

REFUTING THE MYTHS

It is time to expose anti-livestock bias in federal culture. The truth is, long-term livestock removal in the West is usually an environmental disaster. What else could you call something that wipes out most plants and most wildlife?



(© Duane McGarva)

By Steven H. Rich

Published by RANGE magazine
Copyright 2004

Do cows really eat fish? Do they eat fish eggs? I have personally replied (on behalf of clients) to multiple Draft Biological Opinions regarding two national forests where U.S. Fish & Wildlife Service biologists made these claims. They claimed that cows destroyed the nests (redds) of fish species that don't build nests, stepped on fish, and muddied the water of fish that spawn only in muddy water. They also designated dry washes as critical habitat for endangered species of fish.

When consultant May Darling asked several other fisheries biologists about the truth of these claims, all were astonished at their silliness. One university professor summed them up as "deliriously incompetent" and wondered how anyone could achieve a state of delusion deep enough to make

such statements in a professional context.

Anti-livestock claims just as imaginative and unsubstantiated as those are found in government documents all the time. This one was an obvious attempt to claim "direct take" of an endangered species and trigger draconian anti-livestock actions.

Dr. John Rinne of Rocky Mountain Research (operated by the U.S. Forest Service) became so concerned about false beliefs and statements and their terrible effects on policy and endangered species recovery that he wrote a paper entitled, "Fish and Grazing Relationships: The Facts and Some Pleas." He asked for better, more scientifically valid study designs and methodologies.

He asked fisheries biologists to realize that most published work (80 percent) on fish and grazing relationships is not peer reviewed and that most of the data are suspect; that dams and other

human alterations have changed the habitat; that research and wide exposure to the facts. He personally was aware that the forced removal of livestock had led to the extinction of endangered cyprinids on vast reaches of Arizona rivers. He found that their highest populations tended to be in flood-blasted, warm, shallow, braided channel refugia and at places where vehicles splashed through streams, inside corrals (through which streams flowed), and in river channels within mine sites which are regularly bulldozed. He asked biologists to be more accurate and rigorous and stop anti-livestock prejudices.

The last paragraph of his peer-reviewed paper reads as follows. "I finish with two cyprinids (like spike dance, loach minnows, chubs, etc.) are not trout or salmon and have different requirements; and that many trout studies are skewed by governments stocking fish in study areas. He pointed out that in addition to all this, governments' have introduced

many nonnative aquatic organisms (sport fish like bass, green sunfish, and catfish, plus several crayfish species, shiners, mosquito fish, bullfrogs, etc.). These nonnatives eat endangered cyprinids and their eggs and outcompete them for habitat. Dr. Rinne said grazing has little to do with problems which began when government actively poisoned these native fishes and purposefully replaced them with nonnatives.

Dr. Rinne's analysis is from his own thoughts pertinent to the subject of monitoring and research on fishes and grazing relationships in the Southwest or Region 3 or the Forest Service. The first is that little new data are being collected and there is a continuing reiteration of what is in the [extremely deficient] literature about fish and grazing relationships. Selective rather than objective comprehension by individuals has dictated management alternatives for the last several decades. We as environmental groups, managers, and researchers need to stop expressing opinions, disrupting and constantly litigating or threatening to and start collecting data from well designed, defensible research and monitoring activities. Second, as the saying goes, "Without [valid] data, one is just another person with an opinion."

Other responsible scientists support Dr. Rinne's position. The 143-page UC Berkeley Rangeland Science Team's report (March 1999) stated: "Unfortunately, testing of hypothesis is not done before people leap directly from observation to the conclusion that grazing is the primary source of resource degradation."

Dr. Rinne's calm, reasoned and moderate request for science and at least "to pursue" the truth drew furious response from the clique

practicing "selective comprehension" (an elegant term for messing with the truth), including the "cows eat fish" claimants. These were furious because, among other offenses which "affronted" them, he asked that they "remove [them] selves from promoting and sustaining the litany" of anti-grazing factoids and act like scientists.

