

Working Lands Wildlife

Recognizing how altered landscapes can both harm and help wildlife

Wildlife conservationists have long decried the loss of wildlife habitat to the plow. Especially imperiled, they note, are grassland songbird species, whose populations have declined in some cases by more than 90 percent over the past half-century. The wild tangles of prairie grasses and wildflowers where the birds nest and raise their young have been converted to neat rows of wheat or barley, where birds can't find nesting shelter or escape predators. The same is true for sage-grouse, as their sagebrush habitat is burned and plowed under to expand crop fields or grazing lands.

But what often goes unmentioned by wildlife advocates is how much prime habi-



Above: A herd of pronghorn on a stubble field watch a flock of snow geese and pintails near Great Falls. The wildlife feed on wheat and barley left over from the fall harvest.

PHOTO BY ELIZABETH MOORE

Left: The Sprague's pipit is among the grassland species most harmed by the conversion of prairies to row crops

PHOTO BY JOHN CARLSON



“Habitat” is the places and conditions where animals drink, feed, breed, raise young, hide from predators, migrate, and anything else needed for survival. Sometimes developed lands, like flooded crop fields or logged areas, can provide habitat for certain species.

tat has been retained by farmers and ranchers—sometimes due to a strong conservation ethic, sometimes from the inability to convert lands to more profitable uses (such as hill-sides too steep for tractors or cattle), and sometimes both.

Farmers and ranchers need to make a living off their land. But that doesn't mean they don't appreciate wildlife as much as everyone else.

Many landowners retain wetlands even though they could add profitable acreage by draining soggy basins. Some adjust fencing so migrating wildlife can pass through, and others enroll land into Conservation Reserve or other federal and state grassland-retention programs.

Nearly 80 percent of Montana's native grasslands are privately owned. The main reason Montana retains the most intact native prairie in the nation is stewardship of those lands by ranchers and other landowners.

For instance, rotational grazing, practiced by a growing number of Montana cattle operations, allows some grasses and wildflowers to grow while trimming others short, just as bison herds did for hundreds of thousands of years. This creates a diverse, biologically rich mosaic of native vegetation valuable for ground-nesting birds.

Hedgerows and windbreaks planted to protect homesteads give songbirds, raptors, sharp-tailed grouse, and deer essential



An elk cow and calf rest in a formerly logged mountain meadow. Though it creates problems for some wildlife, timber harvest opens areas to sunlight, creating grasslands and brushlands favored by other species.

protection from winter storms. Flood-irrigated fields in spring can provide a rich stew of aquatic insects for hungry ducks, cranes, shorebirds, and other migrants.

Leftover grain in harvested fields feeds deer, pronghorn, pheasants, and gray partridge—food for owls, foxes, and other predators—enough to survive Montana's often-brutal winters.

Some of these wildlife conservation benefits come via state or federal programs. But often they are the result of farmers and ranchers embracing a stewardship ethic to make their land healthier than they found it.

LOGGED FORESTS

Logging during Montana's first century focused on cutting and removing timber for sale. Little thought went into how large-

scale harvest affected wildlife, fish, and forest ecosystems. Clear-cuts removed old-growth trees needed by many species and deprived cavity nesters of standing snags. Silt from freshly logged areas and logging roads washed into streams downstream, clogging trout-spawning gravel with silt.

"In the 1960s and '70s, many wildlife biologists thought logging was the enemy of wildlife," says one retired FWP senior manager. Then biologists saw that forests not being logged were sold for residential subdivisions, creating more roads, spreading noxious weeds, and closing public access for hunting and other recreation. "That's when we realized a working forest with logging was perhaps our best partner in conservation for the future," the manager says.

Despite the problems it caused for some

wildlife, logging benefited other species. Elk and deer grazed in the sunny, grass-rich clear-cuts, and moose browsed on alder, willow, and other shrubs that grew in cut areas. Many grassland songbirds thrived in the sunny openings.

A recent *Montana Outdoors* article ("More Mountain Meadows," November-December 2023) attributed western Montana elk population declines in part to the lack of open grassy parklands such as those created by logging half a century ago. FWP has even begun timber harvest on portions of some wildlife management areas in part to benefit deer, elk, and other species.

MIMICKING WILDFIRES

On national forests, some logging is done to replicate the effects of the low-intensity fires that for thousands of years swept through today's western Montana. Sparked by lightning, or set by Native Americans to promote grass growth, the fires rarely burned too hot because "fuels"—thick understory vegetation or toppled dead trees—hadn't grown to dangerous levels. In dry stands on west- and south-facing slopes, fires would snake through a forest every few decades, creating biologically rich mosaics of charred, partially scorched, and unburned trees.

