

WEST SIDE STORY

How a group of biologists and grouse devotees are returning sharptails to restored grasslands on the other side of the Continental Divide.

BY BENJAMIN ALVA POLLEY

At first light, on a prairie east of Miles City, a flock of male sharp-tailed grouse sails low over badlands and lands out of sight in a stand of short tawny grass. Minutes go by before one male appears and strolls out onto this prairie dance floor. The chicken-size bird is sandy-brown and speckled white with brown chevrons on his underside. His back bows, his head with its brown crest and yellowish eyecoms dips, his wings straighten as his tail lifts. The bird's wing flight feathers (quills) rattle and shake as he struts to some internal rhythmic drumming that keeps time with the pulsing purple skin sacs (drum napes) on his neck. He rapidly stomps his feet up to 20 times a second, creating a purring sound, and then lets out a coo.

A dozen other bachelor birds begin dancing nearby, spinning in tight circles like feathered wind-up toys. After squaring up with the closest male, the first dancer flies up off the ground a few inches, chest-bumping and pecking his rival. "It's a singles bar where men strut their stuff," says Ben Deeble, president of the Big Sky Upland Bird Association, watching the show from a camouflaged blind.

But something is different on this lek—an open area of prairie where sharptails breed in spring and gather again in fall. Wire boxes baited with berries and lined with guiding fences toward funnels dot the site. Curious, the dominant male (the first dancer) walks into one of the traps and tries unsuccessfully to escape. Driven to compete, other males follow.

Deeble signals the capture teams, composed of FWP biologists and volunteers, who sprint from their blinds with fish nets, mesh bags, and empty cardboard boxes to capture the birds for relocation hundreds of miles away in western Montana.

This momentous event actually began several decades ago, when Montana Fish, Wildlife & Parks biologists began restoring the sharp-tail's grassland habitat in northwestern Montana. Years of research by FWP staff, Montana State University scientists, and sharptail devotees like Deeble, as well as an ambitious reintroduction plan, are finally bearing fruit. Whether these newly transplanted birds and future sharptails survive and repopulate historical habitats west of



MARCEL HUIJSER

WHERE AM I? In late September 2021, a radio-tagged and leg-banded sharp-tailed grouse captured less than 24 hours earlier near Miles City walks onto a lek in western Montana. Life-size decoys were used to convince this and other new arrivals to stick around.



ON THE DANCE FLOOR Sharp-tailed grouse males (tails erect) and females gather on a lek in the CMR National Wildlife Refuge. Males congregate on these open areas of grasslands and perform noisy, acrobatic mating displays meant to attract females. Restoration efforts involve reintroducing birds captured elsewhere to historical leks to reproduce and start a new population.

the Divide largely depends on how well Montanans have repaired the fragmented and degraded intermountain grasslands and shrublands where they once lived.

LOCALLY EXTINCT

Historical documents show that sharpies, as they're called, were once a predominant bird in the grassland valleys of western Montana. That's no longer the case.

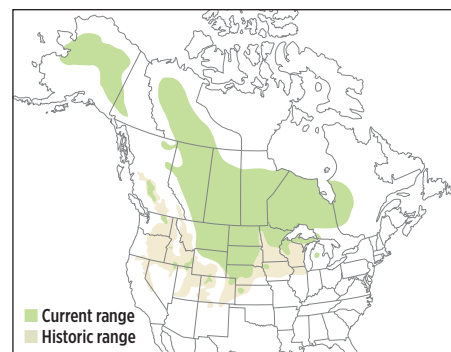
East of the Continental Divide in Montana, sharptails are still abundant. But west of the Divide, they are the only bird species seen by Lewis and Clark as the explorers passed through the region that are no longer present. Populations steadily declined starting in the 1940s, and the birds were locally extinct by the early 2000s.

Sharptails need large contiguous tracts of grasslands. In western Montana, these were fragmented by crop conversion, livestock overgrazing, and construction of a dam that flooded thousands of acres of habitat. Adding to the birds' woes were juniper and pine trees spreading into grasslands. Once

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kept at bay with wildfires or fires intentionally set by American Indians to rejuvenate grasslands, the encroaching trees provide roosting sites for raptors.

