

# How resting rangelands strips away biodiversity.

Words and photos by Steven H. Rich

## THE NAKED TRUTH



*Russian thistle, commonly known as tumbleweed, illustrates the lack of biodiversity opposite park headquarters at Canyonlands National Park in Utah.*

**A**s you leave the “ranching influenced zone” at the edge of Canyonlands National Park and go deeper in, you can see the land dying. All the symptoms are there: bare, crusted ground, old shrubs and trees, dead, gray, decadent grasses and, of course, huge amounts of nonnative plants.

Last year was a big year for Russian thistles (tumbleweeds). Though tumbleweeds are a western icon, they’re really native to Eurasia, not the American West. Like many of us in a nation of immigrants, Russian thistles may be here to stay. Given a chance, Russian thistles will cover the landscape and at Canyonlands National Park the landscape is covered.

As a lover of rangeland plant dynamics it was interesting to see, among the tumbleweeds and general decline, small areas where

stands of “mostly dead” (that’s not the same as “all dead”) grasses had come back for another try, reprieved for a time, but still doomed. Seedlings are rare, and the death rate over time outstrips seedling reproduction 10-to-1. This park is younger than most so the decay is still progressing.

The kindly, courteous park ranger I spoke with blames the tumbleweed invasion on the presence of roads. The Park Service theory is that during dry years, the runoff from the highway grows Russian thistle, which then blows away, scattering seeds with every tumble. In wet years, up they come.

Like most such theories, it ignores critical factors. Tumbleweeds are opportunistic. They need bare ground and weak competition to grow. There are miles of much healthier,

more biodiverse ranch land on the approach to the park. On these lands, tumbleweeds are generally an occasional presence. Obviously, roads are not the cause of the huge Russian thistle invasion in the park or their presence would have caused the same invasion on the ranch land next door.

The real cause of the park’s recurrent tumbleweed explosion is its deteriorating grasslands and grass/shrubland communities, dying from overprotection. Like human couch potatoes, the plants are being rested to death. Tumbleweeds just take advantage of the open niches.

Overgrazing also creates open niches. The ranch next to the park is now owned by an NGO (nongovernmental organization). During two recent visits, 16 months apart, the

pasture across the fence has been overgrazed, unlike the rest of the ranch. One can only wonder why such a thing would happen, but a suspicious guess is they're overgrazing to do away with a longstanding fence line contrast which favored the ranch and got a lot of publicity.

After surveying the area, witnessing the progressive loss of health in the park, I recorded a 200-pace transect in a location with grass remaining. The land loses whole classes of species as over-rest continues. Bunchgrasses that reproduce sexually (by seeds) are often the first to die out, beginning in heavier soils. In about 200 yards there were 161 Russian thistle plants and 15 native flowering forbs. There were 52 coarse, low-nutrient, asexually reproducing (from rhizomes, not seeds) galleta grass plants. Only six seed-reproducer grass plants were still alive. There were more dead grass plants than live ones.

At each transect point I performed "dry weight rank" estimates. Tumbleweeds took first and second place at every data point. They also garnered third place on all but 18. The invaders outweighed the natives by an estimated 19-to-1.

