

Where Are All the Elk?

FWP researchers found them. Now they're trying to figure out how to get the animals back onto public land. **By Tom Dickson**

For most of the 35 seasons that Mike Harmon has been hunting elk in the Taylor Fork, a drainage of the upper Gallatin Valley near Yellowstone National Park's northwestern corner, he was confident that all five or six members of his hunting party would fill their tags. "We'd hunt hard, but eventually every one of us would get a bull," says Harmon, who lives near Three Forks.

That long string of success began to unravel in the late 1990s and early 2000s. Though the group continued to kill an occasional cow elk or spike bull, the days when everyone in the party would head home with a mature bull were long gone. "We started to go days without cutting a track," Harmon says. "It got kind of eerie."

Harmon and his hunting buddies are not alone.

Each year across Montana's elk range, more hunters are reporting fewer elk on state and federal lands, especially national forests. Yet when FWP biologists conduct winter aerial counts of elk, they see as many, in most areas, than ever. In fact, populations are over "objective"—the number that biologists believe the habitat will support and landowners will tolerate—in 50 percent of elk hunting districts.

The striking disparity between what hunters see while hunting public land and the actual number of elk in their hunting district raises questions that strike at the heart of Montana big game hunting and management: Where are those elk going? Why? And is there any way to get them back?

Private Land Magnet

For several years Julie Cunningham, FWP wildlife biologist in Bozeman, had been hearing from hunters who could no longer find elk in the Taylor Fork, a nationally known

hunting area that historically held 1,600 elk during fall and early winter. She set out to learn when and to where the animals were moving, and how that compared to previous decades. Cunningham and senior research biologist Ken Hamlin, now retired, compared elk locations of the Madison Range herd documented by FWP biologists from 1976 through 1986 to locations documented in 2005-06 by FWP crews and a Montana State University graduate student. During both periods, elk summered high in mountain meadows of the Madison Range (the Upper Gallatin) and stayed there through August (see maps on page 37). As is common with elk, cooler weather in fall pushed some of the animals downhill—in this case west into the Madison Valley. But in the 1970s and '80s, many elk still remained in the high timber, and when rifle season opened in late October, the animals were accessible to hunters in the Gallatin and Beaverhead-Deerlodge National Forests. Those elk did not move to winter



PHOTO ILLUSTRATION BY LUKE DURAN/MONTANA OUTDOORS

DISAPPEARING ACT Hunters report seeing fewer elk on national forests. Yet FWP winter surveys show as many or more elk in most hunting districts than ever. In recent years researchers have been following the "missing" elk to see where they go.

range until cold weather set in, often as late as December or January.

By 2005-06, all that had changed. Cunningham and Hamlin found that by mid-October, just before the rifle opener, more than half the elk had already moved down to the Madison Valley. There they settled on a growing number of private ranches off-limits to public hunting or on national forest tracts behind the ranches, miles from public roads and access. By November—during the heart of the hunting season—almost every elk had vanished from the Upper Gallatin. “No wonder hunters in the Taylor Fork weren’t seeing elk,” says Cunningham. “They’d been down in the valley for weeks.”

What Cunningham documented has also occurred across other western Montana national forests, says Eric Tomasik, regional wildlife program leader for the U.S. Forest Service Northern Region in Missoula. “Historically, you’d likely see elk [on national forests], at least if you were willing to hike a bit,” he says. “Now in many areas you might not see any. Then you get up on a ridge and look down in the valley and glass an entire

Tom Dickson is editor of Montana Outdoors.

“It’s basically a risk analysis by elk. They generally prefer to go down to private land with limited hunting access rather than stay in forests where vegetation may be more sparse and hunting pressure is greater.”

herd on private land. It’s frustrating.”

And not just for hunters. “Without the tool of public hunting, we as an agency can’t meet our legal responsibilities of managing Montana’s elk herds in the public trust,” says Ken McDonald, head of the FWP Wildlife Division. “What that means for many livestock operations is more depredation problems, and for public hunters less access to big game. It’s become one of the biggest wildlife management problems in Montana.”

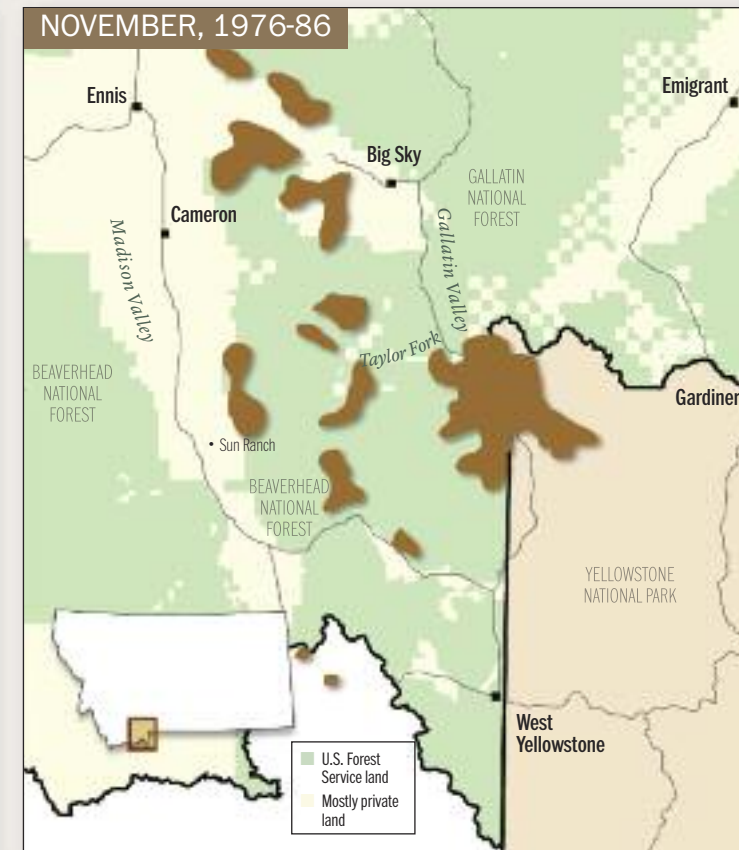
