

DOES CRP NEED CPR?  
WILDLIFE SURVIVAL STRATEGIES FOR WINTER  
HOW FWP GROWS BIG BULLS IN THE ELKHORNS

DO NOT BE GRIM LESSONS FROM THE 1910 FIRE

# Montana Outdoors

MONTANA FISH, WILDLIFE & PARKS | \$2.50

NOVEMBER-DECEMBER 2010



## Welcome to Elk World

An inviting introduction  
to Montana elk hunting

DOES CRP NEED CPR?

WILDLIFE SURVIVAL STRATEGIES FOR WINTER

HOW FWP GROWS BIG BULLS IN THE ELKHORNS



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# Montana Outdoors

NOVEMBER-DECEMBER 2010

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JOHN MCCOUGAN / USDA

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**SNOWBIRD** During harsh winters, snowy owls migrate from the Arctic to "balmy" northern Montana in search of food. Learn more about cold-weather wildlife on page 32. Photo by Donald M. Jones.

**FRONT COVER** We take the mystery out of learning to hunt elk with a new guide, starting on page 20. Photo by Victor Schendel.

**Missed the target**

I enjoyed the story on shooting range development ("Hitting the Target," September-October), but the advice it offers to go on-line to fwp.mt.gov to find a range is misleading. I looked at all the dots around Billings and thought, Wow, there are more places to shoot here than I knew of. But on closer examination I realized those dots are private clubs, of which I belong to two, and they do not offer public shooting except for scheduled matches. What is needed in Billings and in all of Montana's larger cities are more truly public shooting ranges.

DAVE SALYS  
Billings

Kurt Cunningham, who administers the FWP shooting range grant program, replies: *Mr. Salys is correct in that it has been hard for people to find public shooting opportunities in the Billings area. Some private clubs allow non-members to shoot sporting clays or trap for a fee. But for someone who wants to sight in their rifle or practice shooting a rifle, BLM land is still the best public opportunity.*

**Begging for SuperTags**

In response to your "Lucky Sons of a Gun" (September-October), I would like to point out that governor's tags and SuperTags help to assign an inflated dollar and emotional value to ordinary game animals. FWP is far from being a major actor in the commercialization of wildlife, but it can help set the tone. When game is valued more in dollars and cents, access to and through private land becomes more expensive. Poaching also increases.

The SuperTag Program is described as giving an opportunity for "ordinary" hunters. If there's



any other kind). It reminds me of training a dog to beg for treats. Obviously, FWP raises money with these techniques, but growing your department isn't your mission. These "opportunities" belong to the public. FWP should allocate tags equitably, at minimal cost, and with as little hype as possible. I enjoyed the reporting of these hunts, but they could have happened through the ordinary regional tag system. Our wildlife was worth more when it cost less money.

ANDY CRITES  
Lewistown

**Sweetheart of a grouse**

I was interested to read the letter in the September-October issue about the hunters who were harassed by an aggressive male blue grouse. I too had an encounter with a grouse, but my bird was definitely a lover, not a fighter.

One day in mid-March, as I was getting off my four-wheeler after exploring U.S. Forest Service roads near my home in Thompson Falls, a female blue grouse walked up to me. As I talked to her quietly, she continued approaching and then, to my surprise, hopped up on the handlebars. Over the next few weeks I returned to that area, and each time Sweetheart, the name I gave

her, came out of the woods to greet me. This continued all through the summer. She'd sit next to me and explore my head, pulling a few strands of hair, and one time even gave me a little peck on the lip. I would just pat the pickup tailgate and she'd hop right in. (She loaded good—unlike some horses I've had). One time she showed interest in a white rag I had and I put it over her like a cape. She seemed to really like it. In a lifetime of hunting and fishing, I've never seen anything like this.

RON BARKER  
Thompson Falls

Editor replies: *Readers may be interested to know that in 2006 the American Ornithologists' Union officially split blue grouse into two separate species. The interior species (found in Montana and other western states east of the Cascades) now has the common name dusky grouse, while the Pacific species is known as*

*the sooty grouse. One of the most informative scientific books on dusky grouse (published in 2004, before the name change) is Blue Grouse: Their Biology and Natural History, published by NRC Research Press.*

**Unhappy with hunting shots**

I always look forward to receiving my issue of *Montana Outdoors*. Thank you for a job well done. However, as I sat down this evening to look through the September-October issue I was completely saddened, even disgusted, to find that the entire magazine, with the exception of a couple of pages, is focused on blasting some animal to death. The outdoors of Montana consists of a whole lot more than slaughter, though you wouldn't know it by the magazine, which might be more appropriately entitled *How To Kill Montana Outdoors*.

ELLEN MALPHRUS  
McAllister

**Disingenuous justification**

While I have no problem with Montana's Come Home to Hunt license program ("New hunting license brings families together," September-October), it is somewhat disingenuous to say the program doesn't take opportunity away from out-of-state hunters who didn't previously live in Montana. If issuing those additional 1,000 licenses is consistent with game population levels and all other factors that determine the appropriate number of nonresident licenses to issue, those same 1,000 licenses could have been added to the 17,000 licenses made available to non-residents annually.

DUANE PHINNEY  
Hoodsport, WA

# PULLING OUT ALL STOPS

**O**n August 5 in Missoula, U.S. District Court Judge Donald Molloy put wolves in Montana and Idaho back on the endangered species list. Despite a strong legal defense by the two states and the U.S. Fish & Wildlife Service (USFWS), the judge ruled that the federal delisting of wolves in 2009 violated the Endangered Species Act (ESA) because wolves were not also delisted in Wyoming.

This was bad news for Montana wildlife management. We had planned to reduce the state's wolf population to roughly 450 animals this year with a combination of management tools, including public fair chase hunting. Judge Molloy's ruling ends for now this agency's ability to use hunting to manage wolves.

Let me be clear: Wolves are an important, native component of Montana's natural world. FWP wants to see a recovered and viable wolf population and won't do anything that would endanger the population's long-term health. But wolves in Montana are fully recovered, and there's no biological reason they should not be delisted and managed by the state as resident wildlife, the same as elk or black bears. Just as there can be too many deer, geese, or mountain lions, there can be too many wolves. An unchecked wolf population will kill too many livestock and substantially reduce deer, elk, and moose populations. And if the large carnivores continue to reduce their wild prey base, their own population will eventually crash.

Just as important, a wolf population out of balance with other wildlife reduces tolerance and support among ranchers, hunters, and others for the large carnivores to remain in Montana.

We can't effectively manage wolves if public hunting isn't an option. That's why FWP has been working since the day of Judge Molloy's ruling to find ways to regain state authority or otherwise allow for a regulated public hunt with strictly enforced harvest quotas, similar to the successful hunt held in 2009. What we have done so far:

- FWP quickly appealed the District Court's decision to the Ninth Circuit Court; strongly urged the USFWS to do the same; and met with the plaintiffs to look for ways to reach a negotiated compromise (which would then be presented to the public before any final agreement).

- FWP has strongly urged the USFWS to grant Montana a wolf season under provisions of the ESA that allow for a "conservation" hunting season; asked to hold hunts, again under ESA provisions, in areas where wolves are harming elk and deer populations; and asked the USFWS to reclassify northern Montana's endangered population to threatened status, as in the state's southern half, to make it easier to respond to livestock depredation problems.

- FWP is working with Montana's congressional delegation to look for federal legislation options that could return wolf management to Montana.

- Montana state officials have met with their Wyoming counterparts to see if that state might revise its wolf management plan to be acceptable to the USFWS, which could then delist wolves in all three states. (The federal agency has rejected Wyoming's current plan,

which is why Judge Molloy returned wolves to the endangered species list.)

- FWP has met with conservation, stockgrower, and other groups to discuss options and update them about department efforts.

Unfortunately, we are not optimistic that federal authorities will be convinced to allow Montana to hold a wolf hunting season

**Montana must be allowed to manage its own resident wildlife. And we're doing everything in our power to regain that authority.**

in 2010. But we will keep trying. Montana's history is filled with successful wildlife restorations and management, from elk and pronghorn to grizzlies and cougars. Our approach to wolves has been equally notable. To maintain that track record, Montana needs to maintain full management authority over all of its healthy wildlife populations, including wolves. The delay caused by the District Court's ruling sets back conservation of this important native carnivore.

Montana must be allowed to manage its own resident wildlife. And we're doing everything in our power to regain that authority.

—JOE MAURIER, *Director, Montana Fish, Wildlife & Parks*

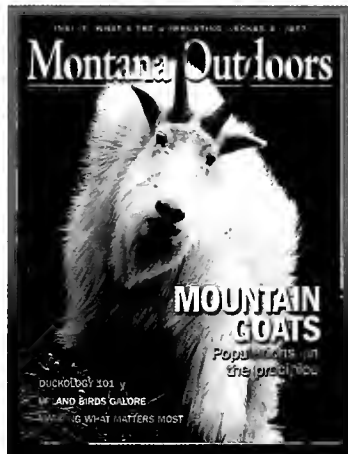
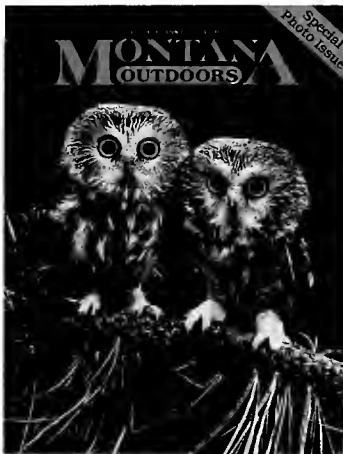
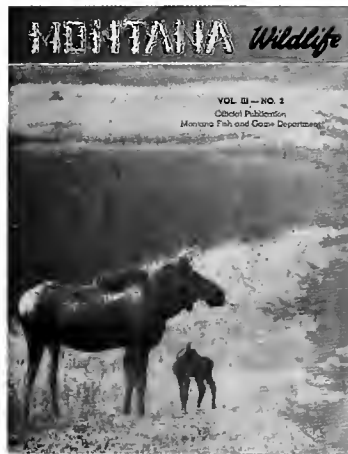
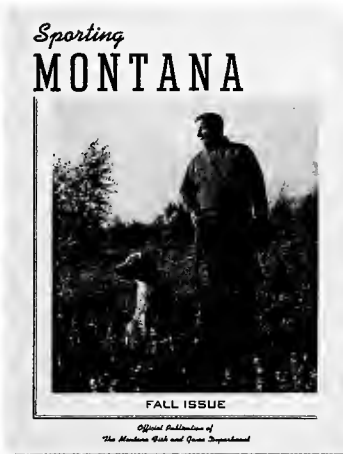
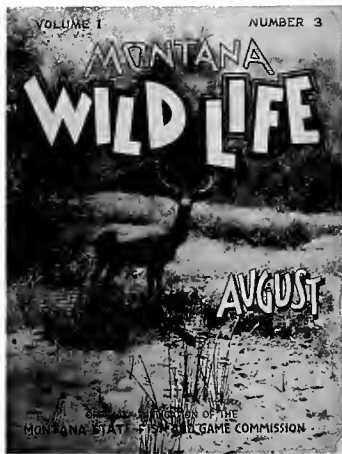


JUDY WANYUOK





After Helena photographer Bob Martinka spotted a family of sandhill cranes near Lake Helena, northeast of town, he returned the next day with his camera. "It was morning, a bit hazy, and the Big Belt Mountains in the background had those great blue colors," he says. "The young crane couldn't fly yet, so the male and female were flying around trying to distract me, and I was following them with my camera. I love taking high-contrast shots, and I was hoping I could get a shot of a flying crane silhouette with those three ridge lines in the background. But it's hard to get the right composition, because everything has to line up just right. When I took this shot, I knew right away it was a neat one." ■



## Issues going back to 1928 now available on-line

All back issue of *Montana Outdoors* and its predecessor publications—dating to when Calvin Coolidge was president—have been digitized and are now available on-line.

The project is part of the Montana State Library's (MSL) effort to digitize its entire Montana state publications collection.

"For a long time we've wanted to make all issues of *Montana Outdoors* and its forerunner magazines available on the Internet, so we were real pleased when the Montana State Library agreed to help us digitize these historical publications going back more than 80 years," says Tom Dickson,

*Montana Outdoors* editor. "Our bimonthly print version is still super popular—circulation is at record highs—but we also see the need to make back issues more accessible."

Dickson adds that the digitized versions will be especially valuable for students, journalists, and others interested in past fish and wildlife policy and public attitudes. "They might want to read about where FWP stood on wolf or grizzly issues back in the 1970s, or how anglers regarded bull trout in the 1950s, or what state leaders considered the major wildlife issues during the Great Depression," he says. "I think

once people start browsing, they'll find it hard to stop."

Jim Kammerer, MSL Library Information Services manager, says digitizing the state library's *Montana Outdoors* collection was a top priority because of the magazine's popularity. "Once we digitize an item, we generally see use increase by 10 or 20 times from when it was just sitting in our building on a shelf," he says.

As with all digitized publications, the *Montana Outdoors* special collection appears in a flip book format so users can turn pages as if holding an actual magazine. And users can choose to print or download selected documents. The digitized magazines are also keyword searchable. "Just type in the word you're looking for, and an annotated list of your search automat-

ically pops up," Kammerer says.

Access the *Montana Outdoors* special collection by visiting [archive.org](http://archive.org) and searching for "Montana Outdoors." (Montana library patrons can also find it via the Montana Shared Catalog.) The magazine's predecessor publications can be accessed by typing in "Montana Wild Life" (1928–1933), "Sporting Montana" (1951–1952), or "Montana Wildlife" (1952–1970). New issues of *Montana Outdoors* will be added to the digital collection with a two-month lag time.

## Stay alive when hunting waterfowl

Last January, 58-year-old Garry Wallace of Great Falls drowned in the Missouri River while rescuing his Labrador retriever. The dog fell through weak shore ice into the frigid water while retrieving a goose. Wallace plunged into the river when the ice collapsed as he pulled the dog to safety. His hunting partner tried to reach him, but the ice broke with each attempt. By the time rescue crews arrived, Wallace had drowned.

This tragic story is a reminder that hunting on lakes and big rivers puts waterfowl hunters and their dogs at risk of hypothermia and drowning.

FWP safety experts advise all duck and goose hunters to wear a waterproof hat, jacket, and belted chest waders when on the water. "Even more important is a life vest," says Liz Lodman, the department's boating education coordinator. "A properly fitted Coast Guard-approved life vest or float coat helps keep you warm. And if you fall in the water, it can save your life." Lodman notes that some life vest



# Many hunters bring too much gear and too much dog for a small boat.”

snug neoprene vest. “It’s essential to protect your dog’s core when it swims in cold water,” says Devney. “Even when it’s bitter cold out, I’ve felt under my dog’s vest and it is warm and dry under

there.” Hunters on big rivers should be especially careful to not lose their dogs in strong currents, which can sweep even a large retriever away or pull it under shelf ice.

## Hunters explore Spotted Dog WMA

Elk and deer hunters wasted little time before heading to a large tract of wildlife habitat that FWP recently acquired between Deer Lodge and U.S. Highway 12. The Spotted Dog Ranch property contains the largest wintering elk herd in the Upper Clark Fork River Basin as well as mule deer, white-tailed deer, pronghorn, moose, and many nongame wildlife species.