But now, after three decades of planning and research, a diverse partnership is working to bring the prairie birds back to mountain valleys west of the Divide. This requires habitats more hospitable to sharp-tails than what existed when the birds disappeared. But Deeble, a project leader who has been working for more than two



SHRINKING RANGE Sharp-tailed grouse populations have disappeared in much of their U.S. range, especially in the Midwest and mountainous West. Grassland habitats have been lost to crop conversion, livestock overgrazing, and conifer expansions that increase raptor perching sites.

decades on restoring the birds to western Montana, is optimistic. "Montanans are making many of these grassland ecosystems whole again," he says.

WINTER WARRIORS

Sharp-tailed grouse are denizens of short-grass prairie and brushlands. Historically they ranged from central Alaska as far south as Death Valley, across the northern and central Great Plains, and east to the Great Lakes. The hardy species survives drought, blizzards, and blistering hot summers. In regions where most ground-nesting birds migrate south for the winter, sharptails stay put, enduring months of bitter cold and driving winds. Heavily feathered legs and toes keep the birds warm in freezing weather and allow them to walk atop deep snow.

Sharptails eat insects like grasshoppers and a wide range of prairie plants, including rose hips, yarrow, and buttercups. They feed much like chickens, pecking for bugs and seeds. They often fly into deciduous trees to soak up sunshine or escape predators.

The birds remain in family groups throughout summer, then form larger flocks in the fall. When startled by a ground predator like a coyote, sharptails flush in stag-

gered ones and twos with a rush of wings and loud *kuk-kuk-kuk-kuk* calls, showing their namesake pointed tail and white breast feathers. Strong flyers, they can cruise for a mile or more, their stiff wingbeats followed by long glides on cupped wings.

A favorite of upland bird hunters, especially those with pointing dogs, sharptails are also sought by bird watchers, especially during their lively mating season.

Males begin dancing in mid-February and continue off and on until mid-April. They conduct their mating displays longer than most birds, even dancing in the fall when females aren't present as a warmup for the real action in spring.

Male sharpies assemble at a flat, open, matted patch of ground free of shrubs, made of short-cropped grass worn down by generations of little grouse feet. They engage in competitive displays to win female grouse hearts. In groups as large as 50—peak numbers at a lek last for about a week—males strut in a spectacular dance, an ancient ritual of flair and endurance.

The dominant males stand in the center of the lek, with others gathering in concentric circles beyond. The birds regularly square off and tussle. "Any place where a bunch of guys come together to impress girls, there's bound to be fights," says Lewis Young, a retired U.S. Forest Service wildlife biologist living in Eureka, who has worked on western Montana sharptail restoration for decades and now volunteers for the restoration project.

FWP EFFORTS

Efforts to save dwindling western Montana sharptail populations began after an estimated 4,000 birds were lost with the cre-

ation of Lake Koocanusa, an impoundment of the Kootenai River between Libby and Eureka, in 1972. To mitigate that and the loss of hundreds of square miles of winter habitat along the river, the federal Bonneville Power Administration provided FWP with long-term funding for grouse restoration and habitat conservation. From 1987 to 1997, biologists transported 139 birds captured in British Columbia and released them in the bunchgrass prairie of the Tobacco Valley, considered the best remaining habitat in northwestern Montana. Unfortunately, the birds didn't take. According to Tim Thier, a retired FWP wildlife biologist who worked



CAREFUL CAPTURE Bottom: Biologists and volunteers erected funnel fencing on leks in eastern Montana. When sharptails arrived at the historical dancing grounds before sunrise and began walking around, they were guided by the fencing into cages (white cloth tops). Right: The birds were then gently captured for transport to a nearby camp, where more biologists and volunteers awaited.



PHOTO: DONALD M. JONES. MAP BY LUKE DURAN/MONTANA OUTDOORS

PHOTOS: WINSTON GREELY/MONTANA FWP

out of Eureka, the habitat by then was too degraded by conifer encroachment and increased housing and roads.

Though FWP used mitigation money to buy conservation easements and other sharptail habitats, bird reintroductions stalled. A major obstacle was the long-held belief that grouse west of the Divide were the Columbian sharptail subspecies, which differs genetically from the plains subspecies east of the Divide. “Because the Columbian subspecies was disappearing elsewhere in its historic range in Canada and Washington, by the early 2000s we couldn’t obtain any for reintroducing to western Montana,” says Chris Hammond, an FWP wildlife biologist in Kalispell.