Dr. Rinne quoted a federal manager: "When the search for truth is confused by political (or any kind of) advocacy, the pursuit of knowledge is reduced to a quest for power."



(Copyright Cynthia A. Delaney)

There's something fishy when cows get blamed for problems that don't exist.

Where cattle graze, critters like this burrowing owl in Jarbidge, Nevada, find abundant food and shelter.

The anti-livestock groups are jealous of the power they have created by reiterating their litany of generally spurious information. One Bureau of Land Management (BLM) biologist responding to Dr. Rinne's article represented a more reasonable view, but still revealed his bias (and by his reference to "managers' claims" that it is widely held in government) interests will undoubtedly use [Rinne's] article to contest the science behind the claims of resource managers." Never mind, apparently, that these claims may be built on false assumptions without support in fact.

Such statements are justified in the minds of radicalized persons by their highly imaginative and often very sincere apocalyptic visions of pillaging bovines raping every riparian system in the West. These visions along with squeamishness about animal dung drive the rhetoric and actions of anti-livestock activists in and out of government. I have personally heard versions of this "cows (or sheep or goats-supply favorite evil agricultural animal here) will destroy the world" rant from dozens of federal officials.

"There is an entrenched culture in federal land and resource management agencies based on sociopolitical philosophy rather than scientific inquiry," said biologist and attorney Dennis Parker, who loves wildlife and is a passionate advocate of good management. "For example, Region 3 of the Forest Service has created 'grazing guidance criteria' for endangered species consultations which are notorious among responsible scientists for institutionalizing speculation and assumption as if such were scientific fact, while ignoring excellent research by its own (Rocky Mountain Research Station scientists, of which the agency was fully aware."

Parker is also passionate about the distortions that bias creates in dealing with wildlife issues. He added, "For its part, the U.S. Fish & Wildlife Service is also notorious for uncritically accepting speculation and assumption posited as biological fact by NGOs' [nongovernment organizations/ environmental groups] petitions to list various species under the Endangered Species Act. The result is that both the Forest Service and the Fish & Wildlife Service vie with one another to institutionalize bias at the expense of livestock grazing permittees and at the great injury

of species these agencies are alleging to protect."

Parker concluded: "It goes on and on-flycatchers, the owls, cyprinid fishes, Mearn's quail. It's endless and it makes no sense."

Dr. Jerry Holechek is a widely respected researcher and professor of range science at New Mexico State University. No one is more quoted by government. He shakes his head sadly when asked about anti-livestock groupthink in governmental agencies.

"In a sane environment we'd be paying ranchers for the ecosystem services they provide," he said. "Dr. Rick Knight says ranchers get paid for one quarter of what they do for society. In my book he's just about right. Look, this obsession with overgrazing is a disastrous waste of time and energy. It's well-known that I'm firmly against overgrazing. Well, so are the vast majority of ranchers. Tremendous improvements have occurred just in the last 10 years. I've got good science on that. Overgrazing, now is a nonissue. It's not even a one on a 10 scale."

Dr. Holechek continued, "The West really is in terrible danger, but people won't face it because they're part of it. The real threat is the loss of ranch land to urban and ranchette development. Persecuting good ranchers is like shooting firemen because you see them whenever there's a fire. Driving ranchers off the land is feeding the monster that's eating the West."

An example is the shameful persecution of Jim and Sue Chilton, who own the Montana Allotment near Arivaca, Ariz. As has been done elsewhere in the West, an ephemeral stream, California Gulch (dry most of most years), was designated a critical habitat for an allegedly endangered

fish, the Sonora chub, another hardy cyprinid fish (though not hardy enough to get along well on dry land). In their Mexican home rivers, the banks and watersheds of which are widely overgrazed and degraded, there are millions of these flood -and muddy-water-loving fish. All southwest fisheries biologists know this. To call them endangered is an egregious, preposterous whopper of a lie.