FWP purchased the 26,626-acre ranch on September 2 for

\$15.2 million from Y-T Timber, LLC, using Natural Resource Damage Program funds. The money came from the state’s lawsuit against Atlantic Richfield Company for damages to natural resources in the Upper Clark Fork River Basin. The property and a checkerboard of inholdings the department plans to lease from the Department of Natural Resources and Conservation (DNRC) is bordered on one side by national forest. The property is now named Spotted Dog Wildlife Management Area (WMA).

Mike Thompson, FWP regional wildlife manager in Missoula, says Spotted Dog contains Montana’s second-largest contiguous grassland west of the Continental Divide. Among the 180 wildlife species living on or using the WMA are lynx, Wolverines, and grizzly bears, along with diverse birds and small mammals. “Spotted Dog is really an incredible area for hunters and other people who like seeing wildlife and walking through native prairie,” Thompson says. “And it’s probably one of the best remaining winter ranges in Montana.”

Thompson says the Spotted Dog Ranch was closed to public hunting for the past decade. By acquiring the property, FWP can use hunting to lower elk numbers and reduce depredation on neighboring private property.

But hunters shouldn’t expect the hunting to be easy. “Because it’s winter range, most of the elk are off the property in the high country until the snow flies. Hunters need to plan on working hard for their elk, just like in any

other piece of Montana’s elk country,” Thompson says.

The area of extensive native grasslands and rolling foothills is intermingled with a total of 10,260 acres in state trust land managed by the DNRC. Once FWP leases these parcels, the Spotted Dog WMA will comprise nearly 40,000 acres.



Download a detailed map of the new Spotted Dog WMA by visiting [fwp.mt.gov](http://fwp.mt.gov).

SOURCE: MONTANA FWP

Thompson says that as soon as the purchase was approved by the State Land Board, archery hunters began using the property, and firearms hunters began showing up on October 23. FWP has established temporary regulations that restrict most of the WMA to foot or horseback travel until the interior road system can be made suitable for public travel.

Thompson says visitors to Spotted Dog can expect to see cattle grazing on many parts of the property and should be careful to stay off private inholdings throughout the WMA. “People need to download our map and know where the private property boundaries are so they don’t trespass,” he says.

A free map and interim regulations are available by calling the FWP regional office in Missoula at (406) 542-5500 or visiting [fwp.mt.gov](http://fwp.mt.gov) (search for “Spotted Dog” then click on “2010 Hunting News” and look in the “General Hunting Tips & Info” sidebar). 🐾

Overloaded boats are susceptible to swamping, putting you and your dog at risk of hypothermia or drowning. Safety experts also say wearing a life vest will keep you warmer and afloat in case of a spill.



JEREMIE HOLLIMAN



# THE GREAT FIRE OF 1910

How the Big Burn shaped the nation's fire-fighting policy and transformed a 4,700-square-mile landscape in northern Idaho and western Montana.

BY MICHAEL J. BROWN

“Out of the underbrush dashed a man—grimy, breathless, hat in hand. At his heels came another. Then a whole crew, all casting fearful glances behind them,” wrote forest ranger Joseph Halm in a chapter of *I’ll Never Fight Fire With My Bare Hands Again*. “‘She’s coming!’” the man cried. “‘The whole country’s afire! Grab your stuff, ranger, and let’s get out of here!’”

Although Halm and his men had been battling wildfires for weeks, this breathless warning from the terrified arrivals was his first real

hint of the unimaginable hours to come.

It was mid-August 1910, and the heat was like a hammer. It hadn’t rained since May. Halm worked on Idaho’s Coeur d’Alene National Forest, and his crews were fighting fire in the high headwaters of the St. Joe River, not far from the Montana line. They’d spent days slashing their way into the remote wilderness, 65 miles from the nearest railroad, and by August 18 they finally had their blaze contained. But then came those terrified men, rushing out of the brush with hell at their heels. ▶▶

“For days,” Halm wrote, “an ominous, stifling pall of smoke had hung over the valleys and mountains. Crews of men, silent and grim, worked along the encircling fire trenches.” Even wild animals ventured close to camp, their fear of fire overwhelming their fear of men. “Birds, bewildered, hopped about in the thickets, their song subdued,” Halm wrote, “choked by the stifling smoke and oppressive heat.” The sun “rose and set beyond the pall of smoke. All nature seemed tense, unnatural and ominous.” And then, on the afternoon of August 20, the wind started to howl, the result of two powerful weather systems colliding over eastern Washington. The fire that Halm’s men thought was trenched rose and roared and rampaged into their camp.

“As if by magic,” Halm wrote, “sparks were fanned to flames, which licked the trees into one great conflagration.” The men dashing into camp “had dropped their tools and fled for their lives. A great wall of fire was coming out of the northwest.”

Halm’s men headed for a small gravel bar in a nearby creek, “an open space scarcely 30 feet across.” By the time they gathered there, fire had surrounded their tiny island and “the quiet of a few minutes before had become a horrible din. The hissing, roaring flames, the terrific crashing and rending of falling timber was deafening, terrifying.” A few tried to hide beneath wet blankets, but were flushed out as towering trees came crashing down around them. A downstream logjam ignited into “a threatening hell,” Halm wrote. “If the wind changed, a single blast from this inferno would wipe us out. Our drenched clothing steamed and smoked; still the men fought.”

They fought shovel by shovel, bucket by bucket—now not to control the blaze, but to survive it.

Dawn sneaked up slowly, filtered by thick layers of smoke. As the forest lightened, Halm saw for the first time that “the green, standing forest of yesterday was gone.” A crew member asked him what he’d do now, and Halm muttered something about calling in more men. But there were no more men. “Little did I

*Michael Jamison of Missoula is a freelance writer who also works for the National Parks Conservation Association.*



IMAGES COURTESY BERNARD STODOLNICE PHOTOGRAPH COLLECTION, UNIVERSITY OF IDAHO LIBRARY

**UNIMAGINABLE DEVIATION** The 1910 fire, larger than any in U.S. history, burned 3 million acres, wiped out three towns, and killed 67 people. Above: Wallace, Idaho, on August 20, 1910. “People dashed through the streets, stumbling, humping into each other,” wrote Timothy Egan in *The Big Burn*. “Some carried babies under wet towels... It felt as if the town was under artillery fire, the mile-high walls of the Fitterer cuts shooting flaming branches into the squat of houses in the narrow valley hollow.” Left: A U.S. Forest Service trail crew attempts to clear a path of charred timber after the fire.

know, as I spoke, that our fire that morning was but a dot on the blackened map of Idaho and Montana,” the fire ranger wrote.

The 1910 fire—fanned by hurricane-force winds called Palousers and known variously as the Big Burn or the Big Blowup—scorched 3 million acres of Idaho and Montana, killed 78 firefighters and nine civilians, turned entire towns to cinder, and darkened sunsets all the way to New York City. But on the morning of August 21, Halm—like fire bosses throughout the region—had no way of knowing that. So he set out, surveying a landscape abruptly transformed by wind and flame. “On the ridges and slopes,” he wrote, “every tree was now uprooted and down.”

Halm and his men came across the remnants of their horses and supply camps and “saw the remains of an elk and several deer; also, a grouse, hopping about with feet and

feathers burned off—a pitiful sight.” They also found the body of a prospector, “burned beyond recognition,” one of many unable to outrun the firestorm. Halm knew then that nothing in these forests would ever be the same.

**1,000-YEAR EVENT**

“The fires of 1910 transformed forestry in the Inland Northwest,” wrote U.S. Forest Service (USFS) historian Hal Rothman in the introduction to *I’ll Never Fight Fire With My Bare Hands Again*, which he also edited. “The scope and scale of the fires, and the need for response, dramatically reshaped the way foresters assessed their obligations. The culture of the agency, the way in which foresters saw themselves, and nearly everything else about the agency at the grass roots changed in the aftermath of the fires of 1910.”



**OUR MOST SHAMEFUL  
WASTE!**

**NEVER AGAIN** The Big Burn and other deadly blazes so unnerved the American public that Congress afterward "limited total fire suppression from the fledgling U.S. Forest Service. At the time, firefighters train in the Umatilla National Forest, 1939, under the Forest Service's new policy: All fires to be extinguished by 10 a.m. the next morning. Left: Smokey Bear, who first appeared in 1944, is the longest-running public service advertising campaign in U.S. history. The iconic ranger mascot helped convince Americans that every fire destroys forests and wildlife. That enduring public perception continues to put pressure on federal firefighters to suppress all fires at all costs.

US FOREST SERVICE PHOTO BY RAY W. FILLON; USFS; SMOKEY BEAR POSTER IMAGE BY THE AD COUNCIL AND USFS FOREST SERVICE

flame retardant—what some now call the wildfire-industrial complex. The policy, endorsed by lumber companies fearful of losing precious timber, called for extinguishing all fires on national forests by 10 a.m. the following morning.

The USFS has since revised its policy to allow some wildfires to burn and to use managed "prescribed" fires to reduce fuel buildup. But in the aftermath of the Big Burn, public pressure made any approach but absolute fire suppression untenable.

Dousing all fires may have been good public policy, but it weakened forests and allowed them to grow more flammable. Long adapted to cycles of fire and regrowth, "protected" forests grew thick and tight. As years passed they became increasingly choked with dead and downed trees—ripe for another big burn. Previous to the 20th century, American Indians and lightning produced low-heat fires, which were healthier for forests. But after 1910, says Pat Van Eimeren, a fisheries biologist with the Flathead National Forest, the USFS "started putting out [all] fires, and ultimately that resulted in more forest fuels and higher-intensity burns."

Ironically, the nation's response to the 1910 fire was to create a policy that created in future decades conditions for a new era of destructive fires. In 2000 the combination of dry conditions and fuel buildup caused more than 7.2 million acres to burn, primarily in western states, nearly double the ten-year average. Six years later, almost 10 million acres burned nationwide. Fire experts warn that high-intensity fires have become unavoidable. "We've interrupted the natural cycle of low-intensity, high-frequency fire," Barrett says. And in an ecosystem historically cleansed and shaped by periodic flame, he adds, "when you change the fire interval, you change everything."

### HEALTHY FLAMES

Fires can destroy property, threaten human life, and transform a lush woodland into a charred netherworld. But fires also can revitalize forest ecosystems. FWP fisheries biologist Mark Deleray says trout streams have long evolved in a landscape periodically set aflame. Fires release carbon and nitrogen,

Some say the Big Burn and the roughly 1,700 other fires that summer were sparked by years of slash left by loggers. Others say fuels had built up following a century of dousing the Native American tradition of burning forests. Still others blame the railroad, whose coal-fired engines kindled

the main drivers, if not the main driver, of the Forest Service getting deadly serious about fighting fire." The horrific maelstrom produced a public outcry to suppress future forest fires at all costs. Previously the fledgling Forest Service, formed by conservationists Gifford Pinchot and President Theodore

**“We’ve interrupted the natural cycle of low-intensity, high-frequency fire. And when you change fire interval, you change everything.”**

many forest blazes. "But in reality," says Steve Barrett, a fire ecology consultant in Kalispell, "it was a 1,000-year event, a perfect storm of long-term drought, lightning, high wind, and a total lack of trained people on the ground."

The Big Burn, says Barrett, "was one of

Roosevelt, struggled to obtain even modest funding from Congress. After the Big Burn the agency was given carte blanche to battle blazes, and it invested heavily in roads, lookouts, and highly trained fire crews. Later the Forest Service introduced bulldozers, smoke-jumpers, and planes that dropped tons of

which wash through the system and nourish aquatic vegetation. Aquatic insects thrive, providing more food for trout. Van Eimeren adds that fires also create habitat by toppling big trees that dam streams and create waterfalls and deep pools. "That large, woody debris is what fish need," he says. "It's cover, shade, a place for bugs to live."

But exceedingly hot fires can do more damage than good. Soon after the 1910 fire, rain washed scorched, powder-dry soils off bare hillsides into streams, suffocating trout, aquatic insects, and fish eggs. Landslides of cobble formed dams that block fish migration to this day, isolating and weakening populations. Abundant sunlight warmed mountain tributaries beyond what trout, especially bull trout, could tolerate. Because snow in brushlands doesn't last as long as in shady, timbered areas, where it can remain well into June, streams were deprived of trickling snowmelt that keeps water temperatures cool throughout summer.

Another result of the Big Burn was construction of a vast transportation system within national forests to get firefighters and their equipment deep into forests and allow logging companies to reach timber. "By far the greatest impacts we have to fisheries today are from forest roads," Van Eimeren says. He explains that dirt roads bleed fine sediment into streams, clogging the gravel in stream bottoms where trout spawn. And metal culverts built a half century ago where forest roads cross streams prevent fish from moving to and from historic spawning waters.

The Big Burn and its aftereffects on forest policy have also shaped western Montana wildlife habitat. When Mike Thompson, FWP regional supervisor, drives west from his Missoula office toward St. Regis, he sees scars of the 1910 fire still visible along the I-90 corridor. "The whole way you think you're looking at mature forests," he says. "But then, all of a sudden, it's 'holy cow.' Sticking up about two times higher than the rest of the forest is this old remnant stand that the 1910 fire somehow missed. That's when you realize that the forest you've been looking at is 100-year-old lodgepole, and it's butting up against these huge, ancient larch. The forest that's here now bears very little resemblance to the one that was here



**UNINTENDED CONSEQUENCES** Decades of total fire suppression following the Big Burn extinguished low-intensity fires that had shaped forest ecosystems for millennia. Ironically, the policy enhanced forest fuel buildup that eventually led to more high-intensity fires. Though fires usually benefit forest systems, extremely hot ones sterilize soils—causing severe erosion and retarding plant regrowth—while threatening human property and life.

before the big fire of 1910."

After the Big Burn, hillsides were opened to sunlight, prompting the growth of huckleberry, willow, and other shrubs. Over the next half century, mule deer populations burgeoned as the animals browsed emergent

again, mule deer numbers declined, elk numbers tapered off, and populations of white-tailed deer—a species that prefers denser cover—increased.

The complexity of old-growth forests was largely replaced by the relative homogeneity of

## “We’ve finally gotten around to talking about fire management rather than just fire suppression.”

shrubfields. Elk benefited years later, as forests grew and expanded to abut open grassy winter range. Moose, also shrub eaters, initially thrived in the newly opened landscape, while lynx lost the dense forests that held their main food source, snowshoe hares. Then, as trees shaded shrubs and the forest canopy closed

lodgepole pine. In many areas between I-90 and the Idaho border, decades of fire suppression created dense stands of aging lodgepole that has become weak and susceptible to attack by pinebark beetles.

When Thompson talks to seasoned hunters about the wildlife populations and landscape

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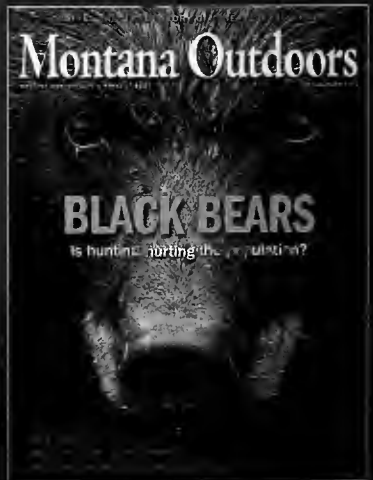
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EAST FORK OF THE BUTTERCROFT RIVER, AUGUST 2000. BY JOHN MCCOUGAN, USFS

*Missoulian* on the 100-year anniversary of the 1910 fire. “Between the North Fork Clearwater and Lochsa drainages of Idaho and the middle and lower Clark Fork drainages of Montana, more than 1 million acres of roadless areas remain today.”

