

The Warning

Passionate love, nature, and drought survival on Dutchwoman Butte. Words and photos by Steven H. Rich.

It's not like we didn't warn them." It's an oft-repeated refrain as one native turns to another with a pained look. Out-of-place expertise is a real problem. It's among the biggest threats facing nature in most of the world. Generations of generally well-intentioned urban elites are unknowingly trapped by their own cultural stories about how nature works. Few people are aware that we have reached the stage where elite activist groups have consciously dialed back their expectations for healthy, diverse ecosystems. They just never told the public.

Rather than manage nature using all appropriate tools, they've adopted instead an astonishingly naive acceptance of the catastrophic destruction of natural beauty and abundance by fire, flood, insect plagues, etc. This acceptance of catastrophe as desirable and natural is not a new thing. Nihilistic cults of destruction have existed historically and, to some extent, persist all over the earth. What may be new is the present cult members' unwillingness to admit to themselves that they belong to the cult because they do, in their way, love nature. They love nature the way rock stars love life—like there's no tomorrow and no consequences. What matters is the experience, the spectacle, the feeling; it's nature as art, as political statements, as mood-altering events, not as home identity and sustenance.

The case of Dutchwoman Butte (DWB) in central Arizona is instructive. A study by the Tonto National Forest soil scientists, hydrologists, and range conservationists published in *Rangelands*, the journal of the Society of Range Management in April 2000, has been much quoted by those who oppose ranchers' use of federal lands. Its photos show an apparently wonderful, never-grazed (by livestock) Mogollon Transition Area grassland, in a 16- to 20-inch rainfall zone.

Without really explaining why they chose a grazed site so far away, they paired the Dutchwoman Butte site with a ranch site 20 miles distant (something fishy there). The DWB stats all looked wonderful, especially those for soil organic carbon. The allegedly cow-mauled comparison site had hand-picked statistics signifying imminent demise to the uninitiated reader.



Sign of trouble. Without experienced rural input, ill-advised, politically influenced theories encourage catastrophic escaped "management" and wildfires. Agencies take huge risks and rural citizens live with the consequences. Twenty post-fire years can elapse before fire-ravaged watersheds quit generating flash floods. No grazing event could possibly begin to equal this damage.



Meet the new neighbors. Never-grazed Dutchwoman Butte was a poster child for antigrazing activists. Now it's thickly invaded by red brome (cheatgrass) and other annual, undesirable and toxic plants since a drought in 2002. As in several grazing-excluded national parks and other ungrazed arid and semiarid rangelands, invaders become dominant herbaceous plants.

Enter rancher Mick Holder, who, in cowboy fashion, suggested to another group of scientists that he'd feel like the comparison was a little more scientific and fair if contrasted with a well-managed ranch site, say, on the next ridge, within handgun-shooting dis-

tance. The Butte, you see, sits on Mick's ranch. A large team led by Holder, University of Arizona and Rocky Mountain Research scientists and several others, began collecting data and photos in 2001 and concluded the study in 2005. Their study, entitled "Dutchwoman

Butte Revisited," was published in December 2007, also in *Rangelands*.

In the interim, a hellacious drought set in and the Dutchwoman Butte ecosystem collapsed (surprise, surprise). There is a huge, obvious lesson in the comparative responses of the ungrazed (Dutchwoman Butte) and the managed (Whisky Tank) experimental sites to the severe (some say 1,000-year) drought.

The "pristine" Butte site had a delicate, ephemeral living community unaccustomed to the significant change. Such communities establish in what scientists call "stochastically favorable" conditions of ideal rainfall, temperature, etc. They persist until something difficult occurs. After normal and absolutely predictable stresses return, the site may never be the same again.

The Whisky Tank plant community, which contained much more robust examples of the same species (also burned some years earlier), by contrast responded like a tough cage fighter absorbing a sucker punch. It bounced back quickly, retained its perennial character and soil stability and went on as before.

