

GREEN GRAZING

Why The Nature Conservancy and Montana Fish, Wildlife & Parks are using cows to improve wildlife habitat **By Tom Dickson**



KEEP 'EM MOVING Cowboys herd cattle to new pasture on the Matador Ranch in southern Phillips County. Owned by The Nature Conservancy, the Matador offers grazing leases at reduced rates under two conditions: The cows are regularly rotated on the Matador and ranchers agree to certain conservation provisions on their own property.

PHOTO BY AMI VITALE

Brian Martin drives to the top of a rise on the Matador Ranch overlooking a prairie stretching for miles in all directions. The landscape appears uniform to a first-time visitor until Martin, conservation director for The Nature Conservancy (TNC) Montana, points out the diversity in this vast grassland. Some clay pans are nearly barren. Stands of green needlegrass and little bluestem grow a foot tall. In the distance, knee-high grasses rise amid clumps of Wyoming big sagebrush.

Martin explains how the varying plant heights benefit different bird species here in southern Phillips County, about 80 miles south of the Canadian border. Mountain plovers prefer short grass. Baird's sparrows do better in tall grass. Long-billed curlews need a range of short and midsize vegeta-

tion. "Every species has a unique combination of heights it needs throughout its life cycle," Martin says.

As if on cue, three sage-grouse glide past, topping a knoll and disappearing into what biologists consider some of the best mixed-grass prairie habitat in North America. The

continent's longest pronghorn migration bisects the ranch, which TNC has owned since 2000. Burrowing owls and black-tailed prairie dogs thrive here, too.

Then, amid this prairie wildlife nirvana, I spot a herd of grazing black Angus.

A problem? Hardly. Cows are not only welcome on the Matador, but their endless appetite is essential to enhancing wildlife habitat. "If not for cattle, we wouldn't have nearly the number and diversity of birds and other wildlife we have here," says Charlie Messerly, ranch manager.

As on the Matador, many landowners across Montana use various types of "rotational" cattle grazing to increase both wildlife habitat and their bottom line. Montana Fish, Wildlife & Parks also is on board with the practice at more than a dozen wildlife management areas (WMAs).

Allowing cows on wildlife lands can raise eyebrows, even hackles. "On a few WMAs, hunters definitely don't like seeing cattle," says Kelvin Johnson, FWP's statewide wildlife habitat biologist. "We have to explain that, even though you might have to step over a few cow pies, cows are actually doing elk and other wildlife a lot of good."

COMPOUNDED INTEREST

Martin hears the same concerns from first-time guests at the Matador. "They'll say, 'Wow, what an amazing prairie. Too bad about the cows.'" He points out that prairie plants evolved with thousands of years of grazing by bison herds. Grasses and forbs (broad-leafed plants) need periodic cropping to produce their full potential. TNC uses cattle grazing—along with carefully controlled burns—to create a mosaic of vegetation that benefits a wide range of native birds, mimicking how migrating bison once created similar patchworks across the Great Plains.

At 60,000 acres, the Matador is the region's largest private ranch. In 2003, TNC set up a "grass bank" there, based on one established by another conservation organization in New Mexico. Surrounding ranches graze their cows on the Matador at steep discounts if they conduct certain wildlife-friendly practices—such as using rotational grazing or protecting prairie dog colonies—

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BIGGER CONSERVATION FOOTPRINT The Nature Conservancy Montana's conservation director, Brian Martin, works out a grazing management plan with rancher Bud Walsh. As FWP does on its wildlife management areas, TNC discounts grazing on its Matador Ranch property as incentive for adjacent ranchers to use wildlife-friendly grazing on their own land.



VARYING HEIGHTS Conservation grazing can produce a wide range of plant heights depending on the time of year, grazing duration, and number of cattle. Top left: Short grasses on prairie near Mosby. Top right: Mid-height grasslands near Cascade. Above left: Taller grass and sagebrush in Phillips County. Above right: If cows are quickly moved off afterward, even intensively grazed areas like this can quickly regenerate to resemble the photo at left.

on their own properties. Most important, no ranch can be in the grass bank if it plows up prairie to plant crops. "Once you turn soil over, it's pretty much lost forever for native birds," says Martin. Operating on tight margins, ranchers can feel pressed to convert prairie to row crops. "The grass bank helps provide an alternative," Martin says.