Now, the ones that swim the few miles up California Gulch in floods are in trouble because bass, catfish and green sunfish get washed out of the town reservoir upstream from the Chiltons and they love to eat chubs. Then, of course, the stream dries up in time and bears, fish-eating birds, coyotes, coatimudi, raccoons and foxes clean them out of the shrinking pools.



(© Jeff Foott, Tom Stack & Associates)

No one would be more surprised than the desert tortoise to learn that U.S. Fish & Wildlife Service biologists claim that cattle are a threat. Desert tortoises need fresh cow dung for moisture, B vitamins and easy nutrition. Fresh cow dung increases the tortoise's health, activity and egg production. The plants they depend on require hoof action and grazing to survive.

This ridiculous charade has cost the Chiltons a great deal of money and time and injured their health. They put together a document with over 100 pages of expert testimony to beat off this threat an effort far

beyond the resources of most ranchers.

Anti-livestock activists count on breaking ranchers' bank accounts, their will and finally their hearts. (I'm aware of deaths caused by this.) Activists get paid to tell lies and it costs big money and many years to disprove them in the present climate, where livestock operators are guilty until proven innocent. Many federal scientists (not named to spare them reprisals) complain that politically radical officials freely and regularly throw irresponsible claims into biological opinions, allotment reviews and environmental assessments. Once they are on the legal record it takes years and millions of dollars to return policy and endangered species' recovery efforts to the path of sanity and success.

Dr. Holechek and I, in the company of Dr. Galt and Sue Chilton, spent a day on the Montana Allotment while I interviewed the Chiltons and the two good doctors on video for an upcoming piece to be narrated by U.S. Senator Bob Bennett of Utah. The allotment is beautiful and healthy. Waist-high grass and overgrazing-sensitive plants and wildlife abound, as do hunters, bird-watchers and other outdoor enthusiasts. Dr. Holechek and Dr. Galt agreed that this is one of the most important and best documented successes of rangeland and riparian recovery due to managed grazing in the Southwest. But the persecution continues. An "environmental" group has targeted it on the internet as one of the "10 most overgrazed allotments in the West." Nothing could be more obviously false, but what does that matter?

The illogic of these endangered fish and bird-recovery plans can reach inspired levels. Miles-wide riparian livestock use are

scheduled for burning in massive areas. This, of course, will expose any endangered fish to potentially lethal ash flows, documented by federal scientists to be a grave danger to all aquatic organisms. It will also expose the riparian system to scouring floods which will destroy all vegetation for bird use along with any nestlings.

A few further examples follow:

The Infamous Desert Tortoise Scam

U.S. Fish & Wildlife Service biologists claimed widespread destruction of tortoises by livestock. They claimed cows stepped on tortoises and crushed their burrows. No caw has been documented to have stepped on a tortoise and only one accidentally trampled burrow has been found. They claimed cows also deprived tortoises of food. Any desert rancher, desert dweller or competent desert reptile biologist will know that tortoises cluster around corrals to get fresh cow dung to eat. They need it for moisture, B vitamins, and easy nutrition. Cow dung greatly increases their health, active periods and egg production. Also, the desert annuals and other herbaceous plants tortoises depend on greatly decrease when livestock removal stops nutrient cycling and soil disturbance. All this and more was raised in the Environmental Impact Statement but the bias won out. Locals report fewer tortoises; scientists report increases in tortoise diseases.

The Infamous Southwestern Willow Flycatcher Scam

Beginning with biologist Dennis Parker, private, university and federal biologists have documented the largest by far (half of the subspecies) and most successful concentration of Southwest willow flycatchers on

earth in New Mexico's Gila Cliff Valley. They are nesting in predominantly man made second-growth box elder-dominated woodland (not willows; they avoid the willows) on irrigation ditches and returns. They eat bees, wasps, and yellow jackets by preference (not flies or mosquitoes). This population refuses to occupy gallery forests on streams lined by willows adjacent, upstream and downstream from the Gila Cliff Valley-the kind of habitat federal endangered species' documents insist they want.