The Butte site lost 95 percent of its perennial grass production. This was replaced in large part by nonnative annual red brome (cheatgrass), annual hairy grama, and poisonous silverleaf nightshade as well as forbs like globe mallow, filaree, and spurge. Palatable shrubby buckwheat was reduced by 93 percent. Cactus increased. The University of Arizona team's much more extensive sampling procedures could not locate the earlier studies' "high organic carbon" soils vaunted by the "Welfare Ranching" crowd.

Following the 2002 drought, the Butte community looked as pathetic as those in national parks like Arches, Canyonlands and Zion in its dead perennial grass, predominance of annuals, nonnative invaders, etc. Such places are profoundly subject to cycles of drought, fires, and other travails. This is because their remaining perennial grasses, for example, tend to be all the same age, have weak roots, and are generally encumbered with years of dead material.

Typically a grass plant in these places starts life in a wet spell and does okay until the third or fourth year when the dead gray stuff starts choking it. It will attempt to "grow away from" this dead material and the original center of the plant dies. The remaining live tissue yellows and longs for sunlight. If a fire occurs while the plant is smothered with hot-burning dead thatch, the likelihood of



Chain of catastrophe. Over the heartbreaking protests of locals, this vast, beetle-ravaged forest surrounding Cedar Breaks National Monument in Utah was denied prescribed logging treatments by activist lawsuits. The inevitable forest fire will burn savagely. Then, years later, when the burned trees have fallen, a second, more sterilizing fire will happen as the huge load burns in direct contact with soils.



Nonnative invasion. Beyond the fence and grazed by livestock since Spanish colonial times, this grassland/shrub community near Tuba City, Ariz., could not handle the loss of livestock. In the foreground in front of the fence, grass plants died with few replacements. Invading Russian thistle presently fills most herbaceous niches and crowds out natives. Behind the fence, managed livestock preserve the grassland community.

death is in the 90 percent range. Plants grazed by wildlife while in this weakened state are also likely to die. Mortality is also increased when wildlife eat the regrowth of already weakened fire survivors.

In the words of the authors of the second (Dutchwoman Butte Revisited) scientific team: “Why did the perennial grass population decline [drastically] on DWB and not on Whisky Tank? The absence of grazing on DWB *did not make the vegetation more resistant to drought nor were perennial grass species in DWB more resilient. Grazing exclusion on DWB also did not make the vegetation more resistant to invasion by exotic annuals.*” (Emphasis added.)

Better grass survival is generally assumed as fact by urban elites and claimed as true by anti-livestock activists. The authors explain: “Adaptive plant responses in grazed systems may include the following: (1) *The same mechanisms or genetic mutations that make plants resistant to grazing may also make them more resistant to drought.* [Emphasis added.] [Several researchers support this idea]; (2) Grazing may result in a more diverse age classification of plants due to seed dispersal and implantation [in hoofprints] by grazing herbivores. This makes grazed plant communities more resistant to environmental stress; and/or (3) Grazing removes senescent [choking thatch] material and opens up the area to increase photosynthesis and rainfall harvesting.” In other words, the old dead junk also keeps rain from reaching the soil.

The “Revisited” authors are firm in their summary of the management implications for their study. They insist: “Two paradigms that have become [anti-grazing] dogma need to be reexamined. First, the presence of grazing-tolerant native grasses should not be viewed as indication of degraded ecological systems.” The antigrazers, in an imaginative special pleading, have long pretended that delicate specimens a grazer’s breath might wither somehow indicate ecosystem health. The presence of grazing-tolerant species that can actually support wildlife species diversity and animal populations high enough to maintain genetic diversity are dismissed as inferior by this logic, which the “Revisited” authors reject.

They continue: “The second paradigm that needs to be reevaluated is that removing livestock from ecological systems will always lead us to ‘Nirvana’ or at least that livestock removal is always a management alternative that moves an ecosystem to a more desirable plant community.”