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In this way, TNC uses the Matador grass to expand its wildlife conservation footprint on an additional 285,000 acres of grazing land.

The grazing arrangement makes business sense, too. One participating rancher is Dale Veseth, who joined the grass bank at its inception. "With rotational grazing here and on the Matador, we get higher calf weights and grow more grass that we can stockpile for dry years like we just had," he says.

CHEWED DOWN

That some grazing regimes benefit birds and other wildlife doesn't mean they all do. When not properly managed, cattle can harm the environment, especially in dry Western states like Nevada and Utah, where rangeland didn't historically evolve with grazing bison.

The worst effects come from chronic overgrazing. When rangeland is chewed down year after year, vegetation can't produce seeds or regenerate. That robs prairie birds of nesting habitat and cover to escape predators. Grazing cattle also stunt the growth of woody plants such as chokecherries, dogwood, aspen, and ash.

On streams, improperly managed cows can trample banks, creating silt that covers spawning gravel and suffocates fish eggs and aquatic insects. Bank trampling also hampers growth of streamside willows that historically kept streams cool in Montana's hot summers.

Even when cattle don't overgraze range, grazing management can still cause problems for some native bird species. Cattle are often managed to graze vegetation halfway

down from one pasture to the next. This “managing for the middle” can maximize livestock weights, but it creates uniform mid-level grass height of less value to the birds that require taller or shorter vegetation.

GIVING PLANTS A BREAK

Surprisingly, the very grazing that degrades wildlife habitat can, with some tweaking, actually make it thrive. Most beneficial is rotational grazing. Under this approach, cattle are allowed to eat grass for shorter periods in specific areas while other pasture rests. Rotational grazing comes in several variations, all of which aim to give prairie plants a break to replenish energy in root systems, regenerate, and produce seeds before cows return.

Wouldn't it be best to just leave grasslands alone entirely? Actually, no. Periodic trimming reinvigorates grasses and forbs. It also reduces accumulated dried fuels, which can produce ultrahot wildfires that incinerate seeds and sterilize soil. Plus, cows' nitrogen-rich urine and dung fertilize the soil.

That's not to say every herd you pass on the highway is making grassland birds and other happy. But more and more ranchers are discovering the ecological and economic value of regularly resting pasture. “When done under a well-considered plan, we've found again and again that grazing can improve rangeland health and wildlife habitat while increasing calf weaning weights and reproductive rates, improving herd health, and lowering ranch operating costs,” says Todd Graham of Ranch Advisory Partners, a Bozeman firm that helps ranchers boost both profits and ecosystem health.

