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Ray wanted to be sure
you got a chance to read
this. We are extremely
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press the success of the
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you played. Sue Marxer
An Environmental Activist Goes  
Trout-Fishing on Montana's Matador Ranch  

Site of the Nation's First Rest-Rotation Grazing System,  
Still on the Cutting-Edge of Progressive Range Management

by Tom Daubert*

It is a hot, bright, August afternoon, and Ray Marxer, looking every bit the lifelong cowboy he is, has brought us to the middle of an enormous, natural-looking landscape that an untrained eye might think is grassland wilderness. His battered hat is curled at the edges and stained from years of all-weather use. Dents and scratches cover the leather of his boots. Jumping out of the pickup, Marxer reaches back into the bed of the truck to shatter the image he presents of a typical Montana rancher: He pulls out a 50-year-old, spring-steel telescoping flyrod that he tells us once belonged to his grandfather, a Montana farmer. Marxer's voice is soft and gentle as the breeze.

My companion is uncharacteristically silent, and I can feel him eyeing the fishing rod with a mixture of awe and envy. To a fish-focused environmental activist like him, the flyrod this cowboy uses is a sacred chalice, rich with the power and wisdom of all the people and fish that have touched it through the ages.

But we are not in a temple of either wilderness or flyfishing. We are in a landscape where the very thought, much less the sight, of a cowboy holding an heirloom flyrod ought to be especially incongruous. The three of us stand at an elevation of 6,700 ft., smack in the center of one of the longest-serving cow pastures in Montana, where a herd of over 6,000 cow-calf pairs routinely eats and tramples the grasses that fill a nearly treeless, unfenced view in all directions. We are in the middle of Montana's massive Matador Ranch, owned since 1951 by one of the nation's premier agricultural conglomerates, privately-held Koch Industries of Wichita, Kansas. Ray Marxer, ranch manager, is about to show us what it's like to fish here.

An ordinary environmental activist might have assumed in advance that the concept of a "ranchland fishery" constitutes an oxymoron. After all, the rhetoric of politically-correct environmentalism seems to contend that, by definition, any creek that runs unfenced through a cow pasture should be an
unnatural disaster area. Grazing is thought by many to be automatically harmful to area fisheries, by destroying streambank vegetation and provoking siltation that chokes habitat.

But just as Ray Marxer is no ordinary rancher, and the Matador no ordinary ranch, George Ochenski is no ordinary "environmentalist." Profiled in Outside Magazine a generation ago for having pioneered the high-risk sport of riversnorkeling, Ochenski still climbs mountains like the Grand Teton in winter conditions, for fun; and he still rattles tempers and steers environmental policy as he has for two decades, as a government lobbyist and journalist based in Helena, Montana's capital. Now 49, in recent years Ochenski has lobbied for various Indian tribes as well as the Inter-Tribal Bison Cooperative, for Trout Unlimited and the radical Montana Environmental Information Center. Yet he also has defied and vehemently disagreed with a number of his traditional allies, most notably when he helped push through the Montana Legislature, against the will of the state's environmental forces, a law of his own design -- The Future Fisheries Act of 1995.

The Future Fisheries program implement's Ochenski's vision, that good land management is the smartest means of helping fish, that "if hatcheries were a solution, we wouldn't have a problem." The program took some of the money formerly devoted to hatcheries, and put it in a grant program that funds on-the-ground improvements to benefit fish habitat. Directed by a citizens council rather than bureaucrats, the program has been a smashing success, with native fish populations demonstrably improved in areas where projects have been funded.

It is to gather insight toward developing refinements to that law that Ochenski has come to the Matador Ranch today. He is eager to learn more about how large agricultural landowners are helping fish on their own, without government support. What we are to see in the operation Marxer directs for Koch Industries is a case study of enlightened and methodically improved land management that proves Ochenski's theory -- and that contradicts completely the rhetoric that would have people regard ranching as anathema to fish.

For an example of advanced range management that helps fisheries -- not because of a subsidy, but because it makes good business sense -- we couldn't have picked a better place. The Matador exemplifies ranching in Montana, yet it operates in a class by itself. An industry leader, in 1998 the ranch won the prestigious NCBA Environmental Stewardship of the Year Award, both in Montana and for the rocky mountain region, and is a contender for the national title to be announced in February, 1999. As manager, it is Ray Marxer's job to find new ways every year to do a better job of putting Mother Nature to work for his company's advantage. In the process, he not only incites environmental improvements but
also shaves larger profit margins out of a business that increasingly challenges its every practitioner. The Matador is a place others come to study and model, and have for generations.

