

SPECIAL REPORT

Exposing Anti-Livestock Bias in Federal Culture

Brave Souls Refuting the "Dark Dehumanizing Dream

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?

By Steve Rich

Do cows really eat adult fish? Do they eat fish eggs? Do they eat juvenile fish? 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 also claimed that cows destroyed the nests (redds) of fish species that don't build nests, stepped on fish, muddied the water of fish that spawn only in muddy water (and spawn every time it gets muddy for a few days), and designated dry washes as critical habitat for endangered species of fish.

When consultant Mary Darling asked several other fisheries biologists about the truth of these claims, no one agreed with them. They 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.

I see anti-livestock claims which are just as imaginative and unsubstantiated as those above 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He asked fisheries biologists to realize that most publications (80 percent) on fish and grazing relationships are not peer reviewed and that most of their data is suspect. He asked them to remember that dams and other human alterations have changed the habitat. He reminded them that cyprinids (like spike dace, loach minnows, chubs, etc...) are not trout or salmon and have different requirements. He said 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 so many nonnative aquatic organisms (sport fish like bass, green sunfish, and catfish, plus several crayfish species, shiners, mosquito fish, bullfrogs, etc...) that eat endangered cyprinids and their eggs and out-compete them for habitat that grazing has little to do with their problems which began when governments actively poisoned these native fishes and purposefully replaced them with the above non-natives.

Dr. Rinne wrote this from a background of his own 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 and 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 projecting their

(alien and Eurocentric) anti-livestock prejudices.

The last paragraph of this peer reviewed paper reads as follows: "I finish with two thoughts pertinent to the subject of monitoring and research on fishes and grazing relationships in the Southwest or Region 3 of 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 [emphasis added]. We as environmental groups, managers, and researchers need to stop expressing opinions, disputing 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 Rinne's position. The 143 page UC Berkley 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."

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 Dr. Rinne calmly, reasonably and moderated squashed under a comprehensive and well selected load of facts. They 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.

When I read the above to Dr. Rinne he agreed that it is an accurate summary of the facts. He then favored me with a quote (from memory) which he got from 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."

The anti-livestock groups are jealous of the power they have created by reiterating their litany of generally spurious information. One BLM biologist, also responding to Rinne's article, who, though representing a more reasonable sounding view, nevertheless revealed his bias (and by his tone, his awareness that his bias is widely held in government) stating: "Unfortunately, pro-grazing 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, or something... [supply favorite evil agricultural animal here]) will destroy the world" rant from dozens of federal officials.

Biologist and Attorney Dennis Parker loves wildlife and is a passionate advocate of good management. He is therefore passionate about the distortions that bias creates in dealing with wildlife issues.

"There is an entrenched culture in Federal land and resource management agencies based on socio-political philosophy rather than scientific inquiry" Dennis said. "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 exclaimed.

"For its part the U.S. Fish and Wildlife Service are also notorious for uncritically accepting speculation and assumption posited as biological fact by N.G.O.'s (environmental groups) petitions to list various species under the Endangered Species Act. The result is that both the Forest Service and the Fish and 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 by doing so."

"It goes on and on, flycatchers, the owls, cyprinid fishes, it's endless. The Mearn's Quail are another example. Study after study by respected people proves that conservative to moderate grazing is good for Mearn's Quail. But if Mearn's Quail are found, cattle numbers are cut below those thresholds. I've got chapter and verse on all of this, the studies and many of the "Cut the Cows" decisions. It makes no sense!" Parker concluded.

Dr. Jerry Holechek (who is a widely respected and much quoted by government, researcher and professor of range science at New Mexico State University) shakes his head sadly when asked about anti-livestock group-think in governmental agencies. "In a sane environment we'd be paying ranchers for the ecosystem services they provide. Dr. Rick Knight says ranchers get paid for 1/4 of what they do for society. In my book that's just about right (Bob Budd, Dick Richardson and the others concur). 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 ten years. I've got good science on that. Overgrazing, now, is a non-issue. It's not even a one on a ten scale."

"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 rangeland 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."

We went over the shameful persecution of Jim and Sue Chilton, a situation with which we are both familiar (they own the Montana Allotment). As has been done elsewhere in the West, an ephemeral stream, California Gulch, which is 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, coati mundi, raccoons and foxes clean them out of the shrinking pools.

