



By Steven H. Rich

Birds are great indicators of rangeland health. Their high metabolic rates require lots of high quality food on a continuous basis. They have very specific habitat requirements for feeding and nesting. Most species need to drink water at least daily and because of all this, birds love well-managed ranches. Good ranches have it all; and the birds get healthier year by year.

Driving through seven western states, I interviewed researchers and experts about the effects of scientific grazing processes and wildlife. From wetlands to prairie to desert, birds told an eloquent story.

On a prairie hilltop at Turtle Lake in North Dakota, Dr. Jimmie Richardson found 11 species of native grass growing alongside diverse wildflowers. There were birds all around, from waterfowl to hawks to sparrows to hummingbirds. Richardson explained that good ranch management (one or two annual grazings for brief periods at conservative-to-moderate levels

with time for regrowth) had increased plant diversity. It had gone from nonnative grasses and only one native with a five-inch root zone to over a hundred combined species of native grasses, graminoids, forbs and shrubs, and a 40-inch root zone.

This had profoundly changed the soil hydrology of the site. In a dry year after a long dry spell, the hilltop was dark green. There was dew on our shoes and pant legs.

We found a frog on the hill over 80 yards from water, happy in the moist grass, hunting insects. The frog was found among plant species normally found in bottomland in the eastern Great Plains, not this hilltop short-grass site. The good doctor was enthusiastic. Rancher and private researcher Gene Goven's management was building soil, re-watering the landscape, increasing soil nitrogen, increasing native biodiversity, making a great return on investment and setting a wonderful example.

Goven pointed to a wooded draw on his land which ran from Turtle Lake to a prairie pothole

and up to a little glacial-till hilltop like the one where we stood. He showed us a bird species list generated in a half-mile birding excursion sponsored by U.S. Fish & Wildlife Service and the Audubon Society. From lake to hilltop and back they identified over 100 species of birds.

Mark Stackhouse of Westwings birding tours (who guides birders in sites ranging from Utah to Arizona and New Mexico and down to Central America) says, "There aren't many places on earth where 100 bird species come easily in a day of birding."

Goven and Richardson showed me an in-depth explanation on Cropland Reserve Program (CRP) land rested 18 years near Goven's ranch.

"New CRP land has lots of wildlife—sharp-tailed grouse, nesting ducks, deer, songbirds, the whole works," Dr. Richardson explained. "But in six years or so they'll mostly be gone. Look at this." He plunged his sharpshooter spade into the ground. "Five inches penetration is the average here.

Below that, the soil has no structure. It's cloddy and unhealthy. You can't dig it any more than you could concrete. Five inches is the root zone and is as deep as the water goes."

Then he held a sample of shallow soil on his spade and poured water on it. "Nine seconds is the test for water repellency," he said. But in 90 seconds the water hadn't absorbed. He poured the water off. "This is due to a fungal coating that makes the organics repel water," he explained. "Now smell this soil."

I took a big whiff. The stink made my eyes water.

"That's the smell of the fungus," he went on. "It's like we'd waxed the soil surface. The soil hydrology is ruined. Water runs off this land, floods the lowlands, then the land and ponds dry up by late summer. Look at this vegetation." He pulled up one of the widely spaced alfalfa plants. "It's pale yellowish green, and it's old and coarse. Listen!" He bent the stems which crackled and broke. "Full of lignin and cellulose. Wildlife would starve on this stuff. Between the bad nutrition and the dewatering of the landscape it's no mystery about absent wildlife."

Dr. Richardson said that no bird can take the risk of nesting here. "Ponds dry up before young waterfowl are fledged. It's devastating to them and to upland animals as well; the forage has low water content and little nutrition. Survivors and successful breeders return to successful sites. No survivors, no returners, no wildlife."

Goven sent his dog out on several sweeps and found nothing. Not even a mouse. After a while the dog got discouraged and had to be ordered to try. "The dog's not

fooled," Gene chuckled. "It's just the humans who can't tell."

Rancher Gabe Brown told me it's a common practice among rural people in North Dakota to send rude or intoxicated bird hunters and bird-watchers to CRP ground where the country folk know they won't see anything. Brown's ranch swarms with wildlife. The trees and berry-producing hedges around his house and barns are filled with birdsong.

Karen Smith and Craig Hultberg of Lostwood and Audubon National Wildlife Refuges confirmed Gene's findings. As a result of a regime of prescribed grazing and prescribed fire, both had seen big increases in native plant diversity and a return of native upland (including endangered Bairds sparrows) bird diversity and a huge decrease in nonnative and invader species (plants) as well as bare ground. Karen's message to Congress and the American people is, "Stop protecting the prairie to death. It needs fire. It needs grazing. It dies without disturbance."

Karen told me how Lostwood Refuge looked 20 years ago. "I was supposed to be managing a grassland/wetland complex, but years and years of little or no grazing and no fire had turned the grassland to brushland. So the native upland birds were gone."

