NATURE CONSERVANCY

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Ranching Rebooted

At Montana's Matador Ranch, what's good for the prairie is good for its people.

BY Scott McMillion

PHOTOGRAPHS BY Ami Vitale

RAISING EXPECTATIONS: Ranchers like Bud Walsh (opposite), a Gros Ventre Indian, are partnering with the Conservancy to improve wildlife habitat while they raise cattle; (this page) Sheila Walsh, Bud's wife, feeds calves.

IN NORTHEASTERN MONTANA, NOT FAR FROM THE Canadian border, the volcanic uplift of the Little Rocky Mountains is visible across 100 miles of prairie. Layered with granite and ponderosa pine, speckled with aspen that turns brilliant gold in the fall, and blanketed in a white comforter in the winter, this "island" range bathes in watercolor hues come dawn or dusk. And from the foothills of the Little Rockies, where the trees peter out, the Matador Ranch runs southeast across mile after mile of prairie grassland to the eroded scars and sculpted sandstone and wind-bent ponderosas of the Missouri River Breaks. It's grazing country all the way.

At 60,000 acres, the Matador, which The Nature Conservancy has owned since 2000, is the largest private ranch in the region. But even with all that land, Brian Martin, the director of science for the Conservancy in Montana, has been thinking about the ranch's role in keeping an even larger landscape intact.

Here on the prairie, small but important creatures need big spaces. There's no better example than the greater sage grouse. Not much bigger than a chicken, sage grouse are what biologists call a landscape species. They depend not on a patch of turf but on a sweep of ground and sky big enough to provide a reliable variety of habitats: sagebrush of one size for nesting and another for winter survival, broadleaf plants for rearing chicks, bare ground for mating rituals. These birds, an important food source for everything from foxes to eagles, often fly scores of miles to find what they need.

But the sage grouse, along with a suite of other prairie species like prairie dogs, long-billed curlews and migrating pronghorns, are finding that their world isn't as big as it used to be. It has been whittled down by roads and fences and, most severely, the plow. And a smaller world can bring trouble for both humans and birds. Lose the bigness and you lose birds. Lose birds and you invoke the restrictions of the federal Endangered Species Act. This isn't a theoretical problem: The U.S. Fish and Wildlife Service is scheduled to decide whether to add the sage grouse to the endangered species list by 2015.

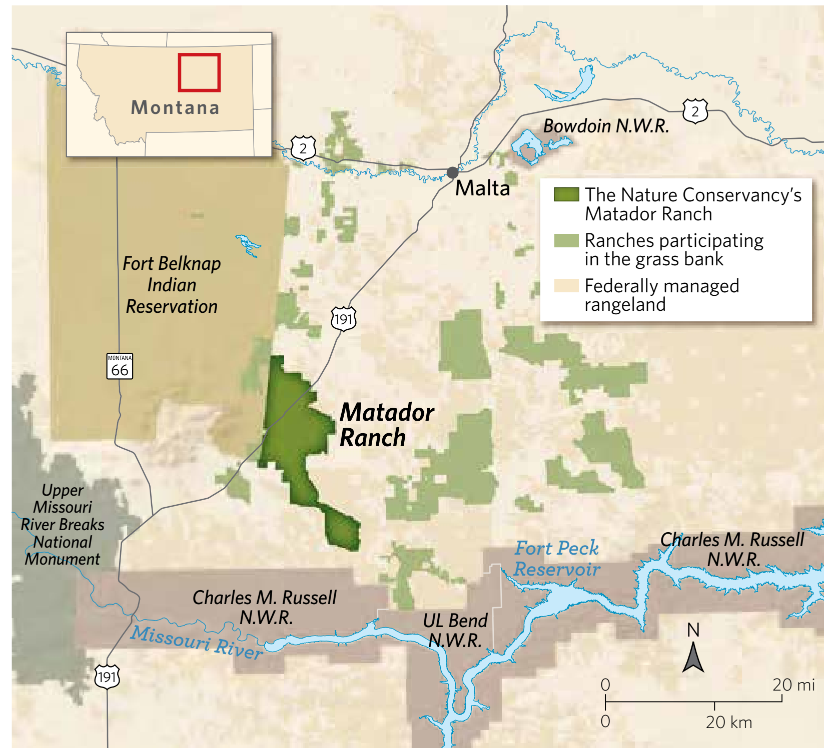
But the Conservancy is using an innovative idea to preserve the open range and keep the prairies functioning for increasingly rare creatures—as well as for the scattering of ranchers who've made a home here in the sagebrush. As big as it is, the Matador remains a relative postage stamp on the prairie. So the Conservancy is working with its ranching neighbors to operate a grass bank, a conservation tool designed to save the prairie far beyond the ranch's borders.