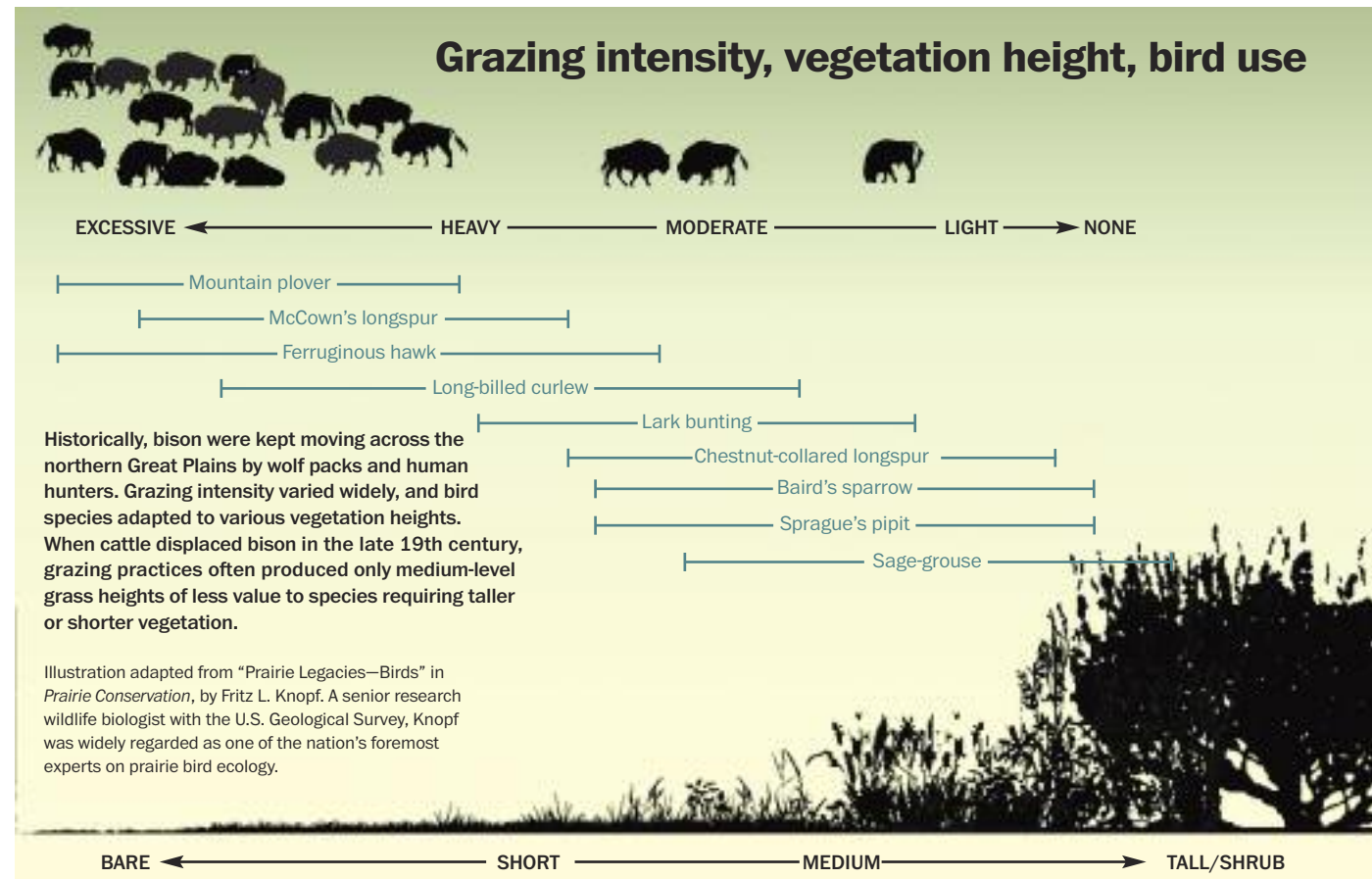
Fish and wildlife conservation groups, longtime opponents of public land grazing, have recently begun to help ranchers find the sweet spot where wildlife and livestock objectives overlap. The National Audubon Society, National Wildlife Federation, and Trout Unlimited

provide economic incentives for ranchers to manage cattle in ways that protect streams and native plants.

Rotational grazing is nothing new. For centuries, herdsman in Africa, Asia, and Europe have nudged their cattle, sheep, and goats from one pasture to the next. In the early 1900s, after observing that plants



GRAZING GURU A young “Gus” Hormay studies the effects of grazing on plant physiology in 1938. FWP biologists later worked with Hormay to develop rotational grazing systems on several Montana wildlife management areas.



FOR BIRDS, NO DIFFERENCE When moved periodically as part of conservation grazing regimes, cattle can provide the vegetation height diversity that benefits grassland birds just as migrating bison herds did historically. Lark buntings (below right) and Baird's sparrows (below left) are attracted to grazing patterns that produce a range of short to mid-height grasses.



CLOCKWISE FROM ABOVE: LEFT: MONTANA STATE UNIVERSITY LIBRARIES; SPECIAL COLLECTIONS; KRISTENA A. OSTBERG; STEVEN WARE; SHUTTERSTOCK; JOHN CARLSON

could not survive and reproduce without periodic respite, range ecology pioneer Arthur Sampson developed the first systemized approach to deferred rotation in the United States. A student of Sampson's, August "Gus" Hormay, developed and advanced "rest-rotation" grazing and, working for the Bureau of Land Management, began promoting it across the West starting in the 1950s.

Despite the advantages rotational grazing offers, it's not for everyone. "The returns are beneficial, but up-front costs can be a barrier," says Veseth. By moving cattle more often, rotational grazing requires more labor, fencing, and water sources. "In the long run you get more grass overall, but some people can't afford to wait that long," Veseth says.