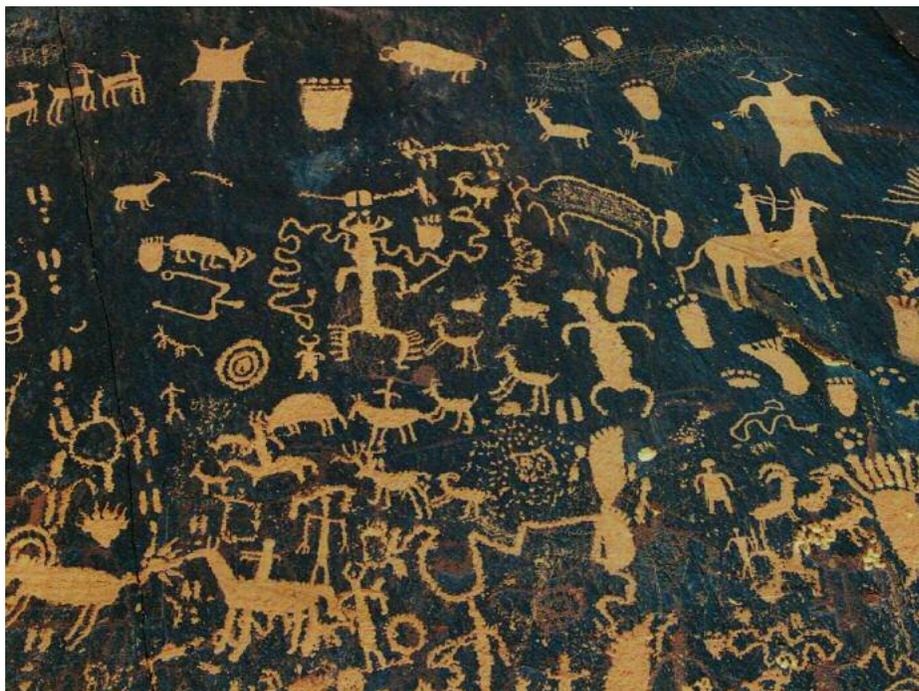
On the adjacent ranch transect, the ratio was approximately 50/50 for sexual and asexual reproducer grasses. There were 82 native flowers, and live plants outnumbered dead plants 96 percent to 4 percent. Dry weight rank gave an 8-to-1 edge to the natives.

Near the park roads to which I had access that December day, I saw only one set of deer tracks. It had been patrolling the highway edge hunting for green shoots generated by that warmer and more fertile microclimate.

On the ranch land I saw where groups of deer had foraged earlier in the day, and I saw wild turkeys several times. There were coyote and fox tracks among the shrubs. Wildlife vote with their feet in the choice between ranch and "protection." These voted overwhelmingly for the ranch.

Three miles further east, Newspaper Rock is covered with petroglyphs of bighorn sheep, mule deer and bison hunted by Native Americans on horseback. This is strong evidence of the presence of bison and herds of other ungulates in southeast Utah in late prehistory and the early historic period. The plant community developed with these animals and native farming and land management practices.

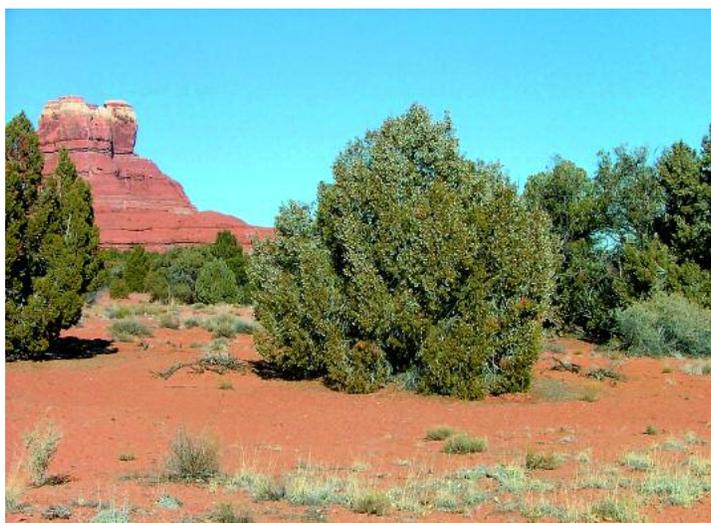
Nature doesn't do well without human and animal disturbance and nutrient cycling. Navajo teachers say that seeds are planted by humpbacks, half-bighorn sheep/half-human



*Newspaper Rock is covered with petroglyphs showing what used to be an abundance of bighorn sheep, mule deer and bison in the area.*



*Flourishing grassland surrounds junipers on healthy ranch ground outside the park. It provides forage for a variety of grazing animals.*



*Inside the park, the ground surrounding the junipers is bare. Native grasses and flowers are gone. There's nothing for little critters to eat.*



*“Cryptocrust” of cyanobacteria and fungi hosts only a few insects. Native grass and flowers have disappeared. BELOW: In view of the San Juan peaks, adjacent to the national park, a ranch provides a variety of lush grasses and forbs, a banquet for wildlife.*



demigods who wield their digging sticks to fertile effect. All hoofed animals have the same magic. Every hoofed leg is a digging stick. Their mouths rejuvenate decrepit grass by clearing away dead growth. Their droppings fertilize and inoculate.