Then, in 2006, Deeble led a genetics study at the University of Montana Natural History Museum, taking DNA samples from museum specimens originally from west of the Divide. Researchers concluded that western Montana sharptails were historically the plains subspecies, not the Columbian. “That was huge. It meant we could look to eastern Montana for birds,” Hammond says.

A PLAN FOR ACTION

FWP biologists and other scientists soon analyzed and compared sharptail habitat in eastern and western Montana. They identified three potential valleys with abundant intact

grasslands protected by conservation easements: the upper Blackfoot Valley, the upper Bitterroot Valley near Florence, and a valley in the Flint Creek Range northwest of Butte.

In 2017, FWP biologists and MSU graduate students wrote “Restoration Plan for Sharptailed Grouse in Western Montana,” which the Montana Fish and Wildlife Commission authorized two years later. The plan identifies factors influencing critical elements of grouse population dynamics such as breeding success, nesting survival, and chick survival. “Based on modeling, we can now predict how well a new population will do under various scenarios and focus reintroductions where the birds will most likely succeed,” Hammond says.

It took members another two years to pull together the necessary funding and assemble enough volunteers to launch the capture and release plan. Researchers had identified healthy source populations in Prairie, Custer, and Fallon counties that

“Montanans are making many of these grassland ecosystems whole again.”



BACK AT THE BLACKFOOT Ben Deeble of Missoula studied the last sharptails and leks in the upper Blackfoot Valley as a graduate student in 2000. He’s now helping biologists and volunteers return birds to those same sites.

INSPIRATIONAL DANCING DISPLAY

The male sharptail’s lively mating dance has been part of the human imagination for hundreds or even thousands of years. Stephanie Gillin, Information and Education Program manager for the Confederated Salish and Kootenai Tribes, says a traditional story begins with a Kootenai man on a vision quest lying in an open field. When he heard singing, the man sat up, peered over the prairie grass, and observed birds dancing. He went back to his people and shared with them what he called the Chicken Dance, a combination of strutting and quick-stepping that mimicked the sharp-tailed grouse. The lively ritual is still practiced at traditional powwows on the Flathead Reservation and across the bird’s native range.

Elsewhere the sharptail was known as



Chicken dance at a Salish Kootenai College powwow

“fire bird,” because it thrived in grasslands rejuvenated by wildfires and prescribed fires set by Native Americans.

During the Corps of Discovery expedition, Meriwether Lewis frequently wrote of what were likely sharp-tailed grouse in his journals. In 1805, while in Oregon, he accurately described the species as “Booted, the Toes of their feet So constructed as to walk on the Snow, and the Tail Short with 2 long Stiff feathers in the middle.”

The first written record of *Tympanuchus phasianellus* in what later became Montana appeared in the 1861 journals of John Keast Lord, assistant naturalist and veterinary surgeon for the British Boundary Commission, who surveyed the 49th Parallel that separates Canada and the United States. Lord reported that sharptails were “particularly abundant on the tobacco plains near the Kootenai River” near present-day Eureka. ■



BACK OFF During the sharptail’s mating dance, in early spring and again in early fall, males butt heads and peck at each other to gain dominance of the lek. One way to find the sites at dawn is to look for leaping birds as well as listen for their cooing and the rattling of shaking wing feathers.

could withstand losing, temporarily, 30 percent of their numbers (sharptails produce many young and can quickly repopulate prime habitat). The plan called for capturing then releasing 75 males in fall of 2021 (25 at each location), followed by 180 birds total of both sexes (60 at each location) trapped and transported every few years over the following decade. The total represents just 1 percent of Montana’s annual hunter harvest of about 15,000 birds, Hammond says. “It’s not really making a dent in the eastern Montana population, while contributing enormously west of the Divide.”

The restoration work is paid for by FWP’s Wildlife Mitigation Program (the Bonneville Power Administration funding) and private money, mainly from the MPG Ranch near Florence in the Bitterroot Valley, one of the release sites west of the Divide.