Ochenski calls the scale of the place "dizzying," and he is right. It takes Marxer 11 hours and over 180 miles on mostly dirt roads to give us "the quick tour." The Matador Ranch uses 250,000 acres -- more than 390 square miles of vast, untrammeled landscape that contains alpine-topped mountain ranges and huge valleys split by streams. One-third of the land is private; most of the rest is half state land and half federal land managed by the Bureau of Land Management; a small allotment from the U.S. Forest Service rounds it out. This vast space is broken up into 148 individual pastures.

The Matador is so big Marxer puts over 30,000 miles of back-road travel a year on his pickup to monitor and direct it. A saddle he bought in 1979 now has "around 100,000 miles on it," he says with an unassuming, thoughtful grin that reflects fond memories.

Huge even by Montana standards, the ranch also traces its roots back to the state's earliest history. In the mid-1860's, as the first gold rush reached high-gear, two California pioneers drove the first cattle herd into the area of present-day Dillon, Montana. They planned to migrate behind the miners, supplying food along the way, but a bad storm interfered and led the men to turn the cattle loose and leave. A year later, they returned to find the cattle fat and happy. The landscape's ranching tradition was born.

Cattle have been the Matador's mainstay, but the land also has supported horses -- at one time, as many as 50,000. And the land was "heavily sheepe," in Marxer's words, once serving as home and food-supply for up to 12,000 of them. The last ewes were sold in 1975, when steadily dismal markets combined with predator control problems to make them uneconomical.

The Matador had been owned and operated by Koch Industries for 23 years by the time Ray Marxer, then 21, came on board in 1974, as a $400-a-month cowboy. Four months later, he was named foreman of the Sage Creek Ranch, an 80,000-acre subsection of the overall operation. It is to a pasture within the Sage Creek area that he would bring us fishing some 23 years later.

Coincidentally, it was just as Marxer was beginning his career at the Matador that his superiors were refining plans to employ a new range management technique, as part of a formal experiment that was about to be conducted on three ranches in America. It would be the first formal test of the rest-rotation grazing system then being suggested by Gus Hormay, who had designed and would oversee the research at the Matador which at the time, had some real problem areas on the Sage Creek unit. Today, at age 92, Hormay still visits test plots and exclosures on the Matador, documenting the extraordinary success of the "experiment" that now
represents common practice by range managers the world over.

"The neat thing is that I got to see it all," Marxer tells us on the way to Sage Creek. "We've learned an awful lot from it, and are still learning more all the time." The Matador's system involves timing the cattle's use of the range, over a three-year period, to mimic "the way God was harvesting this land, with wildlife grazing, before we came along." Pastures are grazed intensely during their first year, and in the second year grazing occurs only late in the season, after seed heads have ripened. This allows cows to press seeds and organic matter into the earth during the second year, to naturally replenish the grassland, Marxer explains, and during the third year this new growth is empowered by giving the pasture a complete rest from grazing.

The end result is a healthier, more stable grassland, and the Matador has twenty-two years of research results, spread across six pastures and 79,000 acres to prove it. Marxer takes us to several exclosures, fenced areas in a pasture within which cattle, and sometimes wildlife as well, are prevented from grazing by fences. Even an untrained eye can discern at a glance that the health, diversity and density of vegetation are all greatest outside the exclosures, in the broader rangelands where the Matador runs its cattle. "One of our goals is to diversify species and age class," Marxer tells us. "From a grass standpoint, it's much better where it's grazed."

By the end of our day on the Matador, we have seen ubiquitous evidence of the principles and success of the rest-rotation method, especially when coupled with the other management tactics Marxer has introduced (see sidebar). The vast, treeless bowl in the Sage Creek Ranch to which Marxer takes us for fishing at high-noon is a case in point. Now in the second year of the rotation, at the height of seed-ripening stage, the grasses here are thick and knee-high, nearly concealing old Indian tipi rings that dot the valley below. A year ago, cattle roamed and ate their way across this range at will. No fence had kept them from freely entering and using area water sources.