COWS ON WMAS

On a sunny September morning, FWP wildlife biologist Cory Loecker carefully maneuvers his rig up a rocky, ragged two-track toward the top of Beartooth Wildlife Management Area, on the northern end of the Big Belt Mountains. As part of an FWP lease, several hundred cattle owned by

Sieben Livestock Company have spent the past few weeks grazing the area. Sieben has run cattle on 6,000 acres of the 36,000-acre WMA since 1992 as part of a vegetation regeneration management agreement. Crews use portable electric "poly-wire" fence to contain the cattle for a few weeks at a time before moving them to new areas.

Loecker, who grew up working on Nebraska ranches, shows me a waist-high stand of smooth brome grass that hasn't been grazed in years. "Elk don't like to use old, coarse stuff like this except as maybe hiding areas for calves," he says. We walk to a trampled pasture that was heavily grazed a few days earlier. "It looks a little rough now, but this fall and next spring this will be filled with new grass shoots," Loecker says. "Elk key in on these green-up areas, basically following where cattle had been a few months earlier."

Most FWP grazing leases include provisions known as "cooperative agreements" that extend the WMA's conservation footprint. As on TNC's Matador Ranch, FWP

discounts grazing fees if neighbors agree to rotationally graze their own lands, too. "That improves habitat far beyond the wildlife area boundaries," says Rick Northrup, chief of the FWP Wildlife Habitat Bureau. Many leasees also provide public hunting access on their land, an added benefit.

In addition to the 115,000 WMA acres leased statewide for conservation grazing, another 90,000 acres of pasture is periodically rested on adjacent ranches and other

“ We put cows on our properties only if we're sure it will benefit specific species.”

leased lands as part of the agreements. Says Kelvin Johnson, the FWP wildlife habitat biologist, "Landowners have told me they wanted to defer grazing on their land to rest the vegetation, but they couldn't afford to until they leased with us."

WMA grazing can even be adjusted to

avoid harming trout. Sieben crews use portable fence to keep cattle away from Cottonwood Creek, home to a restored native westslope cutthroat population. "The usual set 'em and forget 'em approach to grazing public land is often a huge problem for coldwater species," says Dave Moser, FWP fisheries biologist in Bozeman. "But well-managed grazing like at Beartooth can definitely be compatible with both cutthroat and bull trout restoration."

FWP officials acknowledge that conservation grazing isn't good for all wildlife. As cows improve habitat for some species, they can degrade living conditions for others. "With grazing, there are always winners and losers," says Northrup. "Cows definitely can muck up a stream crossing or mow down hiding cover, but on the whole we aim for a net gain to wildlife and conservation."

17 OF 70

FWP has used cows to improve wildlife habitat on WMAs for decades. Influenced by meetings with Hormay, the rotational grazing guru, the department in 1981 began its first lease at Mount Haggin, just outside Anaconda. Today, Mount Haggin



GOOD GRAZING MAKES GOOD NEIGHBORS

In addition to improving wildlife habitat and giving neighbors additional pasture, WMA grazing strengthens relations between FWP and Montana's stock growers, farmers, and rural communities. "I can't stress enough how important that is to the department's long-term effectiveness," says Ken McDonald, head of the FWP Wildlife Division.

WMA grazing and other FWP "working-lands conservation" projects have also helped maintain relations between the department and rural lawmakers. "Our successful WMA grazing programs were a factor in the Legislature passing the Habitat Montana and Upland Game Bird Enhancement bills," McDonald says. What's more, the Fish and Wildlife Commission has instructed FWP to make sure habitat programs "promote habitat-friendly agriculture."

Grazing also makes it easier for FWP to acquire new WMAs or expand existing areas. Some Montanans object to FWP buying land, even though acquisitions come from willing sellers. But when neighbors see cowboys herding cattle on WMAs, they may view FWP ownership in a new light. "A lot of people like to see public land provide some additional economic use," McDonald says.

Grazing leases have also allowed FWP biologists to develop relationships and build trust with neighbors, leading to better wildlife conservation practices on private land. WMAs demonstrate sustainable grazing practices that landowners can apply to their own property. Grazing on WMAs also increases neighboring ranchers' tolerance for having elk on their property. "Farmers and ranchers own millions of acres of wildlife habitat across Montana," McDonald says. "It makes sense for us to partner with them whenever possible." ■



Cows can make WMAs more palatable to the ranching community.