Today, in some cases, wildlife and forest managers use "prescribed" burning to clear understory below older trees. But in forests thick with accumulated fuels, this can put nearby houses at risk. Often a safer and more cost-effective option is mechanical forest management that cuts out the undergrowth that for thousands of years was kept contained by periodic wildfires.

Meanwhile, the combination of environmental regulations and best management practices (BMPs) that timber companies logging public and private lands voluntarily embrace has greatly reduced stream siltation and other damage from logging. BMPs include runoff diversions, silt barriers, stream vegetation buffers, and groundcover planted over bare soil to reduce erosion. Forest managers also leave standing dead trees for cavity nesters, reduce soil compaction from heavy equipment, design roads so runoff doesn't flow directly into streams, and engineer drainage culverts to allow trout to swim upstream to spawning areas. 🐾

CLOCKWISE FROM TOP: LON E. LAUBER; DONALD M. JONES; LISA BALLARD



Above: Sharp-tailed grouse roost in a Russian olive tree, a common shelterbelt plant. Over the past century, landowners have planted thousands of shelterbelts that provide essential winter habitat. A mountain bluebird nests in a cavity of a dead standing tree. Snags (dead trees) are now left in some logged areas to provide habitat for cavity-dependent birds and mammals.

FROM TOP: SEAN R. HEAVEY; JOHN WARNER



A Montana Department of Transportation worker based in Wolf Point picks up a dead deer along Montana Highway 24 about 15 miles north of Glasgow.

Roadkill

Roadkill is a fact of life—or death—on Montana highways. Each year, Montana Department of Transportation maintenance crews collect 6,000 to 7,000 wild animal carcasses. Thousands more wild animals are fatally wounded and limp off to die elsewhere. The state has the second-highest incidence of wildlife-vehicle collisions per capita in the nation due to our abundant wildlife and the thousands of miles of rural roads that run right through their habitat. The most common casualties are white-tailed deer, but mule deer, elk, bears, pronghorn, moose, bighorn sheep, mountain lions, and smaller animals also are killed on roads.

FWP and MDT staff work together to identify areas that are especially dangerous to crossing wildlife and motorists. Biologists know where animals go by tracking movements with GPS collars. Traffic specialists track wildlife collision sites.

With the number of wildlife collisions increasing due to a growing population and more tourists, MDT is installing underground tunnels on new highway projects, 8-foot-high woven-wire fencing that keeps animals off highways, and deer-crossing signs on local roads.

FWP and rural wildlife

With 65 percent of Montana's land base privately owned, FWP staff members spend more time meeting with, thinking about, and responding to landowners than any other group in Montana. Biologists and others work to understand the concerns of farmers and ranchers so they can provide advice and funding to protect fish and wildlife habitat, increase public hunting access on private land, and help landowners solve problems caused by wildlife.

To learn how the department partners with farmers, ranchers, and other landowners to enhance working lands to produce crops and livestock along with abundant wildlife, visit <https://fwp.mt.gov/landowner>.



Working with landowners in the Musselshell Valley.





This native sagebrush prairie east of the Little Rocky Mountains in Phillips County is prime sage-grouse habitat.

Original prairie vegetation

Before European settlement, most of eastern Montana was covered in mixed-grass prairie containing hundreds of grass and forb (wildflower) species. Short and medium-tall grasses included Western wheatgrass, green needlegrass, blue grama, rough fescue, and needle-and-thread. Wildflowers like yarrow, scarlet globemallow, and Missouri goldenrod bloomed here. Among the shrubs were serviceberry, western snowberry, buffaloberry, creeping juniper, and Wyoming big sagebrush.

Because so much of eastern Montana has been plowed or grazed, relatively few examples of original plant communities remain. Look for them in places where plows, cattle, and invasive plant species haven't taken over, such as prairie hillsides, butte tops, and ridges.



Above: Outside Roy, Fergus County. Below: Sheridan

White hillside letters

White rock letters dot hillsides outside more than 100 communities across rural Montana. Though found in some other states, the letters are especially common here, where it's easier to find a high point on which a high school or town can project its pride. Most are arrangements of whitewashed rocks, often with the current year added by the high school graduating class. A few are built of poured concrete.