The flycatchers on the ranches experience the lowest rate of cowbird parasitism of any population in the U.S. Some of the highest cowbird parasitism rates are in Grand Canyon National Park, Where there are no cows.



(© John Gerlach, Tom Stack & Associates)

Ranchers have been adversely impacted by the need to protect the "Arizona Agave." Only, it's not a separate subspecies after all, just a hybrid cross of two common agave varieties. Who's protecting the threatened ranchers?

The Gila Cliff Valley has the highest concentration of livestock in southwestern New Mexico. Despite this and much more, thousands of cattle have been removed allegedly to protect flycatchers.

Right now in Rock House, Ariz., the feds are building mosquito ponds lined with willows for flycatchers. This is a West Nile Virus hot spot. These birds don't like willows, don't like mosquitoes, and have no immunity.

The Infamous Mexican Spotted Owl Scam

According to Bent's "Life History of North American Birds," there were none of these in the U.S. before 1929 or until large-scale logging began. These owls prefer steep, deep, dry, cool canyons. They dine by preference on wood rats (packrats) and other rodents. Most actual Mexican spotted owl habitat is inaccessible by livestock, but livestock are removed because they allegedly threaten the owls through exposing wood rats to avian predation. (Avian included owls last time I checked.)

The Infamous Lesser Long-Nosed Bat Scam

This organism has millions of acres of protected habitat on federal land. It has been used to reduce livestock numbers and destock ranges. In fact, its numbers are limited only by lack of roosting and nursery habitat in caves. The Forest Service has closed over 200 abandoned mine entrances which could have served this need. More are being closed.

The Infamous Cactus Ferruginous Pygmy Owl Scam

Ranchers have been de-stocked by 90 percent over this bird, abundant in Mexico. Its listing as an endangered species was recently ruled by the Ninth Circuit Court in San Francisco as "arbitrary and capricious." Politics have prevented the lower court from ordering its delisting.

The Infamous Masked Bobwhite Quail Scam

Millions were spent buying Arizona land to "protect" these birds (whose care habitat is in Mexico). The Buenas Aires National Wildlife Refuge was created and the cattle were removed. The tame, pen-raised quail usually got eaten by coyotes and other predators within a weed, so the escapees left and went to nearby ranches. This is a very common outcome.

These are just a few of a very big list of examples. Anti-grazers passionately believe in the validity of all of them. We should not forget the activists' propensity for planting evidence (remember the bogus lynx hairs planted by federal biologists in Washington in 2001?). The Tucson Daily Star on May 16, 2004 published a similar story about a former U.S. Fish & Wildlife Service refuge manager planting Chiricahua leopard frogs, apparently to create continued justification for the Buenas Aires National Wildlife Refuge. In Grand Staircase/Escalante National Monument, cows under federal grazing prescriptions have also been alleged to create "dung fire" risk to underground artifacts; rub petroglyphs off cliff walls; endanger a historic structure (a corral); endanger native wildlife; cause floods, erosion, water-quality degradation, widespread public outrage, lost tourism revenues, juniper invasions (all not true); and destroy some recreationists' experience of the outdoors by their mere presence. What does this say about the biases of the recreationists? All this was found, along with the flycatchers and the spotted owls, in one federal document.

Hundreds of conversations with anti-grazing activists inside the federal government have outlined their reasons and motives clearly. They see themselves as principled, heroic figures performing civil disobedience to save nature from

industry. Some view themselves as "monkey wrenchers" (from Edward Abbey's "The Monkey Wrench Gang") who do violence to legal and scientific records rather than fences, wells pipelines, barns or livestock. One activist in a BLM office sported a "Heyduke Lives" bumper sticker on his private car, referring to George Heyduke, the fictitious leader of The Monkey Wrench Gang. They hold fellow workers who defend Scientific grazing in disdain as having "sold out to the Man." They know that ranchers experience their deliberate troublemaking as a form of domestic terrorism but they feel that the end justifies the means.



