

Swallowing Camels

Rhetoric, damned lies and statistics are destroying nature.

By Steven H. Rich

“Ye blind guides, which strain at a gnat and swallow a camel” (Matthew, 23:24) is a warning against mixing science and rhetoric. This vigorously warns authority figures against the use of rhetoric to distort truth. Jesus castigated those rulers for making a public show of obeying trivial rules, creating an illusion of righteousness to get public support, and using rhetorically distorted interpretations of law to “devour widows’ houses” (steal their property). Anyone now using “scientific” rhetoric to devour widows’ (and everybody else’s) ranches and farmlands, turning them into playgrounds, condos and summer homes, and selling their

water, would do well to heed the warning.

Those of us who have witnessed so much exciting ecosystem healing result from implementing solid, local-information-based, monitored grazing processes are baffled and disappointed by the misinformation campaign coming out of environmental groups, most media, and many government employees and academics.

Managed cattle, sheep, horses and goats can serve nature well. “The Grazing Response Index” (GRI) is used by Region 2, the Rocky Mountain area of the Forest Service. Colorado State University researchers Floyd Reed, Roy Roath, and David Bradford

designed it to be effective, simple and easy to understand. Ranchers, federal managers and true environmentalists like it. It does a solid, real-world job of assigning relative values to factors that determine plant responses to growing-season grazing: timing (time in plants’ lifecycle), severity (how much grazing removes), and frequency (how often grazed, how much rest).

In general, severely and repeatedly bitten plants without a chance to regrow (over-grazed) are negatively affected. In various combinations, fewer bites, less severe bites, and longer regrowth periods can get very positive and healing ratings on this index.



On Nevada’s Cottonwood Ranch this meadow is expanding. It is not irrigated, just managed so well that the water table is rising. Little Salmon Falls River runs along the base of the mesas.

There are several species of livestock, many ways to graze, and potentially great results. The GRI acknowledges and predicts them.

None of this matters to anti-grazers. They are too busy colluding to invent a walloping “camel” that they label “livestock grazing,” ironbound to a set of always-negative effects. According to their rhetoric, livestock grazing is always overgrazing—causing floods, alien invasions, dead fish, the end of wildlife, death to native plants, erosion, dust storms and water pollution if domesticated animals eat any plants, belch, pass wind, or poop.

Touching on a media favorite, “greenhouse gases” from cattle, let’s get real. Every smidgen of organic matter will eventually be broken down by macroorganisms’ digestive enzymes (from elk to insects), oxidation, aerobic bacteria, anaerobic bacteria or fungi leading to the production of CO₂, methane, sulfur dioxide and a soup of organic gases. Cow belches make no net difference in greenhouse emissions. The issue is a gnat inflated by gaseous rhetoric to camel size and it’s hard to swallow (something about it doesn’t smell right either).

It’s easy to spot these propaganda papers in science journals, government documents, etc. They use the term “livestock grazing,” followed by the above litany, in whole or in part, without reference to such matters as timing, intensity, or frequency of grazing, and controlled studies that respected scientists find to be so important. To create a “livestock-grazing-equals-overgrazing” mental image they pretend positive grazing effects don’t exist. That’s effective propaganda, but it’s not science.

Lawsuit-happy anti-grazing organizations greatly inflate the worth of a stable of self-proclaimed anti-livestock writers and seminar speakers who take an apparently revolutionary, postmodern view of science as a tool of pre-decided sociopolitical policy, not as a search for truth. This reduces their science to the level of a high school debate. The focus is on “winning” through emotional appeal. They assume the other side is doing it too.

New Mexico State University’s Dr. Jerry Holechek doesn’t believe in sides. He believes in science in the service of nature and humanity. Holechek wrote the most used, most influential text on rangeland science and management. His rigorous publications are respected. Overgrazing has no fiercer enemy.

Holechek widely rejected the anti-grazers’ methods and arguments. For example,



Fine-textured, nutritious muttongrass greens in early spring to rescue wildlife from winter’s protein and vitamin deficit. Through managed grazing, this formerly bare ground has become an abundant resource.

Holechek revealed that two collections of anti-grazing papers and opinions are “heavily biased” and “prone to distort many of the facts.”

Anti-grazing authors Fleischner and Jones chose over 100 studies for their reviews, “which fail to take into account critical details... [See GRI etc., above] that greatly

influence experimental outcomes.” One of these authors (Fleischner) “failed to consider any of the 35 long-term controlled studies which [respected scientists] Van Poolen, Lacy, and Holechek recognize as the foundations of range management.” The other (Jones) did manage to find one of them. Holechek also revealed that anti-grazing writer Joy Belsky’s



Every creature but one sees this land, ungrazed since 1982, as dead and dry. The oddballs are the “scientists” who count these inedible plants as “canopy cover, litter, standing biomass,” and so on. They are covering the dead ground with indigestible fallacies.

much-quoted study reviewed only overgrazing effects.