It was thrilling to see the formerly gray, decadent highway right-of-way (Utah 211) spring back to life by means of “magic” cows. On my previous trip I saw tracks, grazing and cow pies all over the right-of-way (the land on either side of the road, inside the fences). Now there are seedlings and healthy adult plants all along the way.

The effects of well-managed livestock really are wonderfully healing. On the ranch land, native grass and flowers grow up to the trunks of the Utah junipers. In the park, the ground around the trees is bare except for the black crust of cryptogams. Cryptogamic crusts are made mostly of cyanobacteria and fungi. Park signs praise the crust for cyanobacterial nitrogen fixing and the ability of their mucilage to stick sand grains together. In the federal agencies’ “Evaluating Indicators of Rangeland Health,” such crusts are “not to be counted as ground cover.”

They’re nature’s first and last gasp in holding soil together. These crusts and vascular herbaceous plants like grasses, etc., are obviously mutually exclusive. Just look in Canyonlands. Crusted areas have little in the way of grass and flowers. Only perhaps a few insects have any use for the crust. Soils are better protected by grass and flowers. Wildlife love and need the grass and flowers. I’m on the side of the deer, birds and bunnies on this one.

If you know enough about rangeland and have enough native clarity to actually see what you’re seeing, visiting rangeland national parks is an “Emperor’s New Clothes” moment. As you may remember in that fairy tale, the vain and foolish emperor was conned and hoodwinked by a larcenous “tailor” who charged huge sums to produce splendid magical clothing which, according to the tailor/thief, could only be seen by those who were worthy of their jobs. All the government ministers, scholars and officials complimented the ruler on his beautiful nonexistent clothes, each attempting to outdo the next in the magnificence of his compliments.

As the emperor paraded naked before his people (all of whom thought they were incompetent because they couldn’t see the “magical” suit, but lacked the courage and integrity to say so), a little boy cried out: “The emperor has no clothes!”

Everyone immediately realized that the

bright lad, rightly shocked by the sight of the naked ruler, was simply telling the truth. Someone started to laugh, then other brave souls joined in. The joke was on the whole nation, except for one honest child.

The same processes of deterioration are evident in every livestock enclosure that is not so disturbed by the activities of the researchers themselves that “nondisturbance” effects are invalidated. Every rangeland national park, with decades of livestock exclusion, is in some state of ecosystem collapse. It’s there for anyone to see.

The people who gushingly write and talk about healthy nature in these places have missed their real calling—retailing used cars or flogging (an English slang term for selling) dead horses. Monty Python fans will remember the famous Dead “Norwegian Blue” Parrot sketch. Like the parrot, the rangeland national parks are “just resting.” These park apologists get high marks for sheer gall and chutzpah. They get lower marks for science.