Before he began his prescribed fire and grazing program, Craig Hultberg used to spend much of his time spraying poisons on thistles and other nonnative invaders. Now the spray rig stays in the garage. Craig spoke of an "illusion of health" created by years of rank old growth from European grasses, etc., due to years of rest.

"It's really a biological desert," he said. "It doesn't fool the birds

and other wildlife though. They leave and they don't come back till the native diversity is restored, along with natural nutrient cycling."

I had seen what he meant on other sites around the state while touring his impressive biodiverse rangeland. Rancher Ken Miller showed me nearby land that had been rested 30 years. It had two grass species: leafy spurge, a destructive invader plant, and no prairie flowers at all. Researcher Paul Nyren at the Central Grassland Research Station guided me to long-rested research plots. They all looked the same, had the same foul-smelling soil surface, and had few native plants or birds.

On Deseret Ranch, in high, dry, cold northeastern Utah, Mark Stackhouse has identified 274 bird species on the property, including a trove of sagebrush obligates like Brewer's sparrows, sage thrashers, sage sparrows and sage grouse. On one percent of Utah's potential habitat, Deseret has 20 percent of the sage grouse counted in the state. Gallinaceous bird expert George Wilson from Utah's Department of Wildlife said that year after year, in an ecological site comparison, Deseret had 10 times more sage grouse than BLM-managed land.

Like Goven's land, Deseret's program of once-a-year, brief grazing has produced plant communities and soils that hold water. Now that there's lots of water in the soil, native meadow complexes have reappeared, thousands of acres of them, and are growing. The flowering plants and native grasses have also returned.

Mark Stackhouse made it clear in our interview that growing a bunch of sagebrush for sagebrush obligate birds, and animals like pygmy rabbits, does them little good. They need sagebrush steppe

ecosystems, not just the bushes. The reappearance of the wet meadow complexes and upland herbaceous community is a godsend to many creatures.

It's not hard to understand. "Sage grouse chicks need insects and tender, high-energy, high-protein plant matter," said John Kimball, former head of Utah's Department of Wildlife Resources. "The farther momma sage grouse has to trail her brood to food and water, the more she'll lose to predators. On Deseret, it's a very short trip."

Deseret Ranch has been designated a worldwide "Important Bird Area" by the Audubon Society. In the letter informing Utah's Rich County Commissioners of this honor, Audubon stated that they estimated "more than 2,000 waterfowl, more than 7,000 Canada geese, 20 breeding pairs of long-billed curlew, 50 breeding pairs of Franklins' gulls, 30 breeding pairs of burrowing owls, 100 breeding pairs of Virginia warblers, and 50 breeding pairs of broad-tailed hummingbirds." If you added 50 pairs of willow flycatchers on a short reach of Lost Creek and Blue Fork, ferruginous hawks, lots of other raptors (many eagles), the sage grouse and other sagebrush obligates, 8,000 (combined) deer, elk, moose, and pronghorn along with pelicans (no kidding) on manmade rookery islands, you start to get the picture (100 species in a birding day is easy here too).

Dr. Roy Roath of Colorado State University found the same thing on Cold Springs Mountain Allotment in northwestern Colorado. Wet meadows were expanding, stream flows increasing, springs reappearing even in a severe drought, and so were the sage grouse.

"Bigger broods, more of them, higher survival," Roath grinned, standing among aspen sprouts that were invading the drowning sage. Sage grouse are responding "dynamically," along with pronghorns, deer, elk, and songbirds. "Grazing periods average seven days; conservative-to-moderate grazing on average, leaving plenty of residue." The cattle and the ranch bank account are also doing better. Improved nutrition allows female grouse to lay more fertile eggs, increasing brood size.

In southwest New Mexico, I visited David Ogilvie on the U-Bar Ranch, famous for hosting the largest population of Southwest willow flycatchers known anywhere (260 pairs). Less well-known is the fact that Forest Service scientists have found the highest and most species-diverse population of noncolonial riparian birds anywhere in North America on the U-Bar Ranch and Gila-Cliff Valley, including endangered birds other than flycatchers. This land has been ranched and farmed since the late 1800s; that may be why it also still hosts high numbers of endangered cyprinid fishes, rare on federal land.

The kind of habitat willow flycatchers actually like can be created easily. They do not choose to occupy classic gallery forest habitat along the Gila River for many miles north and south of the Gila-Cliff Valley. But if someone creates a slack water slough anywhere in the valley, it is immediately occupied. Flycatchers live primarily in narrow stringers of secondary forest containing box elder trees on slow-moving irrigation ditches and the aforementioned sloughs. The federal government has so far rejected an enlightened proposal to increase prime habitat. Apparently, this is because such man-made structures and resulting vegetation

are not politically correct—even if they are beautiful and assist in saving several endangered species. (This is particularly odd since the U.S. Department of Agriculture pays tens of millions to create such wetlands elsewhere on private land.) The proposal is also designed to protect fully occupied flycatcher habitat in imminent danger of destruction by floods.