(© Cynthia Baldauf)

Of all those who deal with land management, ranchers are probably the most knowledgeable about the land and its needs. In a sane environment, one scientist said, we'd be paying ranchers for the ecosystem service they provide.

That explains the activists who act in full knowledge that they use falsehoods as weapons. Even more pervasive, but just as damaging, are those who simply and uncritically believe the body of false information passed on to them from what they believe to be authoritative sources. This tragic multiplier of dangerous (to nature) beliefs operates in the media as well, which then spread bias to the public. It all speaks to the huge disconnect between urban people and the truth about nature.

Thom Harrison is a popular and respected private psychotherapist,

author, former faculty member at the University of Utah School of Medicine and instructor of Mediation and Conflict Resolution at the J. Reuben Clark Law School at Brigham Young University.

"Bias operates at several levels," he said. "At the group level it functions through both fear-based and reward-based enforcement systems. A culture which develops a group bias can be ruthless with nonconformists. It will sanction and encourage actions such as marginalizing those who don't agree, slandering and libeling them, threatening their careers, and withholding employment and advancement opportunities. It rewards conformity with opportunities deprived from those who won't support the bias. If the bias is directed against another group it plays the same game of intimidation. The rewards to complicit individuals in the persecuted group are provisional and shame laden. It's very complex. The dynamics of racists and African Americans in the Old South are a perfect example. So are the things that went on in Nazi Germany and the occupied countries."

There are numerous landscape-scale successes in achieving miracles of healing far in excess of "no grazing" through solid, prescribed and monitored livestock and range management. Harrison agreed that anti-livestock/anti-rancher bias in the face of recent science operates at the same intellectual level and through the same mental pathways as racism, sexism, and other biases.

"It's a delusional process," he said. "Their belief is 'Only what I think can exist and no one is allowed to see it differently.' Their own social, financial, and professional survival is at stake at very intense, emotional levels."

Harrison laughed when I shared Dr. Rinne's term, "selective rather than objective comprehension."

"Perfect," he chuckled, "there's also a selective distribution of information. Facts which refute the bias are not perceived or remembered in efficiencies anything like those for pro-bias data. Antibias information is also suppressed in various ways. When several societal power groups, and especially when the media are involved, become allies in projecting prejudice, the cognitive distortions reach hallucinatory thresholds."

It takes a brave soul to face all that. When informed that a group of researchers and activists were seeking funds to sue the federal government under the National Environmental Policy Act (NEPA) to force examination of the environmentally destructive effects of removing managed livestock from public lands in any NEPA action, Dr. Jimmie Richardson, internationally connected soil scientist from North Dakota State University, replied, "I'll be their first expert witness."

Many others have similar guts and integrity. Dr. Jerry Holechek recently published a monumental survey of worldwide grazing literature which states in the summary, "There is strong scientific evidence that managed livestock perform important ecological services." The evidence, in journals, papers, and elsewhere, shows that wildlife prefer properly grazed areas. Prescribed grazing supports riparian healing and watershed stability, soil health, and much higher biodiversity than no grazing; higher soil (and overall) living biomass; and higher reproductive and survival rates for native plants and animals.

The summary to Dr. Holechek's "Controlled Grazing Versus

Grazing Exclusion Impacts on Rangeland Ecosystems: What We Have Learned" continues, "The idea that managed livestock grazing is not ecologically sustainable in arid and semiarid areas is refuted," as the research clearly demonstrates.