The centenary of the Big Burn offers opportunities to examine both the horrors of fire and its value. A blackened tree stump or smoldering building makes the devastation obvious. But the seeming paradox of beneficial fire remains difficult to grasp. The old message was simple: “Only You Can Prevent Forest Fires.” The new message is more complicated and harder to comprehend. “We’ve finally gotten around to talking about fire management rather than just fire suppression,” says retired USFS fire ecologist Stephen Arno of Florence. “But by the time we started that conversation it was already pretty late in the game, and the public had already been brought up on Smokey the Bear.”

Federal agencies have learned much about fire over the decades. By the 1980s many forest managers were endorsing the reintroduction of wildfire into ecosystems. In 1995 the USFS officially revised its fire-fighting policy to allow some wildfires to burn themselves out. A report by the Departments of Interior and Agriculture following the 2000 fire season noted, “While the [old] policy of aggressive fire suppression appeared to be successful, it set the stage for the intense fires that we see today.”

For years Kalispell writer Ben Long has been pondering the relationship between humans, forests, and fire, especially in the aftermath of the Big Burn. “A century after that horrific fire, we are still trying to shape forests to our designs,” he says. “We’re squandering huge amounts of money—and sometimes firefighters’ lives—in the process, but still we’re never really satisfied with how the tinkering turns out. It seems that how we view our relationship with fire and forests has for too long been blurred by fear, by economic interests, and by a lack of understanding of ecological processes.

“Maybe 100 years later the haze and smoke is finally clearing,” Long adds. “Maybe now we can see what it is we’re doing to forests—and to ourselves in the process—a bit more clearly.” 

of 30 or 50 years ago, he’s reminded of the tremendous change the region has undergone after the historic fire. “They say, ‘This is how it was when I grew up,’ and I think, ‘It’s a whole different forest now.’”

### DESCENDENTS OF FIRE

The 1910 fire indirectly ushered in modern wildlife management practices that have led to healthier game populations and better hunting. Retired FWP wildlife biologist John Firebaugh explains that the logging and fire-fighting roads constructed up many drainages gave hunters in the mid-20th century more access to backcountry areas, increasing deer and elk harvest beyond sustainable levels. That forced wildlife managers to devise stricter harvest regulations, which later led to

today’s finely tuned management of big game populations in dozens of different hunting districts. Adds Thompson, “I guess you could say today’s wildlife populations are descendants of that fire.”

The Big Burn also created vast tracts of near-wilderness. While some of the 3 million acres scorched in 1910 retained healthy trees, many large tracts were so devastated the timber could not be salvaged. Long since recovered, those areas are now secure wildlife habitat containing no roads. “These factors helped maintain one of the largest backcountry complexes in the lower 48,” wrote Whit Fosburgh, president and CEO of the Theodore Roosevelt Conservation Partnership, a national conservation organization, in an editorial published in the

# LIVING UP TO ITS



# NAME

## How controversial hunting regulations restored big bulls to the Elkhorn Mountains BY LEE LAMB

**J**ust a generation ago, a hunter would have been hard-pressed to find a mature male elk in the Elkhorn Mountains. “When I first started hunting there, I’d never see a branch-antlered bull,” says Bruce Rehwinkel, a Townsend resident who has hunted the mountain range for nearly 30 years. “Just about everything that had an antler on it got shot.”

That made sense. Hunting District 380 is less than an hour’s drive from Helena, Butte, and Bozeman and contains abundant elk that roam throughout an accessible national forest. For years, a hunter with a general elk license could legally shoot any antlered bull there. Few male elk survived the hunting season.

That began to change in 1987. Concerned about the low number of branch-antlered bulls, Montana Fish, Wildlife & Parks established a “spike season” in the Elkhorns. Any hunter can shoot a yearling (spike) bull, but to shoot a mature bull or a cow a hunter must apply for a special permit. The regulation allows more bulls to

grow older and produce larger antlers. Today the Elkhorns are world renowned for trophy elk, and the population contains a biologically healthy mix of young, middle-aged, and old males. “We’ve got every age class in the bull population up to 15 years old,” says Tom Carlsen, FWP management biologist for the Elkhorns.

Each year more than 7,000 hunters put in for the 110 coveted Elkhorns bull tags—known as “either-sex permits”—making the odds of hunting the famous trophy bulls slim. But Car-

**Biologists didn’t know if hunters would be content to see big bulls they couldn’t hunt.**

lsen says the vast majority of elk hunters in the Elkhorns support the harvest regulations. “Even if most years they

can’t hunt for those big bulls, they can go out and see them and maybe shoot a spike. For those hunters, it’s a thrill just to be in the Elkhorns and see the mature animals,” he says. “And then, if they’re lucky, they’ll someday draw that bull permit.”



**ELK PARADISE** Rising like a great forested island in a valley sea, the Elkhorn Range south of Helena has become famous over the past two decades for mature elk (right). The herd, which numbers roughly 2,000, contains bulls as old as 15 years—unheard of in a population within an hour’s drive of three major Montana cities.

MONTANA FWP

MONTANA FWP

mid-1800s with the onset of hardrock mining and livestock grazing did wildlife populations decline. As elsewhere in the West, the range's elk herd quickly diminished under pressures of market and subsistence hunting.

In 1905, Theodore Roosevelt designated the Elkhorn Mountains as a permanent forest reserve to protect it for wildlife and public use. Two years later, it became part of the national forest system. In 1939, wildlife biologists captured 34 elk in Yellowstone National Park and released them into the southern Elkhorns to help reestablish the population, which by then had nearly disappeared. By the early 1960s, the herd had grown to 400, and over the next two decades that number more than doubled.

Despite the growing population, all was not well with the Elkhorns elk herd. Relentless hunting pressure on antlered elk made the ratio of bulls to cows extremely low. "This is how bad things were," says Carlsen. "Of 1,000 elk we identified by aerial surveys in 1985, only nine were bulls, and they were all yearlings." Males made up less than 1 percent of the Elkhorns population. Healthy elk populations have at least 10 males for every 100 females.

**"Males made up less than 1 percent of the population."**

Concerned that there might not be enough mature males in HD 380 to breed with cows, FWP adjusted hunting regulations to increase bull numbers and help bulls live longer. Under the spike season, any archery or firearms hunter with a general elk license may shoot a spike as long as its antlers don't branch. If branched, the point must be less than 4 inches long as measured from the main antler beam. "About 20 percent of yearling bulls have a 4-inch or longer branch, so they are protected," says Carlsen. "Those are the more robust yearlings that live to be 2½-year-olds." Hunters who want to shoot a mature bull must enter a drawing each summer for an either-sex permit, which allows them to shoot a branch-

*Writer Lee Lamb grew up in the foothills of the Elkhorns. She now splits her time between Polson and Coeur d'Alene, Idaho.*



**FORTUNATE FEW** Growing one of the nation's top trophy elk herds comes with a cost: Only a handful of lucky hunters draw a permit to hunt the mature bulls each year.

antlered bull or an antlerless elk. Hunters can also apply for a B license, which allows them to harvest an antlerless (cow or calf) elk.

As FWP biologists expected, hunters were slow to accept the new regulation. Check station surveys the first year showed only 25 percent in favor. But three years later, 75 percent of Elkhorns hunters supported the spike season. "We knew it would take several years to build up the different age classes of bulls. We started off pretty conservatively in issuing permits, only about 35 a year," Carlsen says. "But after only a couple of years we were seeing 4-, 5-, and a few 6-year-old bulls, and hunters started to come around."

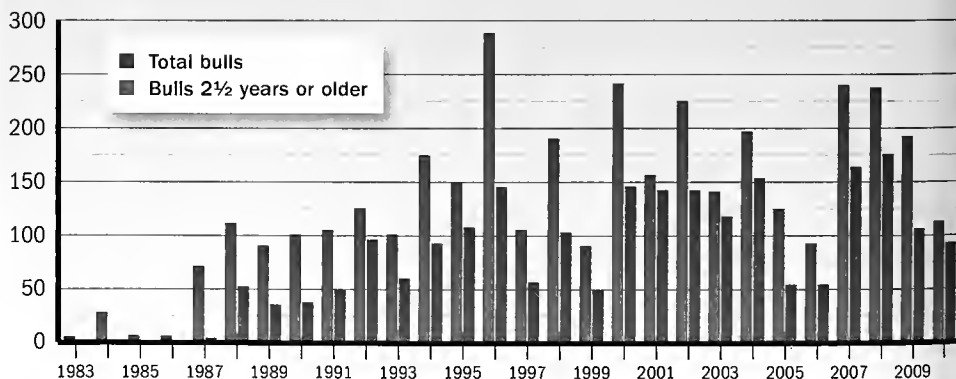
Support for the Elkhorns spike season

has remained high as elk continue to mature. Carlsen says the average age of bulls harvested by hunters has increased from 1½ years old to 6½ years old today.

Hunters are also seeing more elk. The herd has grown to more than 2,000 animals thanks to more breeding bulls and harvest restrictions on cow elk. FWP's elk management plan for the Elkhorns, revised in 2005, calls for being able to observe 1,700 to 2,300 elk in the population following the hunting season. It also stipulates a ratio of 15 bulls per 100 cows on the winter range and an average age of harvested mature bulls between 5½ and 6½ years old. Carlsen says these objectives, along with the percentage of yearling bulls that survive hunting season and winter each year, determine the number of either-

### Bulls in Hunting District 380, 1983-2010

By limiting the harvest of mature bulls starting in 1987, FWP vastly increased the overall number of males in the herd and the number of bulls 2½ years and older.



sex permits issued annually.

That number has stayed at 110 for the past decade. Because anyone can apply for the either-sex permits, less than 2 percent of the several thousand applicants are drawn. But lucky hunters who win an Elkhorns either-sex permit have a success rate of roughly 70 percent—more than three times the statewide average. “Because they realize it’s more or less a once-in-a-lifetime opportunity, they generally hunt pretty hard,” Carlsen says.

Lifelong elk hunter Al Christophersen of Helena spent months pursuing his trophy bull after drawing a coveted Elkhorns permit in 2002. After scouting that summer, he spent archery season crawling through a gauntlet of downed logs and doghair lodgepole pines playing cat and mouse with bugling bulls. After following many dead-end trails, Christophersen eventually shot a massive 6x6 bull during the final days of the season. “I’ve been a meat hunter my whole life,” he says, “but when you’ve got one of those permits in your pocket, you tend to zone out the cows, the spikes, and even the raghorn bulls. I passed up 15 bulls that season, waiting for that ‘special one.’ And when I finally found him, it took three more days of hunting before I tagged him. He was 8½ years old, a tribute to elk management in the Elkhorns.”

**Elk management in the Elkhorns is made easier thanks to abundant public hunting access, including 100,000 acres in Block Management.**

**E**lk management in the Elkhorns is made easier thanks to abundant hunting access. Most of the Elkhorn Range is public land (including an 80,000-acre roadless area) cooperatively managed by the Helena and Beaverhead-Deerlodge national forests, the Bureau of Land Management, and FWP. Portions of the foothills and surrounding valley bottoms contain large working ranches—ideal places for elk to hang out when fall snowstorms, or hunters, drive them down from



**ELK** During the 1970s and early '80s, the Elkhorns elk population lacked enough males to breed with females, dropping at one point to a ratio of just 1 bull per 100 cows.

LAUREN DENNIS



**PROUD HUNTERS IN HD 380** Over the past two decades, Tom Carlsen, FWP management biologist for the Elkhorns, has collected these and other snapshots of successful bull hunters. Carlsen says mature bulls with antler scores of 340, 350, and higher are not uncommon in the Elkhorns, where bulls average 6 1/2 years old. A typical letter from a hunter who drew an either-sex permit and killed a big bull:

*Thanks FWP!!! All of your efforts in the 380 area make my hunt fantastic! It is one I will never forget. Great work!*  
 —Breck Thomas, Bellevue, Montana





**SOMETHING TO BUGLE ABOUT** Mature bulls were rare in the Elkhorns not long ago. Says Tom Carlsen, FWP biologist: "In 1985 we checked on a harvested bull that was four years old, and we all remarked how highly unusual it was to see one even that old." Today the Elkhorns contain bulls in their mid-teens—ages unobtainable back when any hunter had the opportunity to kill a branch-antlered bull in HD 380.

the mountains. Fortunately for hunters, roughly 20 Elkhorns-area landowners have enrolled a total of 100,000 acres in Montana's Block Management Program. Through the program, FWP helps landowners manage hunting activity in exchange for providing free public hunting access to their property. "Because these Block Management Areas are pretty well scattered around the mountain range and offer good access, they've been real important in helping us manage elk numbers," Carlsen says.

FWP controls the size of the Elkhorns herd by adjusting the number of cow elk that hunters kill each season. During years when the population gets too low, the department reduces antlerless elk permits. When elk numbers get too high, FWP increases permits. Each year over the past decade, the department has offered from 350 (1989) to 900 (2010) antlerless permits, now known as B licenses.

Though he considers elk management in the Elkhorns a success, Carlsen concedes that FWP took a risk by instituting the spike season. "If it hadn't worked, we'd have taken some real heat," he says. Fortunately, the elk

**"We've got every age class in the bull population up to 15 years old."**

population has doubled since 1987 and the proportion of bulls has grown from 1 percent to roughly 11 percent. Some of those bulls are now 13, 14, and older—ages rarely reached in Montana (and in only a few other parts of the West, for that matter). "We even had a 15-year-old bull harvested last fall, the oldest that's come out of there," Carlsen says. "That's the exception, but just the fact that a bull had the chance to live that long is pretty rare."

FWP monitors elk age in the Elkhorns by asking hunters who shoot a bull to mail in an

incisor, which is then forwarded to a private laboratory in Milltown for aging. After cleaning, sectioning, and staining the tooth, technicians count the dark rings that grow each winter in the cementum (the tissue forming the outer layers of the root)—much like counting growth rings on a tree.

Despite the high number of "old growth" bulls in the Elkhorns, there's no getting around the fact that only a small number of hunters each year ever have the opportunity to hunt them. More people apply for the HD 380 either-sex permit than any other permit in Montana.

But that in no way lessens Rehwinkel's enthusiasm for hunting the Elkhorns. "I love the spike season," says the Townsend hunter. "The first time I saw a 7-point over on Hog Hollow, I couldn't believe it. I spent the whole day watching him. I've never drawn an either-sex permit, and I rarely kill a spike, but I've seen a number of pretty nice bulls in a day, and that's something nice to see." 🐾

# Welcome to Montana Elk Hunting

Advice for residents and nonresidents on finding where to hunt, obtaining reliable information, and negotiating the licensing and permitting process.

BY TOM DICKSON

**Important Note:** This guide does not contain all of Montana's elk hunting regulations. Before hunting elk, all hunters are responsible for reading and knowing the regulations, available on-line and at all FWP offices.

To a beginner—whether resident or nonresident—trying to learn about elk hunting in Montana can seem like entering a secret society. The elk hunting world is replete with inscrutable numbers and symbols (210-80, 390-00, HD, WMA, BMA, LPT), intimidating restrictions (“Elk HD 424 may be subject to 12-hour closure for the antlerless portion of the general brow-tined bull or antlerless elk season....”), and a thick regulations handbook. The only thing missing is the special handshake.