The practice isn't new. Inhabitants of Britain, Europe, Mexico, and Central America built or carved massive symbols on cliffs, mountainsides, and plains thousands of years ago. Modern letters are believed to have started in the early 1900s.

FFA and 4-H

Almost every rural community in Montana has a 4-H club, Future Farmers of America (FFA) club, or both.

FFA kids (age 12 to 21) are recognizable at county fairs and other events by their dark blue corduroy jackets with yellow logo and name stitching. The organization is mainly for high school students who want to become leaders in agriculture and is part of most rural high schools' curricula. Instruction includes lessons on leadership, communication, and interpersonal skills; supervised ag projects; and community involvement. Montana FFA has 6,600 student members in 109 chapters.

Recognizable by its green 4-leaf clover logo, 4-H ("head, heart, hands,



Wearing their trademark blue corduroy jackets, FFA members compete in a floriculture competition at a career development event in Miles City.



A 4-H teen models leadership in a team-building exercise, engaging a group of 4-Hers at the Lewis & Clark County Fairgrounds in Helena.

and health") is the largest out-of-school youth development organization in Montana, reaching roughly 19,000 kids in all 56 counties. The 4-H motto is "To make the best better," while its slogan is "Learn by doing." Many of the more than 200 project categories and experiences for kids age 5 to 18 are related to livestock and other domestic animals, but some cover earth science conservation, nutrition, plant science, community service, and leadership. Trained adult volunteers guide and assist.

Both programs stress skills like public speaking, leadership, and giving presentations. And both are ways to bring communities together to cheer on the kids and their projects. The main difference is that 4-H is open to grade-schoolers and includes broader topics like aerospace, sewing, photography, and other programs, so it attracts more than farm kids.

Old wooden structures

Scattered across rural Montana are thousands of old wooden "out" buildings, many of them miles from homesteads. Some were built in sheep pastures and used for spring lambing or fall shearing. Others were—and may still be—used as calving sheds in late winter. Pregnant cows are herded to the sheds to give birth. The small structures provide newborn calves some warmth and shelter from the wind and provide a place for ranching crews to assist with births or help a newborn onto its feet to nurse.

Wood structures with a roof but no sides were used for keeping rain or snow off hay bales. Old wood-fenced corrals were used for shipping. Livestock would be herded into these circular pens, then individually led up the loading chute, indicated by the diagonal rails, and into the bed of a shipping truck.



An old corral hints at livelier days gone by on the abandoned Bell Bottom homestead, now located in the Charles M. Russell National Wildlife Refuge.

Rodeos and O-Mok-See

Dozens of rural Montana towns have their own rodeo grounds, which consist of spectator stands, an announcer's booth, livestock pens, bucking and roping chutes, and an arena.

The structures stand empty most of the year, but for a few days in midsummer they house outdoor riding and roping competitions that include bareback bronc riding, saddle bronc riding, bull riding, steer wrestling (bull dogging), calf roping, team roping, and, for women riders, barrel racing.

In events sanctioned by the Professional Rodeo Cowboys Association or the Northern Rodeo Association, winners take home big cash prizes. "Open" rodeos don't require participants to be certified with a professional outfit to compete but have smaller purses. Towns also may hold old-timer rodeos, Indian rodeos, and youth rodeos (college and high school). Many are summer celebrations that include parades, car shows, carnivals, kids events, and vendor fairs.

Related to rodeos are O-Mok-See events, derived from a Blackfeet phrase meaning "riding big." It refers to a ceremony performed by warriors before mounting an attack on an enemy. Historically, warriors mounted their horses and raced around their encampment while the women, children, and old men sang songs and beat drums to help build courage for the battle ahead.

Also known as gymkhana and pattern horse races, modern O-Mok-See events are held across Montana, often sponsored by local saddle clubs like the Helena Trail Riders. Timed races, held with contestants simultaneously running in four separate lanes, demonstrate controlled actions and tight teamwork between horse and rider as well as riding skills such as sliding stops. Most events have categories for different ages and abilities.



Above: An annual event for more than 70 years, the Wilsall Rodeo in Park County features bareback bronc riding, barrel racing, calf roping, team roping, bull riding, and steer wrestling. Right: Riders compete simultaneously in a barrel race at a national O-Mok-See competition.



CLOCKWISE FROM TOP LEFT: JOHN LAMBING; WAYMARKING; KELLY CARTER HALL; LUKE DURANI; MONTANA FFA

FROM TOP LEFT: CRAIG & LIZ LARCOM; ERIK PETERSEN; ASHLEY SCHLAPKOHL