"We don't want random acts of conservation out on the landscape," Martin says. "We want large blocks. For the landscape-scale species we're interested in, that's what they require."

SOUTHERN PHILLIPS COUNTY, MONTANA, ISN'T HOME to a lot of people, but the prairie here is no stranger to controversy and mistrust. "I'm 50 years old," says local rancher Dale Veseth, "and it seems there's always been a fight."

Some folks, Veseth says, are still sore over the creation of the Charles M. Russell National Wildlife Refuge along the Missouri River in the 1970s. The designation of the nearby Upper Missouri River Breaks National Monument in 2001 also rankled some ranchers, who feared that they would be shut out of grazing rights on public land, an important component in running an economically viable grazing operation. The legal push by several environmental groups to protect the sage grouse under the Endangered Species Act raises plenty of hackles, as does a growing national advocacy for returning bison to the prairies, particularly to the wildlife refuge.

But the Conservancy is trying a different approach. Working from a model established in the 1990s on a former Conservancy property in southern New Mexico and Arizona, the organization has established a grass bank on



LEVERAGED PROTECTION: Matador Ranch covers 60,000 acres, but the grass bank program based there has improved another 220,000 acres of wildlife habitat on neighboring ranches.

the Matador. The goal is to improve both wildlife habitat and ranch profits, and to leverage those improvements far beyond the borders of the Matador.

Here's how it works. The Matador has a lot of grass but no cattle. The neighboring ranchers have a lot of cattle but not always enough grass to last the year. If ranchers commit to adjusting the way they manage their own properties, the Conservancy gives them a substantial break on the cost of grazing leases at the Matador. That means ranchers have better wildlife habitat on their own places, as well as more grass for their own cattle.

The most important commitment ranchers make is a promise never to "bust sod." The American prairie is an incredibly resilient ecosystem: It can withstand raging fires, millions of hooves, cold that can crack a stone and withering drought that lasts for years. But it can't survive a plow. And agricultural economics, a growing population of hungry humans, and federal farm and renewable energy programs have created incentives over the decades to break ground and plant grain.

Each year, more than 1 percent of grassland in the northern Great Plains' Prairie Pothole region is lost, which means it's being converted faster than Amazonian rainforests. That whittles away at the bigness that's so critical for prairie species. Converting prairie grasses to grain crops brings roads and disruption, replaces plant diversity with monoculture, alters habitat. For example, a plowed field can disturb a sage grouse breeding ground, or lek, as far as two miles away. Native grasses, in contrast, eventually become a kind of mulch that slows erosion, helps retain water in the soil, and improves nesting success for sage grouse and other ground-nesting birds.

That's why the Conservancy wants to keep the remaining prairie right side up. "If you ever break native prairie, you're out of the grass bank forever," Martin says. "You can't come back in."