Then there's the challenge of finding somewhere to hunt. Many longtime hunters are understandably reluctant to share with newcomers the locations of their public land secret spots, earned through years of hard work and exploration. Other experienced hunters have gained access to private land through relatives, friends, and business associates—relationships that are tough to develop quickly.

Fortunately, deciphering the mysterious lingo, negotiating the complex procedures, and even locating a hunting spot are not as hard as they might appear. What follows is information from FWP wildlife biologists and front desk staff who regularly explain the rules, regulations, and language of Montana elk hunting to people learning about the sport for the first time.

## Where to hunt

Elk range across several million acres of Montana in 148 hunting districts. Most live west of a line running from Glacier National Park to Yellowstone National Park. Roughly 50 percent of the annual elk harvest comes from southwestern Montana (FWP Region 3), in places like the Gallatin and Beaverhead-Deerlodge national forests. Elk also live along the Rocky Mountain Front and in the Big Belt, Little Belt, Pioneer, Bitterroot, Purcell, Mission, and Cabinet mountains, as well as in the Swan, Garnet, and Whitefish ranges.

Two essential resources to help you decide where to hunt are the FWP Montana Elk Management Plan, available on the FWP website ([fwp.mt.gov](http://fwp.mt.gov), go to “Wild Things” then “Wildlife Management” then scroll down to the elk image), and *Elk Hunting Montana: Finding Success on the Best Public Lands*, published by the Rocky Mountain Elk Foundation.

The 400-page elk plan, last updated in 2004, lists public access opportunities, elk harvest over the previous decade, and other helpful information for each of the state's 35 EMUs, or elk management units. (Each EMU contains from two to five hunting districts, or HDs.) The plan also





includes a history of elk management in Montana, statewide harvest and hunter numbers over the past decades, and the comparative densities, by EMU, of bull elk and antlerless elk harvest during selected years.

*Elk Hunting Montana*, available at booksellers, divides Montana's hunting range into 19 geographic areas. For each area, the book provides an overview of elk distribution, explains where to hunt, and offers hunting strategies. It also includes a matrix—based on FWP harvest data and experiences by Montana hunters—indicating whether each area has low to high elk numbers, hunter densities, trophy bull potential, and proportions of roadless areas.

Once you have a rough idea where you want to hunt,

check the FWP elk regulations (available at FWP offices and [fwp.mt.gov](http://fwp.mt.gov)) to see what hunting districts you will be in and the boundaries, special seasons, regulations, and required permits that apply there.

**HUNTING PRIVATE LAND**

Though most elk in Montana during much of the year are on public land, many are on private property, especially at season's end. Snow and cold drive them from mountains down into valleys, which are composed primarily of ranches and farms. Gaining access to this private land is not always easy, even for locals. The exception is on Block Management Areas (see below). The best way to get access to private land is to ask politely well before the season begins. The odds are better if you ask to hunt for antlerless elk only.

**BLOCK MANAGEMENT AREAS**

Montana's Block Management Program provides free hunting access to private land, under various restrictions. Eastern Montana holds most of the 8 million acres in Block Management, but tens of thousands of acres are in western Montana's prime elk range. New Block Management maps and tabloids are available each year at all area and regional FWP offices starting in mid-August. Call or write the FWP regional office where you want to hunt and ask for their annual "Hunting Access Guide." This booklet summarizes the current year's Block Management opportunities and the rules and regulations for each area. You can also access maps to all Block Management Areas at [fwp.mt.gov](http://fwp.mt.gov).



**Other helpful hunt planning resources**

**FWP Hunt Planner**—Found at [fwp.mt.gov](http://fwp.mt.gov), this interactive website provides detailed elk drawing statistics for licenses and permits, useful for figuring out which districts have the best odds for lottery drawings.

**FWP website ([fwp.mt.gov](http://fwp.mt.gov))**—In addition to the Hunt Planner, you can find information on the Block Management Program, hunting public land, obtaining permission on private land, and more.

**The Complete Book of Elk Hunting**—Informative elk hunting books abound, but this one published by the Rocky Mountain Elk Foundation covers hunting situations and strategies particular to Montana—especially the state's southwestern region.

**"Too Many Places to Hunt"**—Advice on figuring out where to hunt on Montana's overwhelming 30 million acres of public land, *Montana Outdoors* article, September-October 2007.

**"Montana Access Guide to Federal and State Lands"**—This brochure, available at FWP regional offices and [fwp.mt.gov](http://fwp.mt.gov), details all state and federal land access opportunities.

**Montana Hunting Companion ([msl.mt.gov/hunting/](http://msl.mt.gov/hunting/))**—Developed by the Montana State Library and FWP, this interactive website provides links to several state mapping sites and also provides essential hunting information.

**Essential Maps**

**Montana public and private land ownership maps (<http://nris.mt.gov/gis/ownmaps.asp>)**—This website has two map series covering the entire state. One shows all public lands; the other all private lands and the names (though not addresses or phone numbers) of every landowner.

**DeLorme Montana Atlas & Gazetteer and Benchmark Maps' Montana Road & Recreation Atlas**—Tabloid-sized map books sold at gas stations and sporting goods stores.

**BLM maps**—Officially called Surface Management Edition Maps, these show public and private land boundaries. Sold at BLM offices statewide, on-line at the agency's Montana-Dakotas website ([blm.gov/mt/st/en.html](http://blm.gov/mt/st/en.html)), or at many sporting goods stores.

**National forest maps**—Sold at USFS offices and FWP offices.

**U.S. Geological Survey topographic maps**—Sold on-line and at sporting goods stores throughout Montana.

**"Directory of Montana Maps"**—Phone numbers and addresses for obtaining county plat books as well as maps from state and federal land-management agencies in Montana. Available at [fwp.mt.gov](http://fwp.mt.gov) and all FWP offices.

## Expectations

Think beforehand about what you want most out of your hunt. Maybe your primary goal is simply to spend a week in Montana's scenic mountains with a rifle or bow and the chance of killing an elk. Maybe you're most interested in the elk camp experience. Maybe you'd be satisfied with killing an antlerless elk. Or maybe you are determined to kill a big bull. Some expectations are more likely and realistic—and more under your control—than others.

► **Elk hunting versus deer hunting:** Elk hunting is typically harder than deer hunting. Elk move more often and farther, and they are often in steeper and more rugged terrain. Elk hunting usually requires far more effort, and success rates are far lower.

► **The odds of killing an elk in Montana:** Over the past two decades, the statewide average combined annual success rate for bulls and cows has been roughly 20 percent. That means that each year, one of five hunters kills an elk. On average, successful hunters in Montana spend 10 to 12 days hunting before killing an elk.

► **The odds of killing a big bull:** Each year only about 4 percent of elk hunters kill a 6x6 (six points, or tines, on each antler) or larger bull. Most of those elk are shot by local hunters who have figured out elk movement patterns or hunt the backcountry for many days and by hunters who hire outfitters and have access to prime private land.

► **Time:** The more time you spend in Montana's elk country—scouting before the season and hunting during—the better your odds of finding good spots to hunt and see elk. It's unrealistic to expect to kill an elk by hunting only a few days.

DOUGLASSMITH.COM



Elk are smart. They generally don't hang around roads and trails accessible by vehicles. Don't plan on seeing many elk from roads.

### ► Physical fitness:

Hunters in good physical condition are more likely to reach areas where elk hang out. The ability to hike with a pack for 5 or 6 miles each day increases your odds substantially. Generally, the harder the hunting conditions, the more likely you are to see elk. To become fit enough, consider spending some time each day hiking hills for at least three months before your hunt. If the landscape where you live is flat, hike up and down riverbanks or the stairs of office buildings. Gradually add weight to a pack until you can go at least 5 miles uphill with 20 pounds on your back without keeling over.

Check with your physician before undertaking any exercise program.

## When to hunt

Montana offers some of the longest hunting seasons in the West. Archery begins in early September, backcountry firearms starts in mid-September, and the general season runs from late October to the Sunday after Thanksgiving. Bowhunters focus on the pre-rut and rut period of September, when they have the best opportunity of calling in a bull. In a few backcountry areas, firearms hunters also can lure bulls by calling during September and early October. Hunting this time of year requires peak fitness to reach the high country where elk live.

By the time the general firearms season begins in late October, rutting activity is winding down. Intense hunting pressure on opening weekend sends both bulls and cows deep into the timber, often at high elevations. Hunters find elk in early November mainly by hiking into heavy timber or finding where elk emerge at dusk and dawn to feed on fringes of open parks.

Elk stay at high elevations, resting and building fat reserves for winter, until snow or cold pushes them down into the valleys. Though elk become easier to locate, the low land is mostly privately owned. So even though elk are often more visible later in the season, they can be less accessible to hunters.



# Licenses and permits

## GENERAL ELK LICENSE

A general elk license is the basic license for hunting elk. It can be used only according to the specific regulations of the hunting district in which you hunt. Many districts also offer a separate antlerless (B) license (see page 24) to hunt cow elk. Some districts require a special permit to hunt bull elk, while cow elk may be available with a general elk license. Look for "General Elk License" in your hunting districts in the FWP elk regulations booklet to see what restrictions apply.

## RESIDENT GENERAL ELK LICENSE

Resident hunters may purchase this license over the counter at FWP offices and other license vendors for \$20 plus the required conservation license (\$8) and hunter access enhancement fee (\$2). Residents may also buy a sportsman's license (prices vary), which includes a general elk license. Some disabled, youth, and senior hunters may qualify for discounted licenses.

## NONRESIDENT GENERAL ELK LICENSE

Nonresidents can't buy their general elk license over the counter. They must obtain what's known as a "combination" license, which includes a general elk license as well as several other licenses. To get draw a combination license, you need to

apply in a random lottery drawing for either a:

- ▶ Big game (deer and elk) combination license (roughly \$650), which is also good for fishing and upland bird hunting, or a
- ▶ Elk combination license (roughly \$600), which is also good for fishing and upland bird hunting.

The odds of drawing either a nonresident big game or elk combination license are about 2 to 1 (50:50). You can apply for only one of these licenses each year.

If you hire an outfitter, you can buy, without going through a lottery drawing, a

- ▶ Big game combination outfitter-sponsored license (\$1,250, price in 2010). To be eligible, the applicant must first contract the services of a licensed Montana outfitter and then conduct all sponsored license hunting with that outfitter. The outfitter-sponsored quotas and prices are based on a five-year market rate average.

All three nonresident combination licenses include the conservation license and access fee required to hunt in Montana. Bowhunters must also purchase a nonresident bow license for an extra \$10.

Nonresident combination license applications are available each year from mid-January through the mid-March deadline. FWP announces drawing results in mid-April. ▶▶

# Outfitters

Hiring an outfitter can be an attractive option for a hunter coming to Montana for the first time or for anyone who wants to pay someone to find a place to hunt, navigate the permitting process, locate elk, arrange for food and lodging, and—if things go right—pack your elk out of the backcountry. It's also the only way a nonresident hunter can guarantee getting an elk license. Of the 17,000 nonresident combination licenses Montana typically makes available each year, FWP reserves an average of 5,500 for outfitters' clients. (This allows outfitters to know by early spring how many customers they will have during the hunting season.) The other 11,500 nonresident combination licenses are awarded by lottery. (See the note below about the possibility of Montana discontinuing the outfitter-sponsored license.) A guided five-day elk hunt in Montana runs roughly \$3,000 to \$5,000, not including the \$1,250 (2010 price) license.

For about half the price, consider a "drop camp," in which an outfitter packs you and your gear into an area and drops you off for a few days.

You set up camp and hunt on your own. The outfitter returns several days later to pack everything back to the trailhead. Some drop camps allow you to hike in and use a wall tent and cooking equipment the outfitter has already set up. The outfitter-sponsored license is not valid for the drop camp option, so nonresidents would need to apply for a regular combination license.

To find an outfitter, visit the Montana Outfitters and Guides Association website ([montanaoutfitters.org](http://montanaoutfitters.org)), which includes a list of questions to ask outfitters you interview.

Note: *Guides* are licensed individuals who lead the hunts. Guides work for *outfitters*, who own the business of providing hunting services. Many outfitters are also themselves guides.

**Licensed Montana Outfitter and Guide**

"For an Elk Hunt of a Lifetime"

(406) 555-1212

References provided

## No more outfitter-sponsored nonresident licenses?

A new Montana ballot initiative, I-161, calls for abolishing outfitter-sponsored nonresident licenses. It would add more nonresident licenses available by lottery and increase the price of the licenses. As this issue of *Montana Outdoors* went to press, it was not certain whether a lawsuit filed earlier in the year would prevent I-161 from appearing on the November 2010 ballot.

## Licenses and permits (continued)

### ELK B LICENSE

An elk B license (resident, \$25; nonresident, roughly \$280), awarded by lottery, is a second license that allows a hunter to take an antlerless elk in certain hunting districts that have overabundant elk. This is *in addition* to an elk you may tag with your general or combination elk license, thus allowing you to harvest two elk. To buy or use an elk B license, residents don't need a general elk license and nonresidents don't need a combination license. But both still need to pay the access fee and buy the conservation license (page 23). Many hunting districts offering elk B licenses comprise mostly private land, so gaining access can be tough. Some over-the-counter elk B licenses are available, but only for a few hunting districts where public access is extremely limited. The application deadline is June 1, and results are announced in late July.

If you draw an elk B license for a specific hunting district, you can only fill that tag there. But you can still hunt elk in that or any other hunting district with your general elk license under the specific regulations there.

### SURPLUS B LICENSES

Each year some hunting districts offer surplus elk B licenses, left over after the late July lottery drawing (\$20 resident, \$273 nonresident, plus access fee and conservation license). In early August, surplus licenses go on sale over the counter and on-line until the quotas are filled. Because many surplus licenses are in hunting districts where most of the elk range is on private land, hunters need to find out about Block Management Areas there or seek permission from a landowner. Some elk B licenses may be used only on private or state land and not national forests. Check the elk hunting regulations to see which restrictions apply.

### ELK EITHER-SEX PERMITS

Elk *permits*, most allotted by drawings, allow you to hunt in a restricted area or time period or to harvest a bull where bull harvest restrictions exist for hunters who have only a general elk license. (Because bull permits are "either sex," you also have the option of taking a cow or a calf.)

Permits are not a second license for killing an additional elk. Rather, you must use them *with* your general elk license.

Montana makes up to 10 percent of all permits available to nonresidents. Nonresident hunters may not apply for permits (due June 1) unless they drew a combination license (results announced in mid-April) or bought an outfitter-sponsored combination license for that year.

Permits and licenses are labeled with a three-digit number followed by a dash and then a two-digit number (such as

## How to obtain a permit or license

- Visit [fwp.mt.gov](http://fwp.mt.gov), go to "Licenses and Permits," and download a blank application to fill in and mail to FWP.
- Request a printed copy, either at the Licenses and Permits section of [fwp.mt.gov](http://fwp.mt.gov) or by calling (406) 444-2950.
- In person at an FWP regional office.

"345-20"). The first three digits identify the hunting district, and the last two digits are FWP codes for additional restrictions related to that license or permit.