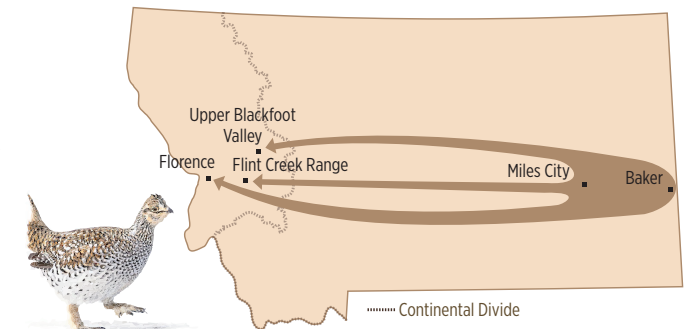
HEALTHIER GRASSLANDS

What’s different about the habitat at the western release sites today from 30 or 40 years ago, when sharptails were disappearing? “The main thing is that more ranchers have changed grazing practices, such as using rest-rotation grazing, and they are

protecting shrubby areas from cattle,” Hammond explains. “That keeps sharptail habitat healthy while increasing grass production for cattle.” Bolstering that private land stewardship is more public funding from the Natural Resources Conservation Service and other federal agencies to help landowners protect and restore sharptail and other wildlife habitat.

In October 2021 at various capture sites in southeastern Montana, project team members removed sharptails from the wire cage traps and trucked them to a nearby camp. There, biologists and volunteers gathered in a wall tent to sex, age, and weigh the birds before inspecting them for injuries and taking blood samples. They secured leg bands on the grouse for later identification and fitted each with a small

Sharp-tailed grouse translocation



In September and October 2021, grouse were moved from source populations in Prairie, Custer, and Fallon counties in eastern Montana to areas of restored and protected grasslands west of the Continental Divide. Additional relocations will be done over the next several years

transmitter backpack to track after release. Thier, who drove from Eureka to help Young and other volunteers with a second round of captures near Baker, grew emotional during the operation. “It was overwhelming. I felt privileged to be part of something I’d been working toward all these years,” he says. The birds were then driven nine hours west in an air-conditioned vehicle, over the Divide, to where another team waited for the new arrivals.

BRING THEM BACK

Deeble was there, in the upper Blackfoot Valley, where in 2000 he did his graduate work studying the last of the region's native sharptails. As he sat in a truck in the pre-dawn darkness, distant coyotes broke the silence with yelps and a great-horned owl hooted from afar. A faint light shone from a distant cattle ranch.

Soon team members began to broadcast recorded sharptail cackles and coos from speakers hidden behind 10 life-size decoys, set up on western Montana's last active sharptail lek, documented by Deeble 21 years earlier. He and others held nylon cords strung

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to the doors of wooden boxes holding the live birds that had been captured 500 miles to the east less than 24 hours earlier. The recordings were meant to reassure the new arrivals and keep them from flying off to areas less suitable to survival.

Shortly before dawn, team members began pulling the cords every few minutes, releasing another sharptail into its new environment. Despite the recordings and decoy “welcoming committee,” a few of the new arrivals immediately flew off into the waning darkness. But others cautiously stepped onto the lek that could be, this coming spring, a place to dance and mate and begin a new generation of western Montana birds.

Deeble choked up, tears gathering in his eyes. More than two decades after he feared Blackfoot Valley sharptails were gone for good, he's been a key partner in what could be a long-term restoration of both the birds and their grassland habitat. “A lot of people want to see the landscape restored,” he says. “This week, I am helping others who have the same vision bring these birds back to this landscape. I feel a lot of gratitude.” 🐾



THE DAY BEFORE

Top to bottom: At a western Montana release site, a biologist carries a grouse captured earlier that day in eastern Montana to a trailer for a final checkup. The birds are fitted with leg bands and a radio transmitter then placed in a box for release early the next morning. Volunteers, Montana State University graduate students, and FWP biologists helped with the captures and releases, done at three sites west of the Continental Divide.



Top left: Volunteers set up decoys on a western Montana lek. Top right: Empty release boxes await grouse that will be placed inside before dawn the next morning, when they are opened remotely with long cords. Right: At night before the release, a volunteer sprinkles berries on the ground and sets up speakers to broadcast grouse calls. The food, recordings, and decoys are meant to convince released sharptails to stay at the lek area rather than fly off to degraded habitats where survival would be less likely.

THE BIG DAY Below right: Photographed with an infrared camera, a cautious sharpie emerges onto its new home ground. Below left: Later that morning, another bird examines the surroundings. Left: Biologists are now tracking the sharptails to see if the birds stay in the release area.