Ranchers who participate in the grass bank must also commit to preventing the spread of noxious weeds like spurge and knapweed, which can outcompete native plants critical for wildlife. But the real innovation in the program is its economic incentives for ranchers who help out wildlife. Protect sage grouse leks and get a discount on grazing at the Matador. Ditto for prairie dog colonies. Prairie dogs were long seen as vermin in ranching communities but are now recognized as a sort of coral reef of the prairies. The colonies provide important habitat: Burrowing owls and snakes live in prairie dog dens; badgers and endangered black-footed ferrets rely on prairie dogs as prey; and antelope nibble sprouts after prairie dogs mow grasses around their dens. More than two dozen species rely on prairie dog towns to one degree or another.

Those kinds of protective actions—and the discounts that come with them—translate into tens of thousands of dollars in savings for ranchers in a tough business. Every year, the Matador hosts about 1,000 yearlings and 860 cow-calf pairs, plus some bulls. In 2013, the average price for leased private pasture in Montana was $21 per month per cow and calf. But on the Matador, ranchers have qualified for enough conservation incentives that they paid as little as $10.50 per cow and calf.

Leo Barthelmess' family has been in the grass bank since 2007. Being able to run cows on the Matador at reduced costs means the family can save its own grass and doesn't have to buy as much hay in the winter. "Not having to feed that hay is a big deal," says Barthelmess, who has been honored by Montana State University, the federal Bureau of Land Management and the Montana Stockgrowers Association for his conservation ranching.

The grass bank has changed the way Barthelmess and his neighbors think about what they do. "We were a little skeptical at first," he says. "But it's

MAP: © XNR PRODUCTIONS

RITES OF SPRING:
(Clockwise from top left) Chris Barthelmess ropes a calf on the Oxarart Ranch; cows are trailed to Matador Ranch; a recently branded calf at the Oxarart Ranch.

CONSERVATION ON THE HOOF: Rancher Troy Blunt trails cattle on Matador Ranch. Increasingly, cattle are being used to create the specific kinds of grassland habitats needed by sage grouse and other native wildlife.

ALL IN THE FAMILY:
(Clockwise from top) Autumn Jane Marquis, right, and Macy Blunt watch calves being branded; the eastern Montana prairie as viewed from horseback; Matador Ranch manager Charlie Messerly, his wife, Jolynn, and daughters, Layla and Janae, relax after a long day.

BALE BONDS:
(Top and lower left) Grazing cattle at Matador Ranch reduces the amount of hay ranchers have to buy. (Bottom right) The Nature Conservancy relies on ranchers' local knowledge to manage grazing on the Matador; here, science director Brian Martin talks with rancher Bud Walsh.

The Fence Dilemma

Fences allow managers to use cattle as tools to improve habitat while keeping them where they belong. But for sage grouse with mating on the brain, barbed wire fences can be fatal.

Every spring, sage grouse flock to their mating grounds, or leks, where males strut for breeding rights. Birds gather for the ritual before sunrise, when barbed wire is hard to see—and often collide with it. Researchers in Idaho documented 142 fence collisions over two years.

Now, ranchers and land managers are making fences more visible by attaching white vinyl clips on the top strand of wire close to a lek. Doing so can reduce collisions by almost sixfold, says Bruce Waage, a Natural Resources Conservation Service biologist who works with the multi-agency Sage Grouse Initiative.

Sage grouse aren't the only animals harmed by barbed wire. Migrating pronghorns generally won't jump a fence and can burn valuable calories looking for a way around, says Brian Martin, director of science for the Conservancy's Montana chapter. But pronghorns can scoot under a fence with amazing speed if the bottom strand of wire is at least 18 inches above ground. Yet the animals sometimes have problems seeing such openings. So the Conservancy is now experimenting with marking bottom wires with PVC pipe to help guide the pronghorns.

Marking fences already is preventing around 1,000 sage grouse fence collisions a year, according to research from the Sage Grouse Initiative.

working for us. It's got ranchers thinking about birds, and conservationists thinking about cattle."

After 10 years, the Matador's grass bank now stretches its conservation benefit to 220,000 acres of non-Conservancy ranchland here.