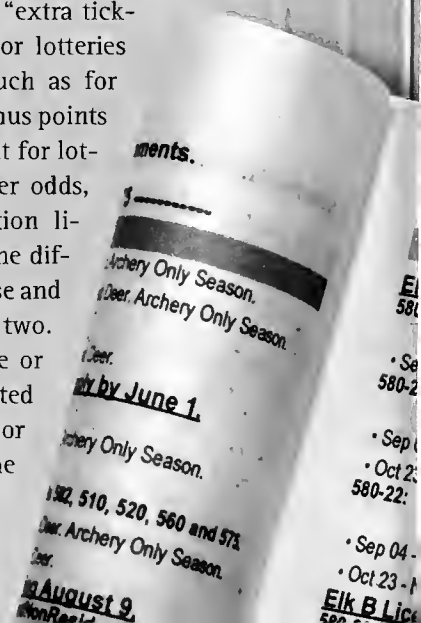
Learn about the hunting district you wish to hunt *before* applying for a permit. For instance, don't put in for a back-country area if you aren't willing and prepared to backpack in. And don't apply in hunting districts that are mostly private land if you aren't certain you can get permission.

### BOWHUNTING LICENSES

In Montana, you may hunt elk with a bow during the archery season and then hunt with a firearm during the regular season. Resident and nonresident bowhunters need to purchase or apply for the licenses and permits listed previously and also buy a bow license (\$10 for both residents and nonresidents). To buy a bow license, you must provide either a National Bowhunter Education Foundation course certificate of completion or proof (archery stamp, tag, permit, or license) that you bowhunted in Montana, another state, or a Canadian province during a previous year.

### BONUS POINT SYSTEM

This is a way to increase your odds of drawing a license or permit. For \$2 (resident) or \$20 (nonresident), you may purchase one bonus point every year for each license or permit you apply for. These points accumulate each year you are unsuccessful. Bonus points don't "move you up the preference ladder," as many hunters believe. Instead, they are like extra tickets in a lottery. The more points you accumulate, the more chances are entered for you into the drawing. Keep in mind that many other hunters are accumulating points, so they too have "extra tickets" added to each drawing. For lotteries where competition is fierce, such as for either-sex (bull) permits, the bonus points don't make much difference. But for lotteries where hunters have better odds, like the nonresident combination license, bonus points can make the difference between drawing a license and having to wait another year or two. Note that if you draw a license or permit, you lose your accumulated bonus points for that license or permit and have to start over the following year.



# Legal elk definitions

Some hunting districts have special regulations restricting elk harvest to certain sizes of bulls. These regulations produce bigger bulls and increase the ratio of male to female elk so more bulls are available to breed.

**Antlerless elk:** Male or female with no antlers, or both antlers are less than 4 inches long as measured from the top of the skull. Generally these are calves and cows.

**Antlered bull:** An elk with one or two antlers at least 4 inches long as measured from the top of the skull.

**Spike bull:** An elk, usually 1½ years old (also known as a yearling), with antlers that do not branch. Or, if branched, the point (tine) is less than 4 inches long from the tip to the main antler beam. Roughly 20 percent of yearling bulls have a point longer than 4 inches long.

**Brow-tined bull:** An elk with one or both antlers having a point on the lower half (see photo below) that is at least 4 inches long.



## YOUR ALS NUMBER

Like many states, Montana assigns each hunter a unique identification number (ALS stands for Automated Licensing System). Your ALS number is your birth date (month, day, year) followed by another one-, two-, or three-digit number. Once you receive your ALS number, you can use it to check your status in license and permit drawings. If you forget your ALS number, look it up at [fwp.mt.gov](http://fwp.mt.gov) (search for "Automated Licensing System").

TOP TO BOTTOM: NEAL & MAJSHLER; FRANCIS & JANICE BERGQUIST; DONALD JONES; DON; JEREMIE HOLLIMAN

## REFUNDS

When you apply for a lottery license or permit, you pay at that time. If you are drawn, FWP mails you the license or permit. If you aren't drawn, FWP sends you a refund check minus a \$5 application fee for each license or permit you applied for (to cover printing and processing costs). FWP cannot refund a license or permit unless the licensee dies or has—and can document—a medical emergency or a death in the immediate family. The exception is with nonresident combination licenses. For those, FWP grants refunds for any reason for unused licenses turned in by August 1 (80 percent refund) or before the start of the general elk hunting season (50 percent refund). For more information, call (406) 444-2950.

## NONRESIDENT COMBINATION LICENSE ALTERNATE'S LIST

When FWP grants refunds on nonresident combination licenses, it then reissues them to nonresident hunters who have asked to be put on the "alternate's list." The odds of obtaining a combination license this way varies greatly from year to year. From mid-April to early May, you may request to be listed as an alternate (see [fwp.mt.gov](http://fwp.mt.gov) for details). FWP holds a random drawing in mid-May to determine the order in which hunters' names appear on the list. Nonresident hunters who correctly applied for that year's combination license but were unsuccessful have preference. The website allows you to check your relative position on the list throughout summer and fall.

## NONRESIDENT LANDOWNERS

Nonresidents who own land in Montana still have to put in for a nonresident combination license if they want to hunt elk on their land or elsewhere. State law stipulates that only Montana residents can buy a general elk license over the counter. However, both resident and nonresident landowners receive special opportunities in drawing certain special permits or licenses. In each hunting district, 15 percent of special permits are set aside for landowners who own 640 or more acres of land used by elk in that hunting district.

LICENSES & PERMITS

ELK HUNTING

**Drawing opportunity for youth**  
permits. Only valid in HD...  
Equipment Only.

17 - Either-sex Elk. Archery  
permits. Only valid in portion between...  
Creek.

- Either-sex Elk. Archery  
- Either-sex Elk.  
Only valid in portion between...  
Duck Creek.

Either-sex Elk. Archery On...  
Either-sex Elk.

ALS NUMBER: 1987 6  
Montana Fish, Wildlife & Parks  
License Year: 2010  
District: 0371  
Permit: 11462

Montana Fish, Wildlife & Parks  
These dates are provided only as a general reference. Check current regulations for specific dates. Visit our Web site @ [fwp.mt.gov](http://fwp.mt.gov)

**2010 Big Game Seasons**

Antelope 900 series	Aug 15–Nov 14
archery	Sep 4–Oct 8
general	Oct 9–Nov 14
Bighorn Sheep archery	Sep 5–Sep 14
general	Sep 15–Nov 28
Bison	Nov 15–5
Black bear	
spoon	

## Don't make an error

Each year FWP rejects hundreds of hunting license and permit applications because of simple errors by applicants. The most common ones:

1. forgetting to sign the application;
2. missing information on the mandatory and general portion of the application;
3. no payment, wrong amount of money, wrong form of payment (such as nonresidents paying with personal checks); and
4. missing supplemental information, such as a copy of the applicant's hunter safety certificate, if required.

# The hunt

## KILLING AN ELK

Many people accustomed to hunting deer approach elk hunting underprepared. Elk generally move farther and more frequently than deer. It usually takes more hiking, especially more uphill hiking, to reach elk areas. The caliber of rifle or type of bullet used for deer may not be enough for elk, which are much larger. Read up on calibers and loads suggested for bringing down an elk. Learn where the elk's kill zone is. Elk often don't die as easily or quickly as deer, even with a killing shot. Sometimes several shots are required. Mortally wounded elk will often walk or run several hundred yards or more before dropping.

## PACKING AN ELK OUT

A field-dressed adult bull elk weighs from 300 to 500 pounds, a cow 200 to 300 pounds, and a calf 100 to 150 pounds. That's a lot of meat to haul.

One option is to pack the entire animal out yourself. That's

easiest if you bone out the meat and make several trips to and from your vehicle. Dragging an entire elk out of the woods is nearly impossible for one person, except in the rare cases where the trip is all downhill with snow on the ground and there is no downed timber. Another option is to rent a game cart from the nearest sporting goods store. Or hire beforehand a horsepacker—get names from the local game warden, meat processor, or taxidermist—to haul out your elk.

► Spoilage: Early season hunters should know ahead of time how to prevent an elk from spoiling in warm weather. Three tips for cooling the carcass in the field: From the inside of the carcass, split the backbone lengthwise with a hatchet; cut open the hip at the socket joint; roll the carcass up onto logs to get it off the ground.

## GRIZZLY BEARS

Roughly half of Montana's elk range overlaps grizzly range. To reduce the chances of running into a bear, watch for sign such as scat and tracks, avoid thick cover, and don't become so focused on following prey that you stumble upon a grizzly. Always carry approved bear spray, keep it handy, and know how to use it. When camping, follow U.S. Forest Service food storage guidelines. If you kill an elk, be especially wary of bears as you field dress the animal and when you return to the carcass to pick up another load of meat. Learn more about safety in bear country at [fwp.mt.gov](http://fwp.mt.gov). If you are uncomfortable with the idea of hunting in grizzly country, visit the website and compare the range maps of grizzly bears and elk.

## Other information

### TROPHY BULL AREAS

Montana has many areas renowned for trophy elk—including parts of the Snowy, Judith, Big Belt, Highwood, and Bull mountains. The Missouri River Breaks and the Elkhorns have become especially well known. Hunters hoping to hunt these and other trophy areas should know it's difficult to draw a permit because so many hunters put in for one.



In the Elkhorns (HD 380), southwest of Helena, any hunter with a general elk license may hunt a spike bull. But to hunt a cow you need an elk B license, and to hunt a branch-antlered bull you need a special permit, available only by lottery drawing. Much of the private land surrounding the Elkhorns is in Block Management, which provides public access.

In the Missouri River Breaks (HDs 410, 417, 621, 622, 631, 632, 652, and 700), hunting for bulls—both for firearms and, since 2009, archery—is by permit only. Access to private land in the Breaks can be difficult, though not impossible. There are also some opportunities there to hunt cow elk.

### WHAT TO EXPECT WHEN CALLING FWP

It's fine to call FWP offices for advice on elk hunting. But don't expect staff there to tell you exactly where to find elk. Elk move around. Where they are one year—or even one day—they may not be the next. As one front desk worker at a busy regional office says, "If we knew where to get an elk easily, all of us here would shoot one every year, and that's definitely not the case." FWP staff can provide general information about public land and Block Management Areas in specific regions.

### CAMP OR HOTEL?

Figure out where you will spend nights well in advance of your hunting trip. If you plan to stay at a motel, book a room early. In some popular elk hunting spots, hotels fill up quickly and hunters book rooms up to a year in advance. If you camp, prepare for winter conditions, with freezing temperatures and snow.

### ADDITIONAL ADVICE

- ▶Bring warm and waterproof clothes. Even in September, elk areas can have snow, cold rain, and low temperatures. By November, deep snow and freezing temperatures are common. Dress in layers. Make

*Tom Dickson is editor of Montana Outdoors.*



sure your boots are sturdy, waterproof, and well broken in.

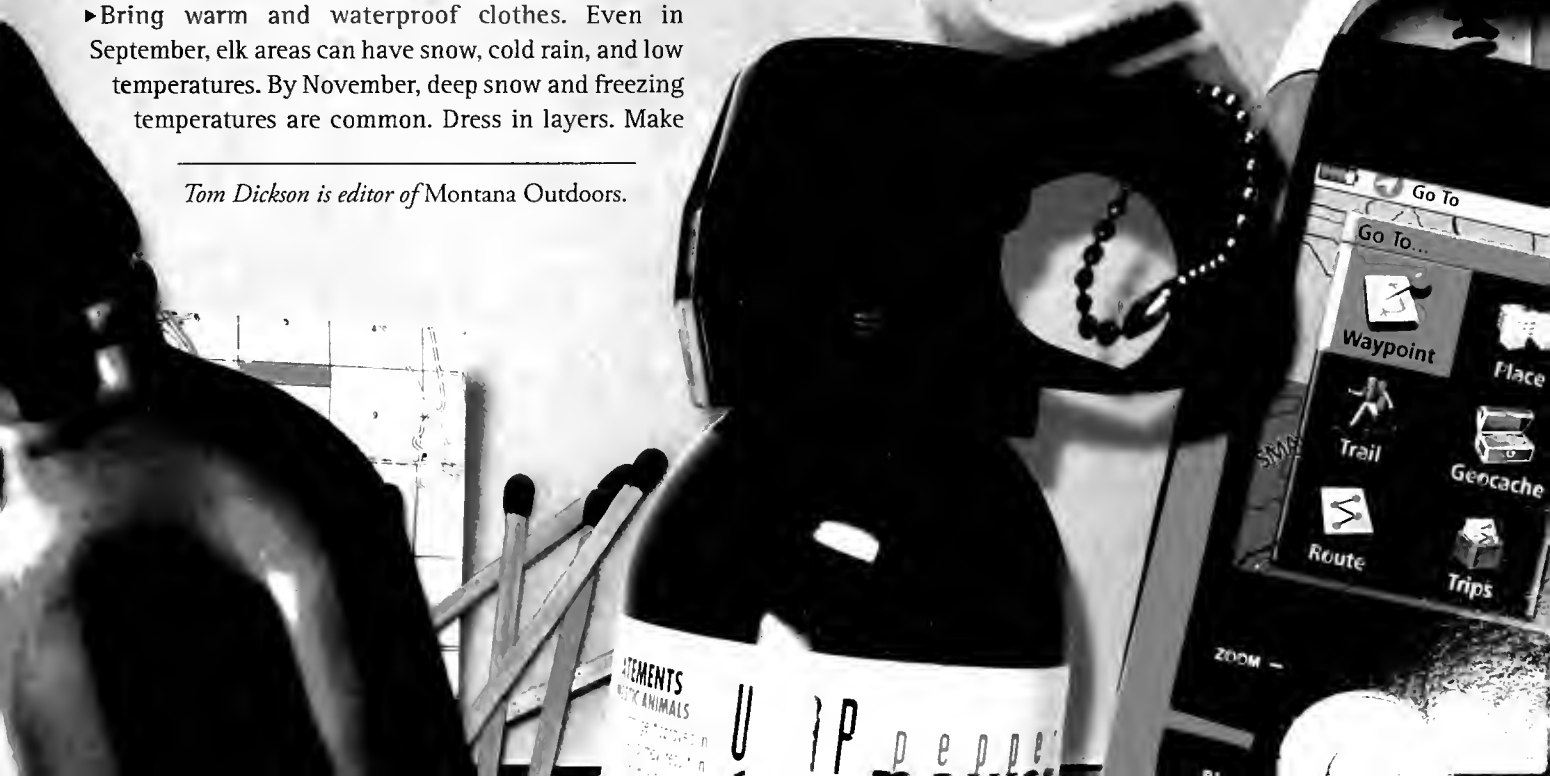
- ▶Always carry an emergency kit containing first-aid supplies, fire-starting materials, a whistle, a space blanket, and a compass in case you become injured or lost.

- ▶Carry lots of water. Dehydration is one of the most common causes of hunter fatigue and weakness, especially in the high, dry mountain air.

- ▶Have fun. And don't get discouraged. Keep in mind that most elk hunters, even highly experienced ones, don't shoot an elk every year. If you don't see elk, keep hunting. They are out there. The key to a successful hunt is having a good time, not necessarily killing an elk. 🐾



ELK



# Goodbye CRP?



Congressional cutbacks and high commodity prices are compelling landowners to convert Conservation Reserve Program grasslands—which benefit pheasants, ducks, and other prairie wildlife—back to crops. BY DAVE SMITH

Montana farmers and farmland wildlife have seen plenty of changes during the past five decades. In the 1960s, the U.S. Department of Agriculture (USDA) phased out its Soil Bank Program, which controlled commodity surpluses by paying landowners to convert croplands to grasses and other cover. The program helped boost pheasant and other grassland wildlife populations throughout the Great Plains. During the next decade, encouraged by rising grain prices and a federal government eager to increase worldwide

agricultural exports, farmers in Montana and other states plowed up millions of acres of marginally productive land and planted wheat, corn, soybeans, and other commodity crops. When grain prices tumbled in the early 1980s, farms began failing at a rate not seen since the Depression. What's more, the intensive cropping drastically increased soil erosion and chewed up grasslands that supported upland birds, waterfowl, songbirds, deer, and other wildlife. By 1985 mallard, pintail, and blue-winged teal populations were at or near their lowest levels in 30 years.