Studies of grassland soils by Dr. Richardson (along with Paul and Ann Nyren, Dr. Bob Patton and others at NDSU and NDSU's Central Grasslands Research Center) showed root zones averaging five inches for ungrazed grassland versus an average of 40 inches for prescription-grazed areas. Native biodiversity was vastly greater, averaging one or two native plant species under nonnative domination for ungrazed soils versus over 100 natives predominating on prescription-grazed rangeland. Water infiltration and absorption capacity was over 10 times greater on the prescription-grazed lands. "Prescribed, managed grazing is 10 times better than no grazing" findings are not uncommon in the literature historically and in long-observed often-documented landscape scale comparisons.

So where do anti-grazing groups get the studies to convince judges to rule against ranchers?

"That's what drive me nuts," Dr. Holechek said. "It's an unethical and unscientific process. They use studies which document the effects of unmanaged livestock. That's not an honest comparison at all. You see the same set of studies quoted over and over, whenever they attempt to close allotments. Which is very ironic, since most of those findings were eliminated from our review because of bad study designs and unscientific methodologies. When you add that to the fact that they're not relevant at all unless the federally created grazing systems mandate

unregulated livestock, it's a pretty sordid business."

Anti-livestock bias has its origin in the widespread abusive, European-culture-based grazing practices of the late 19th and early to mid-20th centuries.

"Abusive grazing is much less common now," Dr. Dick Richardson (University of Texas at Austin) said. "But it continues in places. The trouble is that causation is complex. Symptoms like plant death or morbidity or the lack of herbaceous understory can have multiple causes. Any negative outcome will generally be blamed on overgrazing and that explanation will be believed. It's very convenient. Nobody has to be careful, follow a good scientific process, or think."

The experts agreed that most people, even the majority of those with range science degrees, have little or no ability to distinguish between the effects of drought, overgrazing followed by long-term livestock removal; long-term livestock removal; or continuing long-term livestock overgrazing after a few months' rest. Destructive fire effects are also often confused with those of overgrazing. All negatives are assumed to be livestock caused.

"Undergraduate education, especially, is failing resource management students all over the country." Dr. Rick Knight said. "Of all the groups of people who live on and manage the land-ranchers, agency personnel, and ranchette dwellers-the ranchers are generally the best informed and have the fullest complement of tools to see that the land is more native than invasive, more covered ground than bare ground, more healthy than unhealthy." He added, "Natural science students such as those in wildlife disciplines spend

their time stuck to computer screens. They rarely see daylight."

All agreed that ranchers are, on average, more knowledgeable than urban dwellers and anti-livestock activists.

I asked Tommie Martin of EcoRestore if anti-grazing university scholars were well versed in the realities of western climates and ecosystems and their varied responses to grazing or long-term rest dynamics.

"When I first start to work with anti-ranching professors and other activists in and out of government," she said, "anything positive on any ranch is seen by them as an endangered natural treasure that the cows just haven't managed to kill yet. They're usually wonderful, sensitive, well-meaning people. They're very learned in Latin taxonomy and methodologies. The thing is they've been conditioned to go along and not put their butts on the line. As for experience [Martin teaches by direct observation on-site], you'd think some of them were raised in a closet."

The other side of the problem is the bunch she calls "tunnel-vision ranchers," who focus mostly on their animals. Some years ago, the president of one of the cattlemen's groups admitted proudly that he couldn't tell an annual from a perennial. He explained that he "hired consultants for that." He is not typical of ranchers, but that attitude does exist.

Martin tells both groups that if they put their assets of rancher experience and educated expertise together, they'll be very effective. Science has already benefited greatly from ranchers' keen, questioning, year-in-year-out observations. If scholars then use the fundamentalist science (where rancher/scientist teams'

conclusions are drawn from long-term, real-world scale data, not inferred by brief observations) that Dr. Rinne and other responsible scientists call for, breakthroughs occur and the resource benefits.