THE WMA GRAZING PAYOFF From left to right: Under the grazing lease Cory Loecker, FWP wildlife biologist, coordinates on Beartooth WMA with Sieben Livestock Company, the company's cattle are moved to key areas at certain times to reinvigorate vegetation. Elk thrive on revitalized spring green-up areas, creating more opportunities for hunting and wildlife watching.





CONTENTED COWS Cattle on the Matador Ranch (left) and the Sieben Adel Ranch (with Chase Hibbard, above) thrive on pasture managed for rotational grazing. “How we manage our cows ultimately gets down to caring for the soil to make sure this land stays healthy and productive for future generations,” Hibbard says.

and Beartooth are among just a handful of WMAs—roughly 17 of 70—where FWP allows cattle. “We put cows on our property only if we’re sure they will benefit specific species,” says Johnson.

FWP plant ecologist Bob Harrington tracks long-term effects of grazing on WMAs, monitoring vegetation growth, species composition, and soil health. “This allows us to assess grazing impacts over time,” Harrington says. FWP uses the information to adjust grazing leases in ways that increase benefits and reduce problems.

“You can misuse any tool, or you can use it correctly.”

Improvements don’t happen overnight. On southwestern Montana’s Robb-Ledford WMA, it took two decades of installing fencing and making grazing adjustments before streams recovered from past overuse. Biologists and ranchers experimented for years on Madison-Wall Creek WMA, in the upper Madison River valley, to develop a grazing regime that best serves the wildlife area’s 700 elk and the 1,200 cows on neighboring ranches.

Not surprising for such a counterintuitive

practice, WMA grazing has its critics. “We’re skeptical that FWP is achieving the wildlife benefits it claims that grazing produces on WMAs,” says Glenn Hockett, president of the Gallatin Wildlife Association. “We’d like to see a study proving that even rotational grazing is better there than no grazing at all.”

While acknowledging concerns about grazing on wildlife areas, Northrup says FWP provides a reasonable, science-based middle ground. “There’s a wide range of opinions out there, from those who see no problems with grazing public land to those who want it entirely off public land,” he says. “On WMAs, we’re showing that grazing under carefully managed conditions can be good for both wildlife and cows.”

A ONE-TON TOOL

After talking to Loecker, I head to the Sieben Livestock Company’s Adel Ranch to meet Chase Hibbard and his nephew Cooper Hibbard. Beartooth WMA sits high above us, overlooking the ranch’s 16,500 acres of pasture where the family has used rotational grazing since 1992. “Within a year we saw tangible improvements in grass vigor, then density, then diversity,” Chase says. “Since then, we’ve grown way more of the desirable, nutritious plants that cows like best, like bluebunch wheatgrass.”

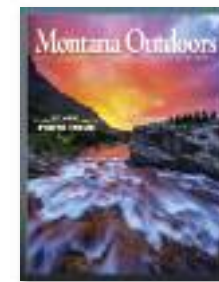
Cooper, ranch manager, explains that Sieben Livestock uses a three-pasture rota-

tion method. In a given year, one 3,000- to 7,000-acre pasture is grazed during the growing season, one is grazed only after grass seed heads ripen in early July, and one is rested with no grazing. That regime, the same that FWP requires in its grazing leases, gives each pasture two full years of not being grazed before seeds ripen. “Our cattle benefit from the same things that benefit wildlife up on the Beartooth: healthy, functioning soil and vegetation, and healthy, functioning watersheds,” Cooper says.

It’s tough for many people to grasp the concept of cows as ecosystem enhancers. They picture healthy prairie as a sea of knee-high grasses rippling in the breeze. And it’s true that in much of the semiarid West, improperly managed cows trample streams and turn range into moonscapes.

Yet by eating grass and drinking water, cows today do nothing different from what millions of grazing bison did for thousands of years. What’s the difference?

Movement, says Martin, the TNC habitat expert. Kept on the go by predators and human hunters, bison naturally mowed down some grassland areas while leaving others to regenerate. With managed movement, cows can produce similar effects. Martin says cattle—whether on a private ranch or a state wildlife area—are a tool for managing grasslands. “You can misuse any tool, or you can use it correctly.” 🐄



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LEFT TO RIGHT: COREY LOECKER/MONTANA FWP; TOM DICKSON/MONTANA OUTDOORS

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38 For 38 Every hunting season for nearly four decades, this West Yellowstone hunter has taken a bull elk on public land. How does he do it? By Craig Mathews

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