All that began to change when President Ronald Reagan signed the Food Security Act of 1985, enacting the Conservation Reserve Program (CRP). The program pays landowners to take highly erodible croplands out of production and plant them to grasses. In addition to reducing price-depressing commodity surpluses, CRP grasslands anchor soil to the landscape, reducing erosion and making streams and lakes cleaner. Another benefit has been the restoration of wildlife habitat at a scale unmatched by any state, federal, or private wildlife conservation pro-



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SHARON SHIMROV BY KEVIN RICHERT

for The Nature Conservancy (TNC) in Montana, adds that the federal farm program “provides key linkages between large blocks of native prairie” essential for populations of nongame grassland birds such as Baird’s sparrows and bobolinks. Valley County farmer Don Fast, who has enrolled marginal cropland into CRP for years, has witnessed enormous increases in pheasants, sharp-tailed grouse, and other wildlife on his property. He has also seen far less erosion throughout the county. “We forget how many dust storms we had in the 1980s, and the importance of CRP in preventing wind erosion on the lighter soils,” he says.

Despite its benefits to farmers and wildlife, CRP may be in trouble. Congress, faced with growing federal deficits, reduced the amount of acreage that could be enrolled in CRP by nearly 20 percent in 2008. Some congressional leaders claim the program—which costs \$1.7 billion per year in payments to landowners—is too expensive. Federal officials have refused to increase rental payments to keep pace with rising prices for wheat and other commodities. As a result, plowing up CRP grasslands and planting them to crops has become more attractive to farmers. The amount of CRP in Montana has declined by 11 percent since a peak in 2006, and conservation leaders fear far greater declines in the next few years.

## FLUSH WITH PHEASANTS

Farmers enroll property in CRP by entering into 10- or 15-year contracts with the USDA’s Farm Service Agency. Landowners agree to stop raising crops there and plant grasses (native or non-native), shrubs, or trees. They are reimbursed from 50 to 90 percent of the cost of the plantings along with annual payments that average, in Montana, \$32.40 per acre.

**“CRP is a huge part of the reason people come up here. It means a lot to main street businesses.”**

Pheasants Forever, Ducks Unlimited, and TNC have successfully lobbied Congress to make the program do more to protect critical habitats such as prairie pothole wetlands and duck nesting grasslands. Pheasant populations in particular have boomed under the federal program. The upland birds thrive in young stands of grass and forbs planted on CRP lands. A study by the Iowa Department of Natural Resources showed that pheasant numbers increased by nearly one-third after croplands in that state were converted to CRP grasses. Rick Northrup, statewide game bird coordinator for Montana Fish, Wildlife & Parks, says the state’s pheasant harvest has climbed from an annual average of 84,000 birds before 1985 to an average of

gram. In Montana alone, more than 3 million acres of grasslands, wetlands, and other habitats are currently conserved under CRP contracts on 6,247 farms. The state contains nearly 10 percent of the 31.2 million acres now enrolled nationally.

CRP’s benefits to wildlife have become legendary. Dave Nomsen, vice president of governmental affairs for Pheasants Forever, calls CRP “the most successful conservation program in history,” not only for roostets but also waterfowl, deer, and other game animals. Brian Martin, director of science



**FIELD OF WENT** A hunter takes aim at Hungarian partridges flushing from a CRP field edge. The federal farm program benefits a wide range of grassland bird species.

CRAIG A. UZ LARSON

124,000 annually from 1986 to 2009. “The relationship between CRP and our pheasant harvest is pretty clear,” he says.

It’s clear for ducks, too. Biologists with the U.S. Fish & Wildlife Service (USFWS) concluded that CRP lands contribute an additional 2.2 million ducks to the continental fall flight each year. Increased CRP acreage produces more grasslands where ducks nest (usually near wetlands) and makes it harder for predators such as foxes and skunks to find eggs and ducklings.

Nongame prairie bird populations would suffer without CRP, say biologists. Researchers at the University of Montana and USFWS determined that converting CRP acres to cropland in the Dakotas would cause some grassland bird populations to decline by half, and the combined populations of five species would drop by 1.8 million birds. Even with existing CRP acres, “grassland birds are declining faster than any other bird species,” says Steve Hoffman, executive director of Montana Audubon. “CRP is absolutely vital to maintaining the quantity of grassland habitat needed by species like the grasshopper sparrow that require big blocks of grass.”

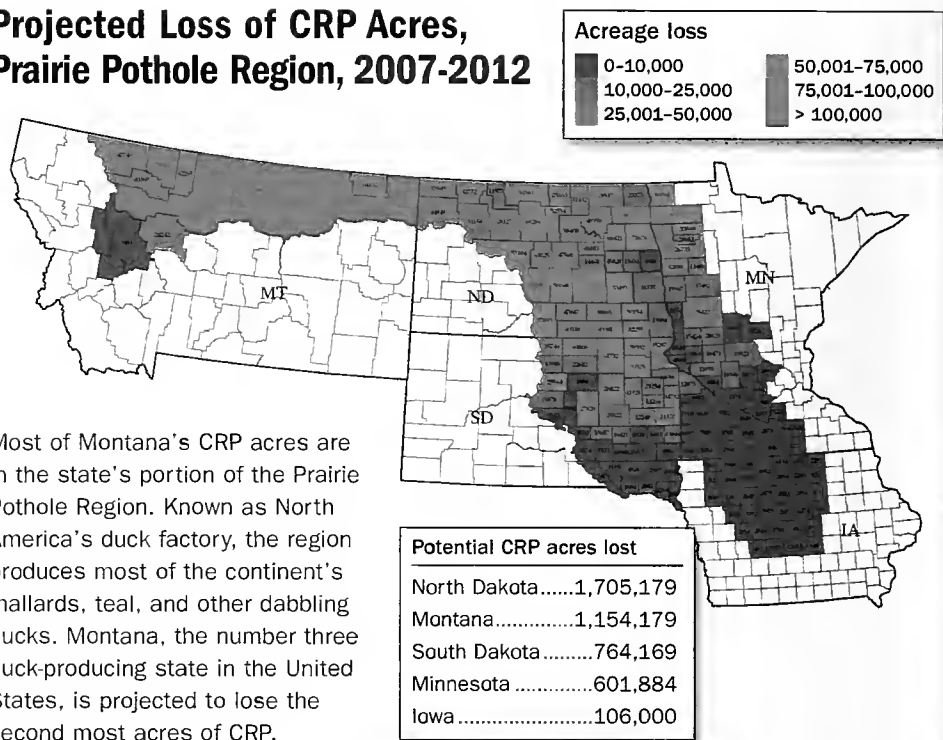
And then there are the environmental benefits. According to research by the Food and Agricultural Policy Institute at the University of Missouri, CRP reduces soil erosion on a single acre by 12.1 tons each year and prevents the annual loss of 25.6 pounds of phosphorous and 6.4 pounds of nitrogen per acre compared to an acre of cropland. The USDA has determined that CRP reduces soil erosion by 450 million tons per year nationwide. “The experiment is over,” says Pat Gunderson, FWP regional supervisor in Glasgow. “It’s clear what will happen if CRP goes away.”

### WORTH THE HIGH PRICE TAG?

Let it go away, say some critics, or improve it, say others. People in some rural communities believe the program takes too much farmland out of production, thus hindering

*Dave Smith of Missoula is a freelance writer who also works for the U.S. Fish & Wildlife Service as coordinator of the Intermountain West Joint Venture, a migratory bird program.*

## Projected Loss of CRP Acres, Prairie Pothole Region, 2007-2012



Most of Montana’s CRP acres are in the state’s portion of the Prairie Pothole Region. Known as North America’s duck factory, the region produces most of the continent’s mallards, teal, and other dabbling ducks. Montana, the number three duck-producing state in the United States, is projected to lose the second most acres of CRP.

economic growth. They argue that fewer crops mean fewer equipment dealers, seed and fertilizer sales, and other forms of agribusiness. And while applauding the program’s wildlife benefits, many hunters complain it doesn’t guarantee public access to CRP lands. Other critics maintain that the \$36 billion spent on the program over the past quarter-century could have bought millions of acres of unproductive farmland outright and permanently restored it to native grasses. If CRP vanishes, they say, taxpayers will be left with nothing of lasting value.

But CRP proponents argue that outright farmland acquisitions by the federal government are politically unpopular in many states. Nomsen notes that short-term land retirement opportunities like those CRP now provides are essential for retaining support for the program from farmers and farm state lawmakers. “A successful landscape-scale program must include a suite of options, and ten-year contracts are part of that reality,” says Nomsen. “At the same time, we do believe that opportunities exist to move some CRP acres into other programs that provide long-term wildlife and water quality benefits.”

Supporters of CRP point out that annual payments to Montana landowners total \$100 million each year. What’s more, the federal program generates tourism income for many rural areas. “CRP is extremely important to our community,” says Mike Jensen, a Sheridan County farmer and owner of Cousins Restaurant in Plentywood. “We have some of the best upland game bird hunting anywhere, and CRP is a huge part of the reason people come up here.” Based on an FWP economic analysis of upland hunting, Jensen estimates that bird hunters spend \$2 million in lodging, food, equipment, and other related costs each year in Sheridan County, which contains nearly 150,000 acres enrolled in the federal program. “CRP means a lot to main street businesses,” he says.

Still, the program’s future is by no means secure. Montana has lost nearly 400,000 acres of CRP in the last four years and contracts for another 1.5 million acres are scheduled to expire by fall 2012—a significant loss that worries conservation leaders. “Since Ducks Unlimited started in Montana in 1984, we’ve conserved 82,000 acres of habitat through a lot of hard work,” says Robert Sanders, the group’s regional biologist for Montana. “We’d have to be here for a cen-

PHOTOS BY LARRY KRUCKENBERG



**HATCHING MULTIPLE BENEFITS** CRP acres provide essential nesting grasses for waterfowl. They also create grasslands important for deer, pheasants, and prairie birds such as curlews and bobolinks, says Pat Gunderson, FWP regional supervisor in Glasgow, shown checking a CRP field enrolled in Montana's Upland Game Bird Enhancement Program. Land rich in CRP acreage attracts upland bird hunters and their pocketbooks. Mike Jensen, a farmer and the owner of Cousins Family Restaurant in Plentywood, estimates that bird hunters each year spend roughly \$2 million in Sheridan County on food, lodging, gas, and equipment.

ture to conserve what could be lost through CRP expirations in 2012."

This past August, the USDA allowed landowners their first opportunity since 2006 to renew expired CRP contracts or enroll new acres in what is known as a "general signup." Further, the federal agriculture agency recently added 150,000 acres nationwide to CRP's State Acres for Wildlife Enhancement (SAFE) initiative, which focuses on protecting critical wildlife habitats on private land. Montana's three SAFE

projects totaling 18,700 acres conserve pheasant winter cover, prairie potholes, and sagebrush habitats, says Northrup.

Nomsen and other conservation leaders who closely follow federal farm policy say the August general signup will help offset some recent CRP acreage losses. And demand by conservationists and landowners to maintain the program remains strong. But with growing nationwide unease over federal spending, congressional leaders and other policymakers may be

dubious about CRP's public costs when weighed against public benefits.

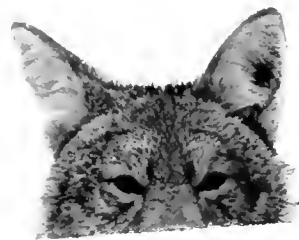
Mark Sullivan, FWP wildlife manager in Glasgow, says local hunters, bird watchers, and other conservationists understand how political winds can reroute federal farm policy. While trying to remain hopeful, they can't help but feel uneasy over CRP's future. "People around here know that if you take it off the landscape, you are taking away a lot of wildlife and a lot of hunting opportunity," Sullivan says. 🐾



# Sharing the cost of CRP plantings

Montana bird hunters are helping make CRP even more attractive to landowners—and CRP plantings more beneficial to wildlife. FWP's Upland Game Bird Enhancement Program (UGBEP), funded with upland game bird hunting license dollars, pays landowners some of the costs to seed CRP acres to bird nesting cover and maintain the plantings. Since it began in 1989, the habitat program has helped pay for grass seed on more than 100,000 acres of CRP land in Montana. "That's been a big help to landowners and also to upland bird hunters and other folks who appreciate healthy grassland bird populations," says Debbie Hohler, UGBEP biologist for FWP. Hohler adds that landowner interest in the program has grown following the recent general signup allowing new CRP enrollments.

Learn more about the Upland Game Bird Enhancement Program cost-share opportunity at any FWP area or regional office, or on-line at [fwp.mt.gov](http://fwp.mt.gov) (look under "Habitat" then "Wildlife Habitat" then "Upland Game Bird Enhancement Program").



# COYOTE WARMS

How do wildlife survive  
Montana's brutal winters?

By DAVE CARTY

Maybe the meadowlarks and mourning doves have the right idea: When the snow flies, take the first flight out of here.

So where does that leave bears, deer mice, frogs, and other wildlife when Montana's long, cold winter sets in? Like you and me, they're stuck here for the duration, dealing with it.

Grizzlies seem to have mastered the art of winter survival. The bears in and around Yellowstone National Park begin preparing for winter as early as August, when they start gorging on cutworm moths. Their appetite only increases over the next few months as they frantically consume calories—a period of intense eating known as hyperphagia—to build fat reserves. According to Kevin Frey, a Fish, Wildlife & Parks grizzly bear management specialist in Bozeman, there's not much grizzlies won't eat in the weeks before cold weather arrives. "Animal carcasses, berries, whitebark pine nuts—they're all high-protein and high-fat foods the bears are looking for to get heavy enough to make it through winter," he says.

Meanwhile, grizzlies are also digging dens, usually on north-facing slopes, which are less likely to see cycles of freezing and thawing in winter. "Otherwise, they get water leaking into their bedroom," explains Frey. The bears' metabolism undergoes dramatic changes before they enter a state of semi-hibernation known as dormancy or lethargy.



STEVE MITCHELL

"Throughout the fall, their body temperature will start dropping off, and while their food sources are diminishing, they're getting sleepier and slower," Frey says. "Their average temperature is 101 degrees. But we've captured bears in October that are already down to 97 degrees. It's kind of odd, because even though they're getting furrer, they're cooling down at the same time."

Unlike ground squirrels and marmots, which go into a near-death slumber known as deep hibernation, grizzlies and black bears awaken occasionally—notably to give birth to cubs—before drowsily falling back asleep. Then in April or May they rouse themselves for good, emerging from their dens to begin a ravenous search for food.

### UNDERGROUND SLUMBER

Many species survive winter by fully hibernating, which conserves energy by severely

**COPING WITH THE COLD** In the months leading up to winter dormancy, grizzly bears (left) and black bears go on a feeding frenzy known as hyperphagia, consuming carrion, berries, nuts, and anything else they can find. Mink (below) stay active all winter, feeding on fish, crayfish, and small mammals.