Beautiful survivor. This graceful, nutritious, drought- and grazing-resistant grass species, among others, is scorned by activists because it doesn't die easily, especially when properly managed. University of Arizona and Rocky Mountain Research (Forest Service) scientists insist that such plants greatly stabilize semiarid and arid ecosystems. Proper grazing causes frequent seedling establishment in hoofprint microclimates resulting in multiage, multispecies grass stands. Fragile ungrazed grasses tend to establish only in very wet periods, grow old as a group, and die off under drought or fire stresses.



Thriving on adversity. Invaded by grass-killing chaparral shrubs and nonnative Utah juniper, this Tonto Forest grass community was chewed by 1,500 juniper-eating Spurlock family goats. Then the junipers were thinned by the Forest Service to make a firebreak in response to Payson residents' demands for cooperation with the county fire protection plan. The many grass species loved it and responded with productivity, beauty, and biodiversity.

Further refuting false claims by activists, they state: "In the 2002 book entitled 'Welfare Ranching: The Subsidized Destruction of the American West,' Dutchwoman Butte is used as an ideal example of a pristine ecosystem that we should all strive for as 'livestock-free.'"

The "Revisited" authors call attention to the ironic but common outcome wherein the present Dutchwoman Butte community is "more indicative of what is commonly thought to be on an overgrazed community." These are the exact disastrous livestock

removal outcomes we and many others have explained for years.

Please examine the Butte's future prospects. If a fire sweeps the butte, cheatgrass will likely complete its takeover, to the detriment of the rest of the community. Fire frequency would likely increase as, subsequently, would the cheatgrass. Lacking fire, woody chaparral shrub species may invade. Many of these, once established, resist fire, dominate the site and extinguish most other species. Or, perhaps a run of wet years could reestablish even-aged grassland until the next drought. The last is the least likely.

Managed grazed ecosystems have much better chances for health and resilience. Good grazing management eliminates the grow-till-you-smother-or-burn-to-death component of possible outcomes, diminishes invaders' options, increases seedling production of desirable plants and evens out the vast swings in forage quality and availability to wildlife that are always caused by the boom-and-bust dynamics of ungrazed systems with highly variable seasonal rainfall. Human interventions can create decades of beauty, productivity and abundance.

The cult of justifying catastrophic results from failed theories as "natural" while persecuting those who differ must wake up and adopt a scientific, esthetic, spiritual and humane feedback process.

Please be aware that study authors Jim Sprinkle, Mick Holder, Chas Ericson, Al Medina, Dan Robinett, George Ruyle, Jim Maynard, Sabrina Tuttle, John Hays Jr., Walt Meyer, Scott Stratton, Alix Rogstad, Kevin Eldridge, Joe Harris, Larry Howery and Wesley Sprinkle have all gone out on a limb professionally in having the courage to publish this study. They did so because they love nature and their fellow beings, urban or rural. Some on this list have been threatened with termination in their professions because they maintained their scientific integrity. Hats off to all such heroes.

Nature needs humanity to become kinder to each other and much more competent when interacting with living communities. Unexamined myths are the greatest obstacle. As the West burns, dies, and is invaded while trusting taxpayers subsidize the tragedy, there is little pleasure in saying I told you so. ■

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Pathetic by contrast. Damaged by fire, this very thick central Arizona chaparral site now regrows fire-sprouting brush and weeds and sheds floodwater. Locals and agency personnel with intergenerational land knowledge prefer tightly targeted land treatments with controllable consequences. They take far fewer risks and get far better results.



Sweet success! In country similar to Whiskey Tank, locals have proposed enterprises which remove invading brush and junipers, make contribution to the economy and generate clean bio-fueled electricity. Activists oppose economic use of invading trees though they destroy biodiversity and threaten towns and ecosystems with fiery destruction. Here, foreground and background juniper thinning creates beauty and abundance.