WHEN THE CONSERVANCY FIRST ARRIVED, SAYS RANCHER DALE Veseth, "we were concerned about how they might fit into a small, close-knit community." Veseth is a well-spoken, well-educated native of the prairie—his ranch has been in the family for a century—and now he's an enthusiastic member of the grass bank who sits on the board of the Conservancy's Montana chapter.

He points to an upcoming program through which the Conservancy will help ranchers write management plans for their properties. Those plans will aim to improve both wildlife habitat and ranch income and give ranchers reliable data on what works and what doesn't.

"It's nice to have a good database," says Veseth, whose ranch has 67 pastures, each unique in some way. And he appreciates the Conservancy's technical expertise in finding ways to manage them better by altering grazing patterns and intensity over both space and time to make the land more productive.

"If the Conservancy had approached us 10 years ago and said, 'We want to write a range management plan for your place,' I know I wouldn't have taken them seriously," he says.

The planning partnership works both ways. For its part, the Conservancy calculated how many cattle Matador Ranch could host without damaging wildlife habitat. Then it worked with ranchers—people with lifelong experience in the region—to create a rotational grazing system for the Conservancy property that benefits both cattle and rare creatures.

MORE

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"They're participating essentially every day in how we manage the ranch," Martin says of the ranchers in the grass bank. "That's a lot different from us coming out and saying, 'We know how to manage your ranch better than you do.'"

The grass bank has helped fuse the economic and conservation goals of the Conservancy and participating ranchers. The program raises enough income for the Matador to pay its staff and other expenses. And the grass bank provides ranchers with reserves of grass in times of drought, which means they face a smaller risk of having to sell their cows in bad years. That stabilizes their income, which means they can pay their bills and shop locally, which helps small towns like Malta, the county seat. It makes the ranchers' bankers happier, knowing that clients have a secure source of grass. Most important for the Conservancy, keeping ranchers in the cow business means fewer temptations to bust sod and convert parts of their ranches to grain.

"The more they're invested in livestock," Martin says, "the more they're invested in keeping grass on the ground."

GRASS IS CRITICAL FOR A NUMBER OF PRAIRIE SPECIES IN TROUBLE. Scientists refer to an "unlucky 13" list of songbirds that are considered species of concern on the prairies. It includes the lark bunting, Baird's sparrow, Sprague's pipit and the chestnut-collared longspur. Some of the birds need tallgrass, some need shortgrass and some need something in between, Martin says.

ILLUSTRATION: © STEVE SANFORD

BIG-SKY COUNTRY: Bird researcher Marisa Lipsey returns to the corral at Matador Ranch after helping out with a cattle drive.

> The grass bank has "ranchers thinking about birds, and conservationists thinking about cattle."

So now, the Conservancy is contemplating how cattle themselves might be used to bolster bird habitat. On the Matador, the Conservancy is experimenting with using cows or fire or a combination to create specific habitat conditions for specific species. For species that prefer short grasses, a controlled burst of heavy grazing by cattle can give them the habitat they need. For species that need tallgrass, cattle get only a light taste before being moved to another pasture.

Martin says that by next year he hopes to be able to offer incentives to ranchers who, following detailed management plans, will implement this kind of "conservation grazing" on their own property. "The thought process has changed from 'it's either cattle or wildlife' to 'it's both cattle and wildlife,'" he says.

That kind of creative thinking could offer an important blueprint for balancing habitat conservation with the needs of working ranches. "The benefit of working together far outweighs the benefit of fighting," Martin says. "You can yell at each other from the corners of the room or you can talk in the middle. And we're trying to talk in the middle."

Barthelmess agrees. Ranchers and conservation groups can find plenty of ways to cooperate, he says. They just need to listen to each other.

"I don't like the conflict anymore," Barthelmess says. "I tried to find a better solution, and [the grass bank] was it." ▪