MISLOVISH PRODUCTIONS

slowing normal body functions. Ground squirrels are extreme hibernators, dropping from 200 breaths per minute to just one or two, while their heartbeat declines from 400 beats per minute to five or six. Hibernating bats also experience a dramatic drop in heart rate—from a high of 1,200 beats per minute while in flight down to just three or four during hibernation. This allows the winged mammals to survive during a time when flying insects—their regular food source—are unavailable.

Marmots, badgers, and many other mammals don't hibernate but survive by burrowing underground below the frost line, where temperatures stay above freezing. The close quarters also retain the animals' body heat. Deer mice and meadow voles stay warm by digging extensive tunnels under the snow. The earth's ambient temperature combined with insulation provided by snowpack keep them relatively warm all winter. Voles and mice eat seeds, sedges, and other bits of food they cached in summer along with additional morsels they find while moving under the snow. During extreme cold snaps, several deer mice may curl up together for commu-



**SLIPPERY SURFACE** A thick, woolly coat helps bison endure cold temperatures that would kill many other animals, but their hard hooves make it tough to negotiate icy conditions.

KENTON ROWE



nal warmth and doze for a few days. When temperatures ease, they resume their hyperkinetic search for food.

The American pika is another animal that survives winter underground—actually, under rock. These gerbil-sized mammals live in boulder fields and talus slopes in high alpine areas. In late summer they harvest grasses much as ranchers do, building up “hay” supplies. In winter they squeeze into rock burrows and live off the cured vegetation stored near the entrance. Because pikas do not hibernate, skiers in high-country areas occasionally spot them sunning themselves on rocks during warm winter days.

Even more active in winter are beavers, which live in ice-covered ponds created behind the dams they build. As fall days get shorter, beavers construct a lodge of mud, sticks, and grass. The structure, impenetrable to predators, has several underwater entrances that allow the rodents to swim to submerged cottonwood and aspen saplings that they cut and stored the preceding sum-



**PUTTING UP HAY** In early fall, American pikas cut grasses and forbs then store their “hay stacks” near the entrances of rocky burrows, feeding on the cured vegetation throughout winter.

STEVEN ANGE

mer. A thick, lustrous coat of fur and a layer of fat keep beavers warm in icy water just a few degrees above freezing.

Insects, amphibians, and other cold-blooded animals are among the first to go dormant before winter’s onset. They can’t afford to wait too long or cold temperatures will slow them down before they can find a suitable place to hole up. For instance, by September snakes often gather in communal dens, called hibernacula, in rocky areas deep below the frost line, sometimes in groups of dozens or even hundreds.

According to zoologist Bryce Maxell, interim director of the Montana Natural Heritage Program, most of Montana’s salamanders and toads overwinter below the frost line in burrows they dig themselves or ones constructed by other species. The plains spadefoot toad, for example, digs down as deep as 20 feet below the surface of

loose, sandy soils. Montana’s two native aquatic frog species, the northern leopard frog and the Columbia spotted frog, overwinter below the ice of lakes and ponds for up to nine months each year, absorbing oxygen from water through their skin. A few Montana frog species can actually survive being partially frozen above ground. Their livers produce glycerol, which acts as a natural antifreeze that prevents the formation of damaging ice crystals within individual cells while the spaces around the cells freeze. As much as 65 percent of a frog’s body can freeze solid repeatedly throughout winter with no apparent ill effects.

#### HEARING DINNER

Many species are able to endure winter living entirely above ground. Weasels, foxes, and coyotes survive by wearing a thick fur coat and eating mice and voles, which they scent through air shafts in snow tunnels. They also find the small rodents by listening to the sounds of scurrying beneath the snow.

Birds of prey are especially good at this. Impossible as it might seem, some raptors can actually hear a mouse beneath a blanket of snow when perched in a tree or even circling in the frigid winter air above. In fact, Montana’s rodent population actually attracts snowy owls and rough-legged hawks each winter from nesting grounds on tundra in the Arctic. Long after most of the state’s songbirds and waterfowl have fled Montana in search of warmer weather, rough-legged hawks and snowy owls migrate in—looking for food.



ROD SCHLECHT

**OTHER STRATEGIES** Tiger salamanders escape the cold by moving to underground rodent burrows below the frost line or deep inside rotten logs. Rough-legged hawks actually migrate *into* Montana each winter from northern Canada. In our relatively mild climate, the hearty raptors feed on rodents they can hear, even while flying, scurrying along tunnels beneath the snow.



ANDREW MECHEN

# It would be nice, at least once in our lives, to spend winter somewhere warm.

Typically, rough-legged hawks show up around late October in valleys and prairies across the state. They're a ubiquitous winter raptor that Montanans see regularly during the cold months. Snowy owls are far less common. Their southern migration into Montana typically stops somewhere around U.S. Highway 2, a region infamous for bitter winters. According to Denver Holt, a snowy owl expert and founder of the Owl Research Institute near Charlo, the cold doesn't bother these birds, thanks to their extraordinary feather insulation. He describes their feathers as "second only to Adeline penguins for insulative value and comparable to arctic fox and Dall sheep for mammals."

*Dave Carty is a frequent contributor to Montana Outdoors.*

Just as hunger drives snowy owls and rough-legged hawks down from the Arctic, it pushes many ungulates down from the mountains. Elk and deer spend their summers in high-elevation areas where grasses are abundant and temperatures stay cool. When the snow flies, they head downhill into foothills and open valleys. Most congregate in open grasslands, where strong winds sweep the underlying grass free of snow. Julie Cunningham, FWP area wildlife biologist in Bozeman, says migrating elk move quickly when cold weather hits. "They don't dawdle; they pick up and go," she says. "We've had GPS collars taking locations every half hour, and what they show is there's not a lot of resting or stopping. Elk have a destination in mind. It could be 70 miles away, and they will just go until they get there."

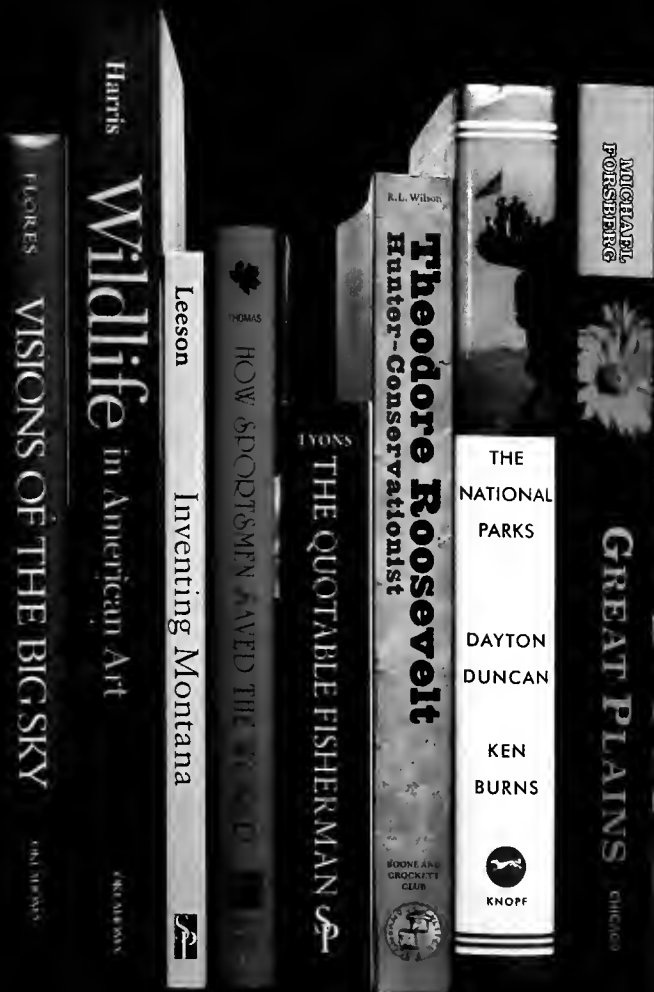
Deep snow and bitter cold are major problems for wintering elk. Snow covers grass and hinders their movement, causing the animals to burn up precious calories as they wade through deep drifts. During severely cold winters, elk in open, windswept areas bed down in tight groups or move back up into dense timber, where conifers provide some insulation. Elk also seek south-facing mountainsides and sunny slopes, where they can stay as warm as possible.

As elk, deer, and other mountain species move down in elevation, dusky (blue) grouse, strangely enough, insist on doing the opposite. In early fall these timber birds forage along the edges of mountain meadows, stuffing themselves with grasshoppers, berries, and the leaves of wild strawberries and other forbs. When the thermometer drops and snow buries their foods, dusky grouse actually migrate farther uphill to high-elevation stands of Douglas-fir. There they spend winter feeding almost exclusively on conifer needles.

Ruffed grouse also must adapt when snow covers their foods. But instead of moving to higher elevations, they stick close to home and feed in trees on aspen and alder buds throughout the winter. At night, perhaps taking a cue from voles and deer mice, they burrow into the snow, using its natural insulation to stay warm. During dry winters when snow is sparse, ruffed grouse are forced to roost in conifers, which are much colder dwellings and expose them to raptors.

I sometimes wonder if, like me, those shivering ruffed grouse and other wild creatures ever consider joining migrating meadowlarks and mourning doves in September. It would sure be nice, at least once in our lives, to spend winter somewhere warm. 🐻





## RECOMMENDED READING

Several new books we thought would interest *Montana Outdoors* readers.

BY TOM DICKSON

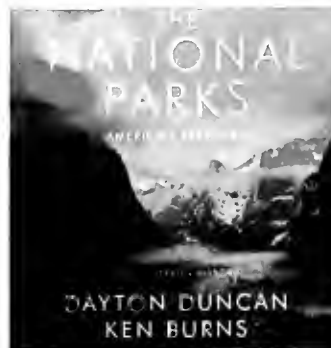
### **The National Parks:** America's Best Idea

Dayton Duncan and Ken Burns.

Alfred A. Knopf, 432 pp. \$50

Historian Wallace Stegner once observed that national parks are "the best idea we ever had," and it's hard to read *The National Parks* and not agree. This massive, richly illustrated history of the national park system can give the reader goosebumps. It was written by Ken Burns and Dayton Duncan, filmmaker and writer, respectively, of the acclaimed 12-hour PBS series of the same name that ran earlier this year. The authors delve into the origins of the national park concept, starting with the first sighting by white men in 1851 of the valley that would become Yosemite and the creation of the world's first national park at Yellowstone in 1872. It's inspiring stuff.

Montanans intimately familiar with Yellowstone and Glacier national parks are reminded that the park system extends far beyond the Rockies, to Haleakala in Hawaii to Acadia in Maine to the Everglades in Florida.



In addition to historical photographs and documents, lavish color photographs, and lyrical prose, the authors include interviews with writers and conservationists, such as Paul Schullery of Red Lodge, who provide additional insight into park history and how Americans today view what John Muir called "nature's sublime wonderlands, the admiration and joy of the world."

### **Visions of the Big Sky:** Painting and Photographing the Northern Rocky Mountain West

Dan Flores. University of

Oklahoma Press, 234 pp. \$35

University of Montana history professor Dan Flores brings to *Visions of the Big Sky* a scholar's insight into the artistic tradition of depicting the diversity and richness of the Northern Rockies. The book features 140 color and black-and-white images ranging from prehistoric rock art to modernistic paintings. Flores explains how artists interpreted the region in their work, paying particular attention to women artists such as Fra Dana and Emily Carr.

In his final essay, "What Was Charlie Russell Trying to Tell Us?" Flores concludes that Russell's paintings of Indians, cow-punchers, and trail riders "tell us that restoring the West is something every westerner who loves the Big Russell vision ought to embrace personally." ▶▶

**The Quotable Fisherman**

Nick Lyons. Skyhorse Publishing, 208 pp. \$14.95

No pastime, not even baseball, has inspired more literature—and quotable words of wit and wisdom—than fishing. In *The Quotable Fisherman*, renowned fishing writer and editor Nick Lyons, former publisher of Lyons Press, has compiled more than 350 memorable quotes expressing the passion and pleasure of angling.

The authors whom Lyons quotes run from the

venerable Izaak Walton (“...’tis not all of fishing to fish.”) to the irreverent Ed Zern (“Fishermen are born honest, but they get over it.”) and include several Montanans, such as Thomas McGuane (“Young anglers love new rivers the way they love the rest of their lives. Time doesn’t seem to be of the essence and somewhere in the system is what they are looking for.”) This book will entertain anyone who fishes and thinks about fishing. You can quote us on that.

**Inventing Montana:**

*Dispatches from the Madison Valley*

Ted Leeson. Skyhorse Publishing, 256 pp. \$24.95

Most books written about Montana are by native residents or immigrants who’ve put down roots here for good. Ted Leeson is neither. He lives and works in Corvallis, Oregon. Every summer for the past two decades, he and a group of close friends return to an old ranch house overlooking the Madison River and spend a month fishing, reading, and conversing, as well as marveling at the surrounding landscape. “What roots I have here, if they can be said to exist at all, run no deeper than those of a potted plant,” he writes in *Inventing Montana*. Yet from his perspective as a longtime visitor, Leeson sees Montana differently. Because his time here is so short, Leeson’s impressions and interpretations become more acute. To be sure, he admits, his experience here is limited and selective. “At the same time,” he

adds, “while skimming the cream from a pail of fresh milk may not qualify you as an expert in dairy farming, the cream itself is perfectly authentic and your appreciation of it genuine. There is a version of knowing that comes with extreme loyalty.”

**Wildlife in American Art: Masterworks from the National Museum of Wildlife Art**

Adam Duncan Harris. University of Oklahoma Press, 287 pp. \$35

Wildlife art often gets panned by critics as not being “artistic.” But anyone who has visited the National Museum of Wildlife Art in Jackson, Wyoming, surely understands that wildlife painters and sculptors often transcend mere documentation to convey ideas and emotions about wild animals, natural history, wilderness, and the relationship between humans and the natural world. In other words: art.

*Wildlife in American Art* includes more than 125 full-color illustrations that highlight the

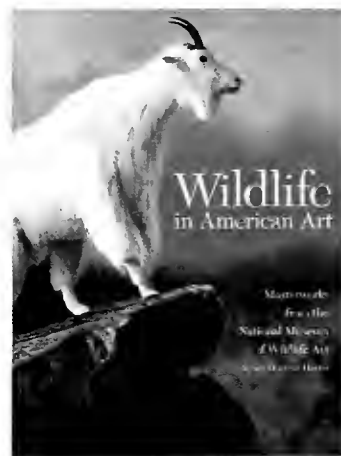
entire range of the museum’s collection over two and a half centuries, up to modern interpretations of wildlife by Andy Warhol and Robert Kuhn. The book also examines the history of wildlife art in America in a series of essays by Adam Duncan Harris, the museum’s curator. He charts the tradition of depicting America’s fauna, which began as early as 2500 BC, with small bird sculptures made of native rock by Great Lakes region Indian tribes, and still thrives today.

**Theodore Roosevelt: Hunter-Conservationist**

R. L. Wilson. Boone & Crockett Club, 295 pp. \$39.95

Ken Burns’s documentary *The National Parks* on PBS last spring and Timothy Egan’s highly acclaimed book *The Big Burn: Teddy Roosevelt and the Fire That Saved America* have stirred public interest in the nation’s irreplaceable 26th president.