Without Ray to point it out from a distance on our way in, we might not have noticed the tiny creek that snaked through the center of this hillside. Barely a foot wide in many places, only the dark Nebraska sedge along its banks suggested its presence from afar. Even once we reached it and saw for ourselves its clear, shallow waters, despite Marxer's word to the contrary we still had difficulty imagining that this little waterway could be "Now Country" for fishermen.

But it was. It took longer to catch grasshoppers, and longer even to thread them on a hook, than it did to feel the sudden bolt of a fish striking once we had dropped a line into water. The fish were strong and they were big, many as long as the creek was wide. After the thrill and spectacle of catching and releasing a dozen or more, we grew tired of bending to chase grasshoppers, and
loaded the gear back in the truck to continue our tour of the Matador.

On the way home, Ochenski revels in the fresh excitement of fishing the unlikely-looking pasture. "Huge, native cutthroat in such tiny water is outstanding," he exclaims. The presence of such fish indicates an "extremely healthy ecosystem," he tells me, clear evidence that ranching and native fish populations can coexist, even thrive together.

In an email Ochenski sends me months later, he emphasizes that "the mutually exclusive outlook some people have on fish and cattle promotes conflict and diminishes the quality of life for all Montanans.

"Fisheries and ranchlands are both important to Montana's future," he explains. "It's beyond argument that ranches provide significant undeveloped areas that define the landscapes under the Big Sky. And now, whereas fishing was once looked on as a frivolous thing people did when their real work was done, both the economy that fishing provides and the role it plays in the life of many of us are being realized for the true assets they are," he says, noting that "fishing is what brought me to Montana, that's what keeps me here, and that's what energizes me to make our fisheries healthy and ranches compatible."

He tells me "all ranchers should be aware of the Matador approach, the techniques, the cost/benefit and then weigh those approaches for their own applications. As far as the condition of the range and streams, I'd say the more ranchers that can replicate the Matador's success, the better for all of us."

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SQUEEZING PROFITS FROM ENVIRO-FRIENDLY ADVANCEMENTS

The Matador creates business success from constantly monitoring and refining its operation. "It isn't rocket science, but there is an art to it," says ranch manager Ray Marxer, and a good deal of his success comes down to the goal of achieving harmony with the natural world. "We try to give these cows all the tools they need to do it alone. If we give them all the tools and they can't get it done, they're gone, just like an employee. But the interesting thing is, they do a great job." Marxer also credits the people who've been a part of the Matador, past and present. "Having the right people on board has also been critical to our success. It's important that the folks who carry out the day to day activities out here take ownership in what they are doing. Management plans are only as good as the people who carry them out."

In the last ten years, the Matador's continual refinements have allowed it to
increase herd size from 5,900 to more than 6,900. At the same time, Marxer has reduced feed costs by more than one-third and labor costs by more than one-third as well. Some of the range and livestock management approaches the Matador has employed simply position the ranch to take fuller advantage of the innate gifts provided by Mother Nature herself:

Rest-rotation: The ranch uses pastures in cycles, with periods of intense use followed by carefully timed lesser use, followed by complete rest. This creates healthier, more productive rangelands, with good species and age class diversity, supporting more cattle and wildlife per acre.

Electric fencing: Single-strand electric fencing has made cattle easier to manage over the long haul, reduced stress on cattle, created greater flexibility in managing pasture use, and has reduced fencing impacts on wild game populations. "The hardest part of this was training ourselves to see how well it could work," Marxer says.

Reduced costs of feeding cattle: The Matador has steadily shifted its emphasis away from using weaning weights to drive profits. "We've learned that maximum economic efficiency on native range in this country involves a moderate sized cow," Marxer explains. In turn, the ranch has lowered feed costs by more than 33%, while weaning calves 10-20 days younger and 140 pounds heavier than before, and letting them be born more in accordance with Mother Nature's patterns, when spring grasses have begun to grow in earnest and the weather is easier on both the cows and cowboys.

Reduced costs of haying: The Matador sold all but one tractor and virtually eliminated its own haying operation. "It's better to get out of a lot of capital investment, so we contract out the farming and haying," Marxer says. And the Matador has found further cost-savings in the practice of windrowing the second cutting of the hay that it still does grow for itself. "It's just a different way of storing forage," Marxer says, adding that research has confirmed that the food value of the hay is not lessened by the practice. This method has cut $14-17 per ton off the cost of forage, and at least $7 per ton off its overall feeding costs.