Many environmentalists know this ranching/wildlife symbiosis. Bob Budd, director of land management at The Nature Conservancy's Red Canyon Ranch in Wyoming (also an Audubon Important Bird Area) told me that the ranch was operated to demonstrate the healing potentials of scientific, feedback-based management. Budd's management has achieved positive results similar to those described above. He is anxious for people to realize that intense weather events, climate, wildfire and other powerful natural forces play a major role.

"A tough winter," Budd says, "can concentrate elk and moose so they chew the heck out of the willows and streamside vegetation I've so carefully husbanded for nesting habitat and brood rearing. Then the heavy snows melt and away it goes. It's happened that way for tens of thousands of years. A four-inch rain on a rocky mountainside or burn area can cause a cascading blowout of beaver dams and wash years of careful management down the canyon. It's important to grasp that in these mountain locations it's gonna happen."

Jim and Sue Chilton of the Montana Allotment near Arivaca, Ariz., have a ranch that's a bird-watchers' Mecca, like so many in southern Arizona. This ranch is the only place on earth that the five-striped sparrow is found. There are also summer tanagers, orioles, grey

hawks, many eagles (golden and Mexican). Mearns quail, masked bobwhite and many other sensitive species thrive there, as do Coues whitetail and mule deer, javelina, mountain lions, coyotes, bobcats, coatimundi, and many species of small mammals and reptiles. Sue serves as chairman of the Arizona Game & Fish Department Commission. The Chiltons love to host visitors on their beautiful Forest Service allotment. Sadly, some have abused this hospitality and accused the Chiltons of mismanagement.

“That is a very unfortunate irony,” says Dr. Jerry Holechek of New Mexico State University. “This is one of the finest examples of scientifically monitored and documented grazing success in the Southwest. There has been a huge shift from short grasses to native mid-grasses on this place—excellent watershed and excellent riparian health.”

He and Dr. Dee Galt (formerly of U.S. Natural Resources Conservation Service) have designed, monitored and published scientific papers on the rest-rotation grazing system,

conservative use levels, and the resulting explosion of life and riparian healing.

“Managed grazing is good for birds as a class,” according to Holechek, who has “peer-reviewed study after peer-reviewed study” in his files that reinforce that fact. “Managed livestock grazing favors wildlife in general. It’s irresponsible and unethical to draw conclusions about ranching based on studies about unmanaged livestock use. Some people stretch some very narrow points to draw anti-grazing conclusions, but in the real world where wildlife live, their ideas are irrelevant at best and usually destructive of wildlife survival.”

As John Kimball, former director of Utah Division of Wildlife Resources put it, “The only future for wildlife in the West is in shared vision which brings all interests together, using our best efforts and information and our mutual resources. We need to honor, trust and respect ranchers who manage toward habitat goals.” He went on, “People need to learn about ecosystem processes. Land that has been used by animals

looks used. It smells used. It doesn’t matter if wildlife or livestock used it. If it was used properly, it will grow back, and it will be better than before it was used.”

Kimball says that wildlife needs to coexist with livestock on western ranges. “Well-managed collaborative ranching creates income for rural people. It prevents rangeland being sold off for other, incompatible uses and preserves open space. Grazing management can achieve what wildlife managers want. It’s the best and least expensive way to do it and it puts primary responsibility for rangeland management back in the hands of those most qualified to do it—the people who live on the land.”

To use an old-time negative phrase, a lot of uninformed people think ranching is “for the birds.” Out on the range, the birds vote with their wings. Where the abstract theorists get their way as they did in the Ruby Marshes in Nevada (a whole other story), the birds leave and go to the ranches. Ranching is for the birds.

BIO

Steve Rich makes these statements with considerable certainty. On his desk are several inches of scientific studies bearing the same message. He has many years’ experience as an environmental educator, rangeland consultant, rancher and outdoorsman. Recent experiences reinforced the scientific ranching/bird connection very powerfully. He can be reached at steve@rangelandrestoration.org or www.rangelandrestoration.com.



When soil holds water, ponds and streams lure waterfowl like Canada geese, snow geese, pelicans, ducks, herons, egrets and long-billed curlews. Good grazing practices are the key to soil health. When the cattle go, the birds must follow.

In the real world, anti-grazing ideas are irrelevant at best and usually destructive of wildlife survival. This blue heron is enjoying a man-made reservoir, created for crop irrigation.

(Blue heron photo copyright Joe McDonald, Tom Stack & Associates)



The farther momma sage grouse has to trail her chicks to food and water, the more she'll lose to predators.

On Utah's Deseret Ranch, it's a short trip, which is why Deseret has ten times more sage grouse than neighboring BLM land.

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Managed livestock grazing favors wildlife in general.

That includes the small critters and crawlers that are "fast food" for owls and raptors.

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