In his “Controlled Grazing Versus Grazing Exclusion Impacts on Rangeland Ecosystems: What We Have Learned,” Dr. Holechek found from solid studies that managed grazing performs important ecosystem services, is good for wildlife, and is sustainable in arid and semiarid ecosystems. Had the rigorous evidence shown otherwise, he would have said so.

Another big issue for wildlife survival that anti-grazers ignore is forage quality. Grazed plants with the same spatial measurements as ungrazed plants are measurably better nutritionally. Dr. Samuel McNaughton of Syracuse University studies plant/animal relationships. He long ago discovered grazed plant communities he calls “grazing lawns.” They can be made up of grasses and forbs and/or shrubs. Their soils are more fertile and bioactive, and their plants are more resilient, more nutritious and more digestible than those in ungrazed areas.

With better soil and stimulation from proper grazing, plants come out of winter dormancy sooner and recover from fire and other defoliations quicker. They also stay green longer in dry periods and in cold weather. Anyone can see this phenomenon on city lawns. On dormant yellow/brown winter lawns, dog-induced fertility makes high-grown green spots that last through spring.

These additional 70 to 120 days with green, vitamin- and nutrient-rich diets in grazed areas are life-giving, death-preventing blessings for wildlife.

The cooler the temperatures at which plants grow, and the younger their tissues, the more digestible they are. As plant tissues age and temperatures warm, they become lignified and indigestible. It's the difference between tender, young, green snow peas grown at cool temps and tough old yellowish summer pea pods.

Ungrazed lands set aside for elk, antelope, deer, birds and other wildlife lose numbers of these species as the years progress. Rather than rejoicing in the politically correct “naturalness” of the nasty useless food, wildlife migrates to well-managed ranches. Their ravenous metabolisms are like those of world-class athletes. Wildlife must win races or die. Replacing a critical portion of their diets with the nutritional equivalent of cardboard causes them to lose health and reproductive capacity quickly. This is a dirty little secret the “protection” crowd hides from their funders and



The sacaton grass above responds to grazing by putting forth fresh, nutritious, digestible new growth. The whole plant, center included, is alive and vigorous, healthy and nourishing, regularly “pruned” by managed grazing.



This sacaton grass was planted at the same time as that at the top of the page. It shares the same slope and the same soil. Growing conditions are identical except for one thing—this plant has not been grazed since 1982. Almost entirely dead, it has little or no nutrient value for grazers or wildlife.

from the public.

“Environmentalists” hold up cryptogams as an example of good soil policy. Researcher, now Nature Conservancy staffer Jeff Yeo, and Challis, Idaho, area Bureau of Land Management and Forest Service staffers explained an almost complete lack of cryptogams on nine of 19 ungrazed exclosures. “Too much grass,” they said.

Wait a minute! We’ve all been told grasslands and grass/shrubland will collapse without cryptogamic nitrogen. You can’t read anti-grazing stuff without being wallpapered with cryptogam claims. What about all those signs praising national parks’ wonderful cryptogam production on their rangelands? There’s rarely much grass.

I asked for and was refused Yeo’s total



Due to concentrated livestock grazing, this meadow responded to a fire by exploding with health and diversity. This “sea of grass” is not on the Great Plains, but on the Maxey/Smith Cottonwood Ranch in northeastern Nevada.

dataset and photos. I would have had them compared to his published data. I cannot agree that his findings support anti-grazing authors. Neither could the scientists who shared with me their review of his paper. Their summary: “This paper fails to discredit the use of livestock by virtue of its own evidence and poor methods. Nonetheless it received high visibility, much like Belsky and others who seek to promote the litany [of biased anti-grazing factoids].”

Yeo insists he has no wish to discredit grazing. He has friends who are ranchers.

Back to the cryptogams. Thirteen of 19 of Yeo’s ungrazed exclosures either had no cryptogams or had no real differences from the compared grazed areas. The great majority of these ungrazed exclosures had few if any cryptogams. Only the three oldest (at 38 years) and least productive of the plant life had a large and statistically significant cryp-

togam difference from the ranch land. These actually reinforce the “more cryptocrust equals less grass as time passes” relationship seen in other long-term livestock removals. Nineteen of 19 ungrazed plots apparently

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refute the notion that cryptocrusts benefit range in any big way.

Rangeland soil nitrification, productivity and stability are not dependent on those crusts, though the cyanobacteria do play a role. We’re just supposed to worship crusts for their livestock-free “naturalness.”

Just like cryptogams, blue-bunch wheatgrass is an anti-grazing poster child. According to anti-grazers, it is a delicate soul that a cow’s breath might wither. Actually, like most

grasses, it can be vulnerable if grazed or burned while raising its immature seed stalks. Like other grasses it needs conscious management, not overprotection.

Yeo’s paper indicates rightly that “a 42 percent increase in [blue-bunch wheatgrass] cover” was created by improved management with “less than three-year rest periods.”

