woody plants have expanded in distribution and increased in density.

Many local forests, woodlands, and grasslands need to be restored to more open conditions to protect both ecological values and human communities, and research has been proceeding on environmentally sensitive ways to effectively implement restoration treatments. While site-specific conditions must always be carefully considered, general examples of ecologically appropriate restoration efforts include: cutting and burning trees out of invaded grasslands and meadows; thinning and prescribed burning of ponderosa pine forests to reduce the density of understory trees; and thinning younger piñon and juniper from thick woodlands, using the slash to mulch the eroding interspaces between remnant trees.

One outcome of such restoration efforts would be a shift in ecological dominance back toward the natural pattern of more abundant herbaceous vegetation in most local ecosystems. While not the primary motivation for most ecosystem restoration efforts, it is possible that the widespread restoration of enhanced grassy vegetation could help resolve persistent range management conflicts on public lands by providing additional grazing capacity on upland settings, away from the environmental conflicts associated with grazing in riparian zones.

The views expressed here are those of the author and do not represent an official position of the USGS.

Where Have All the Grasslands Gone?

(con't)

"Winder has. . .co-found[ed]. . .a group [the Quivira Coalition] specifically designed to bring together ranchers and environmentalists. . . .It is time for moderate ranchers and environmentalists to look past. . .disputes to what lies beyond the horizon (to paraphrase the meaning of the Spanish word, 'quivera [sic]'). . . .It would be nice to see more ranchers and environmentalists. . .come together on the middle higher ground. They just might hold the key to the future of ranching and public lands stewardship in the West." Albuquerque Journal editorial, April 4, 1998

Valle Grande Grass Bank

(con't from page 5)

"[T]he Macho Creek project is promising. This two-mile stretch is only a tiny portion of our state's hundreds of miles of beat-up streambeds... [The project] is welcome evidence that folks in the contrary American West can shake hands, roll up their sleeves and work together. Their fellow New Mexicans would welcome other such cooperative efforts."
Santa Fe New Mexican editorial, May 7, 1998

—management of our allotment and care of the cattle pastured on it;

—raising funds for fires and other land treatments on rested allotments; and

—continued development of working agreements with the Forest Service, Northern New Mexico Stockman's Association, NMSU Cooperative Extension Service, and the Arid Lands Project, a partnership of scientists who will assist The Conservation Fund with monitoring the grass bank allotment.

Our Goals

A lot has changed as the project has grown and begun to mature. We've tried to stay responsive as conditions change and as we learn more about the needs of participating permittees and their home allotments. But three things have remained constant since our earliest efforts to conceptualize the project nearly two years ago. They are our original three goals:

The first is to reinvigorate grasslands and improve the ecological health of public lands. This benefits not just stockmen and their livestock but the entire matrix of wildlife dependent on such lands.

The second is to strengthen the resource foundation on which participating National Forest permittees depend. By participating in the grass bank, permittees get their home allotments thoroughly fixed up, minimizing environmental conflicts and guaranteeing that the size of their herds will be sustainable over the long term.

Thirdly, we hope that the grass bank can serve as a model of collaborative problem solving. We want to show that ranchers, conservationists, and Federal agency personnel can work effectively together for the good of the land and of the people who depend on it. In this regard, we feel considerable affinity for the Quivira Coalition and its efforts to build links among the many constituencies committed to improving the condition of New Mexican lands.

Macho Creek

(con't from page 11)

the state land upstream. But we need to get the grazing controlled along the whole creek to restore a perennial flow in the dry years."

Winder said the forage along his portion of the creek has increased tenfold since he first fenced it off. "The number of days you can graze during the dormant season will depend on your stocking rate. If they put several hundred cows in upstream they might only be able to graze it for a week. With just a few cows it might go for several months."

White said that the Quivira Coalition hopes to set up four or five more grazing demonstration projects in the state in the near future. "We don't have anything to hide," he said. "All the projects will be monitored yearly to see if this really works. I'll be taking before-and-after pictures along Macho Creek. In five years we really think you'll be able to see a difference."

Winder said: "Not many are jumping on the bandwagon yet. A lot of ranchers would rather be left alone to do things the old way. And a lot of environmentalists just want the cows out. But we think these projects will eventually sell themselves."

surrounding our ranch, I am also incorporating elk and deer into the management plan so that we will not have to rely solely on cattle for income.

Goal for This Year

My first goal for this year is putting up an electric fence to keep our cows out of the creek during the growing season; that project should be completed by June 1, if all goes well. Right now I'm trying to convince the Boss to keep our cows at our spring calving pasture until I can get the electric fence up along the creek. He's reluctant to keep them in that pasture much longer because he's not able to fertilize and irrigate that pasture until we take the cows out; in addition, we have to continue feeding the cows hay because they've eaten all the dry grass in the pasture. Consequently, he wants to take our cows to the ranch as soon as possible.