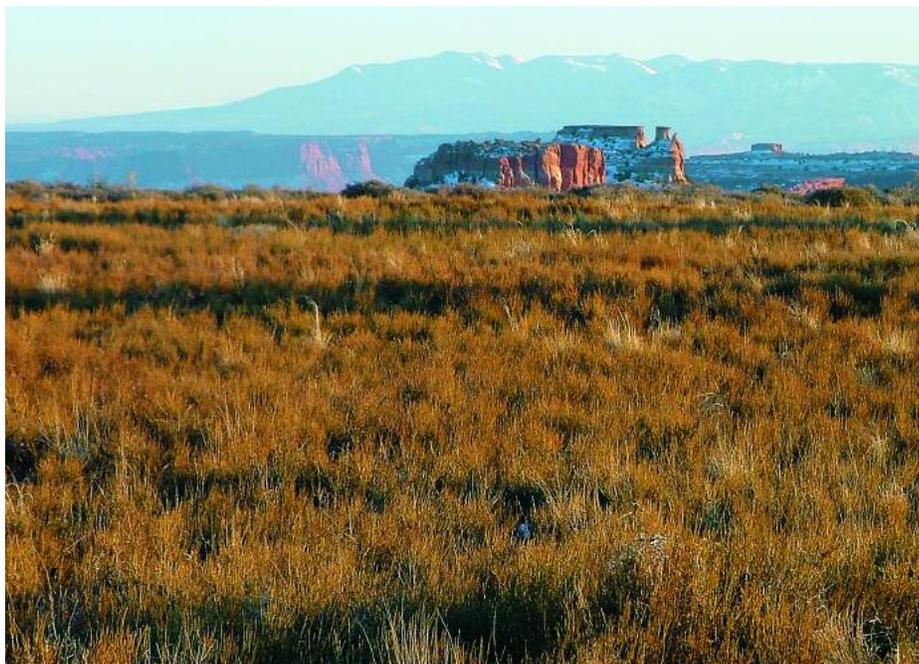
Responses from this group follow a typical rhetorical “lawyer” pattern. If the facts don’t favor their cases, they argue the law. If the law is against them, they argue the facts. If neither the law nor the facts line up in their favor, they attack the witness.

That honest little boy in the story should be very grateful to the first person who laughed. There were a lot of lawyers, lobbyists, and governmental types with a lot to lose in that crowd. It could have been nasty for the kid.

Love for nature compels those of us who speak out on this issue. Millions of acres are at this moment being devastated by long-disproven, junk-science-based, politically correct, “rest the West” nonsense pushed by people with a clear cash motive. They count on the public’s almost complete lack of experience and technical knowledge in nature. They also count on experts complicit in their narrow, romantic philosophy-based ideology to allow them to go on raising money while their efforts destroy species after species. Overprotection is simply a spreading “gray death.”

The freedom to see what you see is a fundamental human right. The emperor (anti-ranching activists) “has no clothes,” folks. Go ahead and laugh—after you’ve finished weeping. Some of us are counting on you.

Again, don’t get me wrong. I love Canyonlands National Park. It’s gloriously, hauntingly beautiful. It’s also scientifically important as a landscape-scale livestock enclosure. The rock formations have an ethe-



*ABOVE: Ephedra, also known as Mormon tea, overwhelms and crowds out native grass on deteriorating park land.*

*LEFT: On healthy ranch land, ephedra coexists with grasses and forbs.*

real, almost surreal beauty. But it’s a melancholy place to observe Colorado Plateau ecosystems.

Even at the higher-altitude “Island in the Sky” district, ephedra (Mormon tea) clones are pushing out the native grasses in the same way sagebrush or junipers force out grass and flowers as their canopy cover increases. Woody plant dominance is one of the “processes of deterioration due to lack of disturbance” to which U.S. Forest Service scientist Dr. Al Medina refers (*RANGE*, Winter 2005). Huge monocultures of ephedra are forming in whole draws and hillsides. Of course, across the fence on the ranch land, the ephedra has grass and forbs growing among the olive green and blue-green sprays of tea stems.

Scientific ranching has wonderful healing potential. It restores and maintains biodiversity. All ranchers can cause their animals to play

the role of the “Humpback Holy People” of Navajo sacred stories. Guided by human intelligence they become, in effect, half animal-half human. They fit the healing pattern of ancient Native American proto-pastoralism.

Finally, if you know any federal judges, please ask them to visit a national park with Drs. Al Medina, Jim Bowns, Jerry Holechek, Jimmie Richardson or J. Wayne Burkhardt (to name a few) before they rule on protecting any more land from ranching. Rural cultures and rural ecosystems deserve the truth, the whole truth, and nothing but the truth. This silly, irrational anti-ranching nonsense has gone on long enough. ■

*Steven H. Rich is president of Rangeland Restoration Academy in Salt Lake City, Utah. He can be reached at <steve@rangelandrestoration.org>.*