Three years of growing-season rest and a high GRI score on the fourth year is easily done if everyone cooperates. Such a plan was created by a team led by Tommie Martin and myself. A Gila County supervisor in Arizona, Martin created the collaborative team process for public-lands management. Our team included Jay Davison (University of Nevada, Reno), the Cottonwood Ranch’s Smith family (Nevada), environmentalists, NRCS, Forest Service, BLM staffers, Nevada Department of Wildlife folks and some Smith neighbors. After several years in use, its

upland and riparian results “wowed” a recent Society for Range Management tour group. The overall plan “maxes out” the GRI. Bluebunch wheatgrass thrives on Cottonwood Ranch in Nevada’s O’Neil Basin and Jarbidge Mountains.

In nature, synergy (the-whole-is-greater-than-the-sum-of-the-parts relationship) and symbiosis are “where it’s at.” When nature works, that’s how it works. There’s no excuse for destroying nature or rural cultures because we can’t see this.

Nature would be far better served if we got the rhetorically distorted gnats and camels back into proportion. How can people foster natural synergies through information as goofy as the images of a carnival house of mirrors?

Elaborately analyzed phenomena in tiny exclosures are often given more weight than the many gigantic landscape-scale successes

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Does this feel eerily familiar?

that use-managed, monitored grazing effects as the primary agent of healing and restoration.

Exclosures are “iffy” little things. If grazing is white and no grazing is red, then exclosures are pink. They get showered with seeds, spores, microorganisms, wildlife and organics from the surrounding ranch. They can get clipped (grazed by shears), trampled, and disturbed by scientists and groups on tours. One reason some of them don’t grow cryptogams is that the researchers trample them out! Seedlings then grow in the researchers’ footprints so those studies don’t show the usual dysfunctional, low seedling rate for crusted ground. Some things can be learned from

exclosure, but if you want genuine nondisturbance phenomena, you need landscape scale. You also need such scales to see what managed livestock really do.

If 20 percent of the documented sage grouse in the entire state of Utah flourish on one ranch (the Deseret) which is famous for thriving plant communities and populations of other native wildlife, then following its management example should provide plant communities, grouse and other wildlife with enough “screening cover,” good food, water, etc. Deseret’s principles always work in similar locations. Problem solved. Quit fighting; keep monitoring; cooperate; and share. Nature’s got stuff we haven’t seen yet.

Inspiring ranch-land examples on cumulative millions of acres—where endangered species are happy and multiplying with lots of clear, clean water, rising water tables, and healthy, stable watersheds; where wildlife



Cottonwood Creek in Nevada is grazed by up to 1,000 cattle. The creek is so stable and healthy that it handles heavy spring flows without damage and provides consistent refreshment for all.

abounds; where good, honest rural people are making a living and sharing nature and their experience with urban neighbors—should have far more policy making and legal weight than itty-bitty fenced enclosures.

In his brilliant paper, “*Victoriosa Loquacitas: The Rise of Rhetoric and the Decline of Everything Else*,” Dr. Hugh Nibley, a scholar of antiquities and ancient languages, described how rhetoric destroyed the ancient world. The “everybody does it” seduction of the power to get power through strategically selected references to some truth caused an environment where no intelligent person believed anybody. Public manipulation and betrayal reigned, universities taught only rhetoric, and widows lost their houses. Social cohesion crumbled and plain-speaking “barbarians” took over. The smooth-talking, luxurious Romans turned Italy into a playground and were fed from North Africa, France and Spain. Does this feel eerily familiar?

Jeff Yeo is right when he says we still have a lot to learn. He kindly called back when I asked to talk about his paper. He said he wrote it to get people to quit overgeneralizing and learn about nature in place. He wants managers “to expect unpredictable variability to management’s actions at a local level.” He wants us to monitor effects and pay continual



Drowned by a rising water table, a gnarled sage root bears witness to the transformation of the land from dry steppe to lush meadow due to improved watershed on the Cottonwood Ranch near Little Salmon Falls River in Nevada. Good grazing is a key factor in the improvement.

attention to nature. I sure agree with that.

The trouble is, anti-grazers are blowing Jeff’s paper into a camel for the courts to swallow. Somehow, they didn’t get the message. ■

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Bemused Epilogue

An anti-livestock broadside from several “environmentalist” groups aims at Chief Forester Jack Ward Thomas. It blames “Livestock Grazing” as “A Major Cause of Increased Tree Densities in Western Interior Forests” (they try to have that issue both ways). It bristles with studies about the effects of overgrazing, not managed grazing. This impressive-looking docu-thingsy is intended to create a gaseous illusion.

Past fire suppression (not managed livestock) and “environmentalist” objections to forest management through logging caused both the problem and the results, catastrophic fires among them.

It is wildly illogical to pretend that removing managed livestock now will solve a problem managed livestock did not and do not cause. The trees must be thinned. The fuel loads are now too great to use fire. The fires are too hot. Too much soil damage gets caused. Careful logging is the answer. But that would create rural prosperity and give America more lumber to rebuild the Gulf Coast. Shoot! We can’t have that!



Cows to the rescue! Where cow tracks create pockets for water, seeds and organic litter to gather, native seedlings explode from the drought-seared land, nourished by bovine waste. In an area with only about eight inches of rainfall, resilience after catastrophic drought is proof of good management.