This is no big thing biologically because as stated before, there are millions of them; but 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). They 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) frequently complain that politically radical officials freely throw irresponsible claims into Biological Opinions, allotment reviews

and Environmental Assessments all the time. 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 wonderfully beautiful and healthy. Waist high grass and over-grazing sensitive plants and wildlife abound, as do hunters, birdwatchers and other outdoor enthusiasts. Both Dr. Holechek and Dr. Galt agreed that this place 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 them targeted 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 exclusion zones are created for "protection." Forest Plans reveal, however, that watersheds deemed too fragile for 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 include:

- The Infamous Desert Tortoise Scam: U.S. Fish & Wildlife Service biologists claimed widespread destruction of tortoises by cows which they claimed stepped on tortoises and crushed their burrows (no cows have been documented to step on a tortoise and only one accidentally trampled burrow has been found), deprived them of food (this one is really ironic. 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. It greatly increases their health, active period 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 E.I.S. 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 manmade second-growth box elder-dominated woodland (not willows, they avoid the willows) on irrigation ditches and returns, eating bees, wasps, and yellowjackets by preference (not flies or mosquitoes). This population refuses to occupy gallery forests on streams lined by willows-the kind of habitat federal endangered species documents insist they want-adjacent, upstream and downstream from the Gila Cliff Valley. They experience the lowest rate of cowbird parasitism of any population in the U.S. living among the highest and most diverse population of riparian non-colonial birds in North America. Some of the highest cowbird parasitism rates are in Grand Canyon National Park, where there are no cows. 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 Arizona (Rock House) the feds are building mosquito ponds lined with willows for flycatchers. This is a West Nile Virus hot spot. These birds 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 threaten the owls through exposing wood rats to avian predation. (You mean like by Mexican Spotted Owls? Avian still includes owls last 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 de-stock 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 "Arizona Agave" Scam: This flowering Yucca-like plant was recently found to be a hybrid, not a separate
 - subspecies. Ranchers have been impacted by the "need" to protect what is really a
 - rarely produced cross of two common agave varieties.
- The Infamous Pima Pineapple Cactus Scam: Most common on disturbed areas like golf course roughs, this plant is probably a
 - hybrid or site-adapted version of other common pineapple cacti. It has cost ranchers,
 - homeowners and others a great deal. It is being studied for delisting.
- The Infamous Cactus Ferruginous Pygmy Owl Scam: Ranchers have been de-stocked by 90 percent over this bird, a Meso-American commonplace
 - abundant in Mexico. Its listing as an endangered species was recently ruled by the 9th
 - 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 land to "protect" these birds (whose core habitat is really
 - in, yep you guessed it, Mexico). The Buenos Aires National Wildlife Refuge was created.
 - The cattle were removed, the tame, pen raised quail usually get eaten by coyotes, etc
 - within a week, 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. The 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). The Tucson Star on May 16, 2004 published a similar story about a former refuge manager planting Chiricahua leopard frogs, apparently to create continued reasons for the Buenos Aires Refuge.

In Grand Staircase/Escalante National Monument, cows under federal grazing prescriptions have also been alleged to create "dung fire" risk to underground artifacts, to rub petroglyphs off cliff walls, to endanger a historic structure (a corral), endanger native grasses and forbs (read on, we deal with this later), endanger native wildlife (ditto), to 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.

Why do anti-grazers in government act as they do? 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 the 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. They hold fellow workers who defend scientific grazing in disdain as having "sold out to the Man." They know that ranchers experience their deliberate trouble making as a form of domestic terrorism, but they feel that the end justifies the means.

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 authoritative sources. This tragic multiplier of dangerous (to nature) beliefs operates in the media as well, who 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 well known 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, 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 and 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."

He agreed that anti-livestock/anti-rancher bias in the face of recent science and numerous landscape scale successes in achieving miracles of healing far in excess of "no grazing" through solid, prescribed and monitored livestock and range management 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." Thom 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. Anti-bias 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 N.E.P.A. 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.'"

I know a lot of others who 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) biomass, and higher reproductive and survival rates for native plants and animals.

The summary to "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 semi-arid areas is refuted." That is what the research clearly demonstrates. Dr. Richardson's (along with Paul and Ann Nyren, Dr. Bob Patton and others at NDSU and NDSU's Central Grasslands Research Center) studies of grassland soils showed root zones averaging five inches for ungrazed grassland versus an average of 40 inches for prescription grazed areas. Native biodiversity was vastly greater as well, averaging one or two native plant species under non-native 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 as well. These "prescribed, managed grazing is ten 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 drives 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."