Monitoring and research: "You can't get better if you don't watch closely and use what you see" to make constant improvements, Marxer says. "Sometimes the cows are the 'funner,' part of running a ranch. It's getting people to go along with new ideas that's the challenge." The Matador regularly conducts cooperative research with Montana's universities, and uses range monitoring and sampling, along with rigorously applied photo-monitoring (see sidebar), to document and learn from experience.

BEST OF BOTH RANCHING WORLDS:
FAMILY LIFESTYLE, CORPORATE RANCH

Growing up on a small Montana dairy farm, Sue Marxer dreamt of marrying a cowboy and raising a family on a ranch. In her 20s, she leapt at the chance to move toward realizing this vision, when a Forest Service job opened in Dillon, and she transferred from her position as a logging road engineer in the Flathead Valley where she had been raised. "I heard there were cowboys in Dillon," she laughs today.

She met Ray Marxer soon after making the move, but by then she had heard about the "Matador Cowboys", and their disreputable reputation, so she regarded him at first with suspicion. The gentle, soft-spoken young man, then foreman of the Matador's Sage Creek Ranch, didn't have to pursue her long. Two weeks after they met, he asked her to marry him, and she agreed. She's been living her dream, watching Ray's success on the Matador -- and helping-- ever since.

All three of the Marxers' children, now 16, 15 and 13, were born during the couple's early years living at Sage Creek, a remote 50 miles from Dillon and headquarters, and 5 miles from the nearest neighbor. In 1986, five years after they had married, Ray was promoted to cowboss, and the family moved to the Matador's headquarters outside Dillon. For the next five years, they spent summers and early fall living with no electricity and no telephone, at the ranch's "cow camp" in the hills about 40 miles away. In September, 1990 Ray became ranch manager, responsible for the entire Matador, and they have lived year-round at headquarters ever since.

Sue recalls the early years at Sage Creek and the summers at cow camp with special fondness. She remembers Ray having to draw maps for her to help her find her way around, and "a great, old horse, worth its weight in gold," that would follow one of her daughters around and come onto their porch to eat dog food. Even an accident Sue experienced on horseback when 25 miles from the nearest road, and six weeks pregnant without yet knowing it, now stands out as a positive memory from her years at Sage Creek. It was back then that Ray bought Sue her first camera, and its use has become a personal obsession -- and a valuable management tool for the ranch -- ever since.

Her photo-monitoring work elevated in significance and methodological rigor in 1990, when the Forest Service, after the ranch had used the agency's allotment for a mere eight days, ordered the cattle to be moved. A federal range conservationist, newly transferred from the East Coast, lacked on-the-ground understanding of the range ecology, and mistakenly feared the cattle would reduce productivity. The Matador swung into thoughtful action in response, setting up study plots for Sue's camera to monitor, and contracting outside experts to conduct a formal 5-year research project designed to get some scientific answers. Thirty-five months later the verdict was already clear: whereas the area's grass where cattle had roamed was lush and long when the project began in 1990, zones where cattle had been prohibited for the interim had degenerated grossly; willows had
disappeared, riparian banks were wiped out, "and it became obvious that certain effects are more attributable to natural events and natural geology than they are to grazing," Sue explains. "In that allotment we've found that it's inside our exclosures where streams have degenerated, and it's mainly a function of geology," she says, and how geologic change unfolds when cattle aren't present to conduct the trampling that facilitates new seed growth.

"This life has been a rare experience for all of us," Sue reflects, suggesting that her years fulfilling a childhood dream, on a ranch owned by a large out-of-state corporation, has combined the wholesome family life of traditional ranching with a stability many family ranches can no longer provide. "Although ideally we'd like to have our own ranch we realize that in today's economy that dream is next to impossible. We've been more fortunate than a lot of families that can't afford to stay and work full-time on their own ranch," she says, and she commends Koch Industries for the opportunity. "I really appreciate them. They allow and expect us to treat this place as our own."

Her comment mirrors a key ingredient of the land management approach that has earned the Matador its stewardship awards, and which Ray Marxer summarizes to George Ochenski while driving us around the ranch. In a single, concise sentence of hope about the future of Montana that could be applied to landscapes everywhere, he says: "The most important thing for this state is having people take responsibility for the land and ownership in its management."

* Tom Daubert is a writer and environmental communications consultant in Helena, Montana.