I wish that I could have had the time to plant some cottonwood trees along the creek this spring, but I was not able to do so . . . maybe next year. This summer I will continue to clear land of piñon and juniper trees in order to plant more grass. Unfortunately, we do not have another place where we can graze our cows in the summer so it's going to be difficult keeping them out of the newly seeded areas without erecting many new fences. It's too bad that we don't have a grass bank in the area! Someone should work on that project.

Because I am convinced that we have to change our traditional methods of cattle ranching in northern New Mexico in order to continue ranching into the next millennium, I am fully committed to implementing a new management plan at our ranch. Although the Boss does not see the need for changes, he probably realizes that it's time to give me an opportunity to make my mark on the land. Hopefully, in 10 or 20 years, the mark that I will have made will be evident in the healthy and productive rangeland and thriving riparian areas on our ranch. I hope that the Boss will still be around then to see if he made the right decision. Only time will tell.

From the Founder

(con't from page 2)

and listening. Collegiality ruled as people from diverse backgrounds set aside their differences to concentrate on how to heal land for multiple benefits. Guided by science, we learned that there are practical, innovative solutions to the riparian problem. It's just a matter of taking the time to learn.

Which is what the Quivira Coalition is all about.

Editor's Note: *The Quivira Coalition will be bringing the National Team to northern New Mexico sometime in the near future for another three-day workshop. We will also be working with the New Mexico PFC cadre to offer workshops around the State on restoring riparian health. We want to thank Ed Frederickson of the Jornada Experimental Range for coordinating much of the riparian workshop.*

Convincing the Boss

(con't from page 3)

JOIN US!

Would you like to join the Quivira Coalition? While we have finally received our non-profit status from the IRS and are beginning to receive grant money, we still rely heavily on donations. If you would like to help us continue our educational mission, please send your contribution with this form to our Santa Fe address.

Yes! I would like to join the Quivira Coalition. I can contribute:

___$15

___$30

___$50

___$100

___Other

Contributions entitle you to receive this newsletter and notices of upcoming events and publications.

Thank You!

UPCOMING EVENTS

ECOLOGICALLY SENSITIVE RANCHING? IS IT POSSIBLE?

Find Out At a **Free WORKSHOP**

8:30am-4pm, Saturday, July 25, 1998 at the Sallyport Inn, ROSWELL, NEW MEXICO

Speakers:

DAN DAGGET - Environmentalist, author of Beyond The Rangeland Conflict: Toward a West that Works.

JIM WINDER - Cattle Rancher and practitioner of ecologically-sensitive resource management.

Dr. KRIS HAVSTAD - Supervisory Scientist of USDA's Jornada Experimental Range, near Las Cruces.

And a **Panel Discussion**

The purpose of this Workshop is to demonstrate to ranchers, environmentalists, land managers, and any interested member of the public, that ecologically healthy rangeland and economically robust ranches can coexist. The Speakers intend to teach that, under most circumstances, ecological goals, such as abundant wildlife, clear streams, hardy riparian zones, and healthy grasses, can be compatible with the commercial goals of livestock raising. For more information, call Courtney White (982-5502), Barbara Johnson (466-4935), or Jim Winder (505-267-4227).

Tour of Ghost Ranch with Virgil Trujillo

Saturday, August 1 and Saturday, September 26, 1998

Virgil Trujillo will lead two four-hour tours of Ghost Ranch, west of Abiquiu, New Mexico. Learn about cattle rotation, range ecology, biodiversity, electric fencing, history, culture and other cool stuff. Enjoy the open space and blue skies of northern New Mexico. We will assemble at 10am at the Ghost Ranch headquarters, located 60 miles northwest of Santa Fe. Take US 84 past Abiquiu and keep going toward Chama. The entrance to Ghost Ranch will be on your right, a few miles past the Abiquiu dam. Bring a lunch, water, a hat, and plenty of sunscreen.

For more information call Virgil Trujillo at (505) 685-4333 or Courtney White at 982-5502.

Outdoor Classroom on Rangeland Health—TBA (a weekend sometime in late August)

We will inaugurate our Outdoor Classroom series with a two-day excursion to Sid Goodloe's ranch and the BLM's Fort Stanton, both near Capitan, New Mexico. Under the overall guidance of a Quivira instructor, we will explore what "health" looks like on the ground. We will study plants and animals and learn in detail how to recognize a healthy landscape. Sid will give us a tour of his ranch and talk about how he integrates progressive ranch management into ecosystem function.

A chuckwagon lunch at Sid's house will follow. After a tour of the nearby forest, we will camp overnight on the lovely Rio Bonito, in Fort Stanton. The next morning we will study life in a riparian area that was recently grazed and look for evidence of beaver, elk, and other wildlife. We will be assisted by biologists from the BLM.

Space will be limited. A fee will likely be charged. More details will be provided soon in a mailer to our readers.

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