Eric Schwennesen of Resource Management International frequently instructs government officials in Africa and other Third World locations. Their governments and people have sacrificed greatly for their elegant educations from the best universities in the world. They feel the responsibility keenly. When he sends them out on the land to make observations, they always come back with notebooks full of conclusions. It often takes repeated efforts before they grasp the difference. The experience leaves them shaken and angry.

"I was sent by my people, who exist always at risk of starvation, to be educated, not to be indoctrinated," one Mailian extension service official told Schwennesen. "Now I see that the evidence of the land contradicts much of that I was taught. I am bitterly disappointed in my university training, but I am now much relieved that I will not formulate disastrous policies out of certainty that is misguided. For my countrymen, who depend on their animals to survive, this could have caused added poverty, suffering and death."

Dr. Dick Richardson agrees. "Bias is an inherent property of the standard method of instruction, evaluating, and awarding grades to students," he said. "It begins with the assumption that teachers know the answers in very young disciplines like ecology and range science. Students are given a standardized set of answers and a standardized set of indicators, or cognitive cause that can only lead straight to those conclusions. That

constitutes a classic circular-logic trap."

In Dr. Richardson's conservation biology courses, liberal arts' students initially make better observation than the natural sciences' students because they observe more generally and ask questions. "They haven't been subjected to the punishment/reward/mental conditioning and the sensory deprivation that comes from being limited to a single one-day or half-day field trip per course per semester. Many of the indicating features are ephemeral and misleading. A single visit to a study site reveals almost nothing compared to repeated observations over an extended period."

He added, "Instructors have the best of intentions, but many are third-generation sufferers of the same abuse. They really don't know better. Limited resources and rigid, formulaic methodologies are not up to the task of assisting students' minds to deal with vast interconnected complexities which are constantly changing over time."

Western national parks (ungrazed for decades), act as time machines to reveal landscape-scale consequences of livestock removal. If the anti-ranching crowd is correct, these places should, after decades of rest, be beautiful examples of native biodiversity and optimum ecological functioning. Instead, in Arches, Canyonlands, Capital Reef, Zion, Lake Powell Recreation Area, Buenas Aires National Wildlife Refuge and other arid to semiarid rangeland parks that exclude cattle, most of the native perennial grass and flowers are gone.

"That's a natural process of biological succession," said Dr. Jim Bowns of Southern Utah

University. "Without disturbance [which is part of prescribed grazing and management activities], the canopy cover of sagebrush and the other woody plants increases until the herbaceous [grass and flower] understory is purged and you have just shrubs and bare ground. That's bad watershed, it's bad habitat for wild animals like birds, deer, etc., that need those herbaceous plants, which most do, and if it burns, you get erosion and nonnative cheatgrass."

Dr. Holechek said: "The visions of healthy land people have regarding livestock removal are more fantasy than reality. The outcome is rarely very good ecologically. In various range sites the response is different. You may end up with tall, coarse, low-nutrient grass which acts in some ways like bushes. The ground between these big grey bunchgrasses is usually bare. Cactus may take over, salt desert shrub, mesquite and chaparral species also most often purge the understory without disturbance. So do juniper stands and piñon/juniper woodland. I have good studies on all of this."

Dr. Bowns agreed: "These depauperate [unbiodiverse] unproductive states can go on and on into any reasonable, foreseeable future. The most likely natural pathway out of them is fire, but more often than not the energy and seed source of the site has degraded and you get cheatgrass of the equivalent, not the native perennials. What we need is proactive management that prevents these outcomes before the damage gets so severe."

Drs. Rasmussen and Keys of Utah State University proved that concentrating livestock briefly in sagebrush steppe reverses the herbaceous losses. Native herbaceous perennials increased

500 percent from 200 kilograms per hectare to 1,000 kilograms per hectare. Brave federal range managers

teamed with environmentalists and ranchers have produced this restorative effect all over the West.