Theodore Roosevelt accomplished much during his remarkable life—writing more than a dozen books, surviving an assassination attempt, and winning the Nobel Peace Prize—but his greatest legacy is conservation. He played a significant role in creating 150 national forests, five national parks, and 18 national monuments, conserving 230 million acres across the United States. That conservation ethic, as detailed by R. L. Wilson in his richly illustrated biography *Theodore Roosevelt: Hunter-Conservationist*, grew from Roos-





evelt's love of hunting and wilderness. Many Americans continue to grapple with the seeming paradox of a hunter who loves wildlife. Roosevelt killed thousands of animals in his lifetime. Yet he helped protect and conserve lands that sustain millions of wild creatures in perpetuity. Wilson's book, which won a gold medal for biography from the Independent Book Publishers Association, captures Roosevelt's joy of life and concern for the world while documenting a lifetime of hunting across the United States and his famous safari in Africa.

### **Great Plains: America's Lingerin' Wild**

Michael Forsberg. *The University of Chicago Press*. 256 pp. \$45  
Draw a line from Shelby to Great Falls to Billings. All of Montana to the east—nearly two-thirds of the state—is part of the Northern Great Plains ecosystem.

Interestingly, most Montana tourism promotions and coffee-table books depict the state as a series of sparkling trout rivers flanked by snowcapped peaks. The fact that far more of Montana is in the Great Plains than the Rocky Mountains

makes *Great Plains* important reading and viewing for those wanting to fully understand the Treasure State.

Michael Forsberg, a Nebraska photographer published regularly in *National Geographic*, loves the prairie's minimalist landscape. His book is filled with lyrical images of a mostly horizontal environment, where people, wildlife, and landscapes are shaped by wind and weather. Adding to the reader's understanding of the vast region are thoughtful essays by geographer David Wishart, poet Ted Kooser, and writer-rancher Dan O'Brien.



### **How Sportsmen Saved the World: The Unsung Conservation Efforts of Hunters and Anglers**

E. Donnell Thomas Jr. *Lyons Press*. 240 pp. \$24.95  
You may not know it from reading books and magazines produced on the East and West coasts, but the modern environmental and conservation movements grew—and continue to prosper—from work by hunters and anglers to protect wild places. In *How Sportsmen Saved the World*, Lewistown physician, part-time Alaskan hunt-

ing guide, and acclaimed outdoors writer E. Donnell Thomas Jr. details the history of the American conservation movement. He begins with how market hunting nearly wiped out many North American big game populations. He then documents efforts by early hunter-conservationists such as George Bird Grinnell and Theodore Roosevelt to pass legislation to protect land and regulate hunting. Thomas also devotes much attention to life-long hunter Aldo Leopold, who popularized the concept of ecology, helped establish The Wilderness Society and The Wildlife Society, and created in *A Sand County Almanac* compelling and enduring arguments for conserving land, water, and wildness.

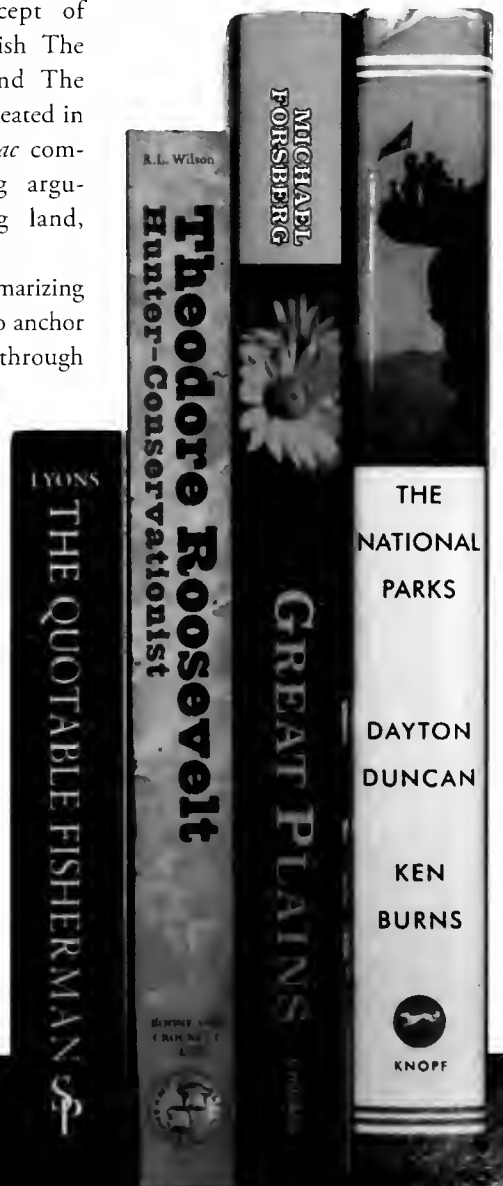
Thomas ends by summarizing how hunters continue to anchor wildlife conservation through what wildlife biologists are now calling the North American Wildlife Conservation Model. The North American model is based on seven principles, such as maintaining wildlife as a public resource, allowing all citizens an equal right to hunt, and conserving wildlife according to both scientific principles and democratic principles of law. Writes Thomas, "As applied in the United States and Canada,

[these seven principles] have given us healthy, free-ranging, unfettered populations of wildlife unequaled anywhere else in the world."

### **Wild Horses of the World**

Moira C. Harris. *Octopus Books*. 176 pp. \$24.99

This captivating natural history book includes chapters on the American mustang, Australian brumby, Mongolia Przewalski horse, and the ponies of Europe and the British Isles. 🐎





**JANUARY-FEBRUARY 2010**  
Annual photo issue

**MARCH-APRIL 2010**

**Ice Fishing Gets Civilized** Electronic fish locators, portable ice houses, and other technological advances are making this once-brutal winter sport downright enjoyable. *By Tom Dickson*

**Following the Great Floods** When Glacial Lake Missoula exploded through an ice age dam, the deluge flooded much of the Pacific Northwest. Evidence of that cataclysmic event is still visible in parts of western Montana. *By Becky Lomax*

**A Steady First Step** What Montana learned from its first regulated wolf hunting season. *By Tom Dickson*

**Leave No Trace for All** Backcountry hikers and backpackers have embraced this national ethics and education program. Will other outdoor recreationists follow suit? *By Bill Schneider*

**Additional and Essential Eyes and Ears** Volunteer citizen scientists across Montana help gather vital information for wildlife and fisheries research projects. *By Becky Lomax*

**Conserving Wildlife (and Culture) on the Flathead Indian Reservation** The Confederated Salish and Kootenai Tribes use the latest science to successfully manage grizzlies, deer, swans, falcons, and other species in harmony with traditional values. *By Daryl Gadbow*

**MAY-JUNE 2010**

**Prospecting Small Trout Streams** Leave Montana's famous rivers to the teeming hordes. Creeks and minor tributaries are where an angler can find fly-fishing solitude these days. *By John Barsness*

**Keeping the Invaders at Bay** Aquatic invasive species degrade ecosystems, hamper recreation, and cost businesses a bundle. Can they be contained? *By Tom Dickson*

**Tiny Fish under Big Skies** Why minnows matter. *By Tom Dickson. Illustrations by Joseph Tomelleri*

**Canyon Ferry's Balancing Act** Trout, walleye, and perch anglers on the sprawling reservoir want more and bigger fish. Is that possible, given the ecological limits of the lake and the complex relationships among species? *By Eve Byron*

**Where There Is Rock Writing** Visitors to Pictograph Cave State Park will discover a site rich in scenic beauty, prehistoric images, and early American Indian culture. *By Michelle Murphy*

**JULY-AUGUST 2010**

**10 Trails You Have To Try** From rain-soaked cedar forests to sun-drenched prairies, these day hikes take you to some of the state's most scenic sites. *By Becky Lomax*

**Keeping the Grass in Grasslands** How Montanans are conserving the state's remaining native prairie. *By Scott McMillion*

**Pretty Ugly** Hating the beautiful hawkweed. *By Rick Bass*

**Picking Up After Others** Concerned citizens team up with FWP and other public agencies to clean trash from the Blackfoot, Bitterroot, and Clark Fork rivers. *By Pamela J. Podger*

**Awaiting the Trumpeter's Return** Over the past six years, 140 trumpeter swans have been reared and released in the Blackfoot Valley. Now the majestic birds face power lines, illegal shooting, and other dangers as they try to return home. *By Nick Gevock*

**Why the Deer and the Antelope Play** When wild animals goof off, they may be doing more than just having a good time. *By Sam Curtis*

**Here It Is** Small signs help hunters, other recreationists, and landowners by showing exactly where state and federal parcels begin and end. *By Tom Dickson*

**SEPTEMBER-OCTOBER 2010**

**The Early Season** Crossing the Divide into bird hunting heaven. *By Rick Bass. Illustrations by Stan Fellows*

**Lucky Sons of a Gun** Winning a SuperTag—and with it a Montana big game hunt of a lifetime. *By Dave Carty*

**Family Reunion** Photo essay

**My Mountain, My Self** Finding more than elk in a backcountry wilderness. *By Ben Long*

**A Secret No More** The word is out: Most of Montana's 334 fishing access sites are open to public hunting. *By Bob Gibson*

**It's Time** After a lifetime of pursuing big game trophies from Missoula to Anchorage, 83-year-old Mavis Lorenz hands her rifle over to the next generation. *By Noelle Naiden*

**Hitting the Target** FWP grants are helping communities create family-friendly shooting range facilities. *By Dave Carty*

**Walk a Mile in My Boots** A new FWP project helps hunters and landowners understand each other's perspective on issues related to public hunting on private land. *By Scott McMillion*

**NOVEMBER-DECEMBER 2010**

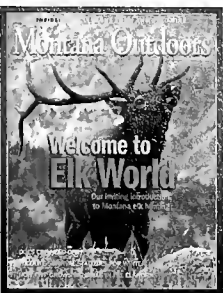
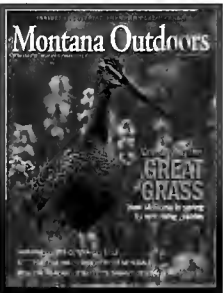
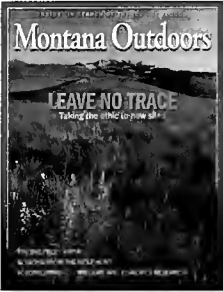
**The Great Fire of 1910** How the Big Burn shaped the nation's fire-fighting policy and transformed a 4,700-square-mile landscape in northern Idaho and western Montana. *By Michael Jamison*

**Living Up to Its Name** How controversial hunting regulations restored big bulls to the Elkhorn Mountains. *By Lee Lamb*

**Welcome to Montana Elk Hunting** Advice for residents and nonresidents on learning where to hunt, finding reliable information, and negotiating the licensing and permitting process. *By Tom Dickson*

**Goodbye CRP?** Congressional cutbacks and high commodity prices are compelling landowners to convert Conservation Reserve Program grasslands—which benefit pheasants, ducks, and other prairie wildlife—back to crops. *By Dave Smith*

**Cold Warriors** How do wildlife survive Montana's brutal winters? *By Dave Carty*



**MONTANA OUTDOORS ARTICLES ON-LINE**  
All stories from 2002–2010 issues are available on-line at [fwp.mt.gov/mtoutdoors](http://fwp.mt.gov/mtoutdoors).

The complete archives of *Montana Outdoors* and predecessor publications (*Montana Wild Life*, *Sporting Montana*, and *Montana Wildlife*) dating back to 1928 are available on-line at [archive.org](http://archive.org).

**BACK ISSUES**

Back issues are \$3.50 each. Send your request along with payment to:

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Helena, MT 59620-0701



# White-tailed Jackrabbit

*Lepus townsendii* BY TOM DICKSON

longer ears and feet. In addition, hares are solitary animals (except during breeding season), while rabbits live in social groups. Another difference is that rabbits are born blind, hairless, and helpless, while newborn hares have hair, can see, and are able to move about. Both rabbits and hares have short tails and breed prolifically. White-tailed jackrabbits bear up to four litters of four or five young each year.

Montana has four true rabbits—pygmy rabbit, desert cottontail, mountain cottontail, and eastern cottontail—and three hares—white-tailed jackrabbit, black-tailed jackrabbit, and snowshoe hare.

The whitetail is yellowish-gray, has a distinct white tail, and turns all white in winter except for its ear tips, which remain black. The blacktail is gray to blackish, has a black tail, and does not change color in winter.

White-tailed jackrabbits are one of the world's largest hares, second only to the Alaskan hare. They are 2 feet long from their nose to their 3- to 4-inch-long stubby tail, and weigh 6 to 10 pounds.

Because of the animals' large ears, early settlers called them "jackass rabbits," later shortened to jackrabbit. Its large ears allow a jackrabbit to hear exceptionally well. Also, the ears are filled with blood vessels that release body heat in summer, keeping the animal cool when temperatures rise.

## HABITAT AND RANGE

White-tailed jackrabbits live in grasslands and shrublands throughout Montana except in the far northwest. They are most common in open grassland plains east of the

Continental Divide. (In Montana, black-tailed jackrabbits live only in the state's far southwestern corner.) Though information on white-tailed jackrabbits is scarce, the population appears to be doing fine.

## SPEED

Like the pronghorn, whose open grassland range it shares, the white-tailed jackrabbit relies on eyesight and speed to avoid coyotes, bobcats, foxes, golden eagles, and other predators. A frightened jackrabbit can cover 30 feet in one leap and reach speeds of up to 35 mph in short bursts. As it bounds along, it regularly jumps 3 to 4 feet high, apparently to get a better view of its pursuer. When captured by a predator, a jackrabbit fights back by kicking with its powerful hind legs.

## HABITS

During the day, a white-tailed jackrabbit rests in a "form," a shallow pit in the earth under grass clumps or shrubs. It hides there all day, ears flat on its back. Jackrabbits begin foraging in the low light of evening, hopping across open areas or following trails made by other jackrabbits through sagebrush. Foraging continues all night, especially when the moon is out. In early morning jackrabbits return to resting forms to wait out the day.

## FOOD

Jackrabbits are herbivores that eat grasses and forbs (flowering plants) in spring and summer and the buds, twigs, and bark of woody shrubs in winter. They also eat crops such as alfalfa, making them pests to some farmers. Like other hares (and rabbits), jackrabbits eat their initial feces, which are soft, green, and rich in B vitamins. Subsequent feces, dry and dark brown with no nutritional value, are not consumed. 🐰

**W**hile we're hunting late-season pheasants, my dog often flushes what at first look like small, white deer. The creatures burst from sagebrush or brushy ravines and race across the landscape. As a pup, Simon tried to catch them, but after a dozen failed attempts he gave up and now runs half-heartedly for only a few hundred yards. The white-tailed jackrabbits, which can outrun any dog except a greyhound, slow down too, bounding along just ahead of him.

## IDENTIFICATION

Jackrabbits are technically hares, not rabbits, though both look similar and belong to the same family, Leporidae. Hares are generally larger and faster than rabbits and have

*Tom Dickson is editor of Montana Outdoors.*

## PARTING SHOT



**SPRING ALREADY?** A captive grizzly emerges from its den after spending several months in a state of semi-hibernation known as dormancy. Learn how bears and other wildlife survive winter on page 32. Photo courtesy of Devin Manky, Grouse Mountain Resorts.



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