Dr. Holechek agreed with the other scholars and experts I interviewed [Dr. Jimmy Richardson (NDSU), Dr. Roy Roath (CSU), Dr. Dick Richardson (UTAustin), Dr. Pat Richardson (UTAustin), Dr. Rick Knight (CSU), Dr. Bob Patton (NDSU Central Grasslands Research), Dr. Jim Bowns (Southern Utah University), Paul Nyren (Director, NDSU Central Grasslands Research), Ann Nyren (NDSU Central Grasslands Research), 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 (UofA), and Dennis Parker] that 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. "Rural people are now often blamed for things they didn't do," Ann Nyren told me in her sympathetic Irish accent.

"Abusive grazing is much less common now," Dr. Dick Richardson 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 I interviewed also 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, those of long term livestock removal, and those of 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 told me. "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."

She smiled tolerantly: "When they start out, 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 and the things eyes-open experience as naturalists do for people, you'd think some of them were raised in a closet."

She tells them all this to their faces. In her classes she explains to such folks in a humorous tone that she classifies them as "educated idiots." The other side of the problem is the bunch she calls "tunnel vision ranchers" who focus mostly on their animals. Tommie and I were both present when 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.

Tommie then tells them that if they put their assets of rancher experience and educated expertise together, they'll be very effective. All the interviewed experts gratefully agreed that science already has 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. They all warned against jumping to conclusions.

Eric Schwennesen 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 Malian extension service official told Eric. "Now I see that the evidence of the land contradicts much of what 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."

"I really agree with Eric, Dr. Knight, Tommie Martin, Dr. Holechek and others who are deeply concerned about this issue," Dr. Dick Richardson said. "Bias is an inherent property of the standard method of instructing, evaluating, and awarding grades to students. 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 cues; that can only lead straight to those conclusions. That constitutes a classic circular logic trap."

"In my conservation biology courses, liberal arts students initially make better observations 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 time period." "Instructors have the best of intentions, but many are third generation sufferers of the same abuse themselves. 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 (un-grazed for decades), act as time machines to reveal landscape scale consequences of livestock removal. If the anti-ranching crowd had been 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, Buenos Aires National Wildlife Refuge and other rangeland elevation parks, 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, a respected expert, researcher and educator. "Without disturbance [from management activities that are part of ranching and prescribed grazing], 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, trees 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 cheat grass."

And Dr. Holechek's opinion on this topic: "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."

When I shared the above with Dr. Bowns he replied: "Oh yes, of course, we've known all that for years. These depauperate [un-biodiverse] unproductive states can go on and on into any reasonable, foreseeable future. Like I said, 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 or the equivalent, not the native perennials. What we need is proactive management that prevents these outcomes before the damage gets so severe. This damage happens in National Parks, in areas that are inaccessible to big animals and similar areas. There are now millions of acres of this type of thing."

Drs. Rasmussen and Keyes of Utah State University proved that concentrating livestock briefly in sagebrush steppe reverses the herbaceous losses. Native herbaceous perennials increased 500 percent from 200 kg/hectare to 1000 kg/hectare. Brave federal range managers teamed with environmentalists and ranchers have produced this restorative effect from Texas to Nevada, Arizona, Utah, etc...

All the experts agreed that the health of grasses is severely impacted if they are not properly grazed or otherwise defoliated periodically. Choking, old, dead material shades out living tissues until death is the result. The average grass plant loses 80 to 95 percent of living biomass in a few years. Many die entirely. This phenomenon is also pandemic in National Parks, so grasslands are not safe from the effects of over-rest.

Neither are riparian areas. I sat in a conference where Drs. Dan Neary and Al Medina and others explained that "wildlife critical native grass-sedge meadows are maintained by grazing. These are quickly shaded out, usually by non-native tamarisk and Russian olive trees in southern Utah, southern Nevada, and parts of California, southern Colorado and 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 the areas stated above, the destabilizing takeover of many riparian areas by non-native trees in Park Service administered lands and others where livestock are removed is as predictable as sunrise.

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 areas 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." "

I further challenge environmental groups to emerge from what Tommie Martin calls 'terminal certainty' about grazing issues. I challenge any uninformed 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."

My experience is that when we get people 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 told me. "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 the process of awakening is not too painful or too long."

Steve Rich