All the experts agreed that the health of grasses is impacted negatively if they are not properly grazed or otherwise defoliated periodically. Chocking, old, dead material shades out living tissues. The average grass plant loses 80 to 95 percent of living biomass in a few years. Many die entirely. This phenomenon is pandemic in national parks. Grasslands are not safe from the effects of over-rest.

Neither are riparian areas. Drs. Dan Neary, Al Medina and others explained at a recent conference that "wildlife-critical" native grass-sedge meadows are maintained by grazing. These are quickly shaded out, usually by nonnative tamarisk and Russian olive trees in southern Utah, southern Nevada and parts of California, southern Colorado on the lowland Southwest in general. Native willows are also very vulnerable to being shaded and killed or greatly reduced.

They also said that these sedge meadows are far more stable and protective of streamside soils than woody plants. "Floods that tear out trees and soils pass harmlessly over massively rooted sedges and the ancient soils they stabilize."

In National Park Service-administered land, and other land where livestock are removed, the destabilizing takeover of many riparian areas by nonnative trees is predictable.

All these facts, manifested on millions of long-rested acres, are ignored by biased managers and scientists who call them "natural" changes or blame them on prior livestock damage. These denial

mechanisms are refuted by the rapid healing intelligently prescribed and monitored grazing and management creates.

Dr. Dick Richardson spoke forcefully about the problem: "Responsible scientists are primarily concerned for the survival of the natural world and humanity. Rushing to judgment puts these in peril. We must make use of all the available evidence. I challenge the federal agencies to take official scientific notice of what has happened in national parks and other livestock-exclusion area and to record and publish the data widely. These facts should affect policy. I challenge these agencies to perform their duty to inform the courts at all levels about the whole body of research, not just anti-grazing papers."

Dr. Holechek's bibliography from his recent paper has made some of that very easy. "This is not about politics or perks or power or eminence or jobs after a federal career," Dr. Richardson concluded. "I further challenge environmental groups to emerge from what Tommie Martin calls 'terminal certainty' about grazing issues. I challenge any uniformed ranchers and landowners to become the excellent naturalists many have been since childhood. I challenge everyone to stop fighting. The world has enough polemics and more than enough rhetoric. Lastly, I challenge the federal land management agencies to remove the climate of repression in the workplace and policy implementation that so distorts the process of science and good governance."

When people get out on the land together, they soon change their minds about many things. Extremists soften their views as the evidence piles up in the presence of other people. Learned

professors learn even more. Tommie Martin and I have witnessed hard cases from both sides hugging each other when they saw they had exactly the same feelings and goals for the land.

"Bias is all about fear, repression, distortions, lies, lost integrity and tyranny," Thom Harrison said. "It's like a dark dehumanizing dream. When people wake up to a wider, more

realistic view of existence, they feel clean, free and grateful. One can only hope that the process of awakening is not too painful or too long."

BIO

Steve Rich is president of Rangeland Restoration Academy in Salt Lake City, Utah. He interviewed many scholars and experts including: Dr. John Rinne (Rocky Mountain Research, U.S. Forest Service), Dr. Jimmy Richardson (North Dakota State University), Dr. Roy Roath (Colorado State University), Dr. Dick Richardson (University of Texas at Austin), Dr. Pat Richardson (University of Texas at Austin), Dr. Rick Knight (Colorado State University), Dr. Jim Bowns (Southern Utah University), Dr. Bob Patton (North Dakota State University Central Grasslands Research Center), Paul Nyren (Director NDSU Central Grasslands Research Center), Ann Nyren (NDSU Central Grasslands Research Center), Mary Darling (Darling Consulting), Eric Schwennesen (Resource Management International), Tommie Martin (EcoRestore), Bob Budd (The Nature Conservancy, Red Canyon Ranch, immediate past president of the Society for Range Management), Dr. Jim Sprinkle (University of Arizona), and biologist/attorney Dennis Parker.

Steven H. Rich can be reached at steve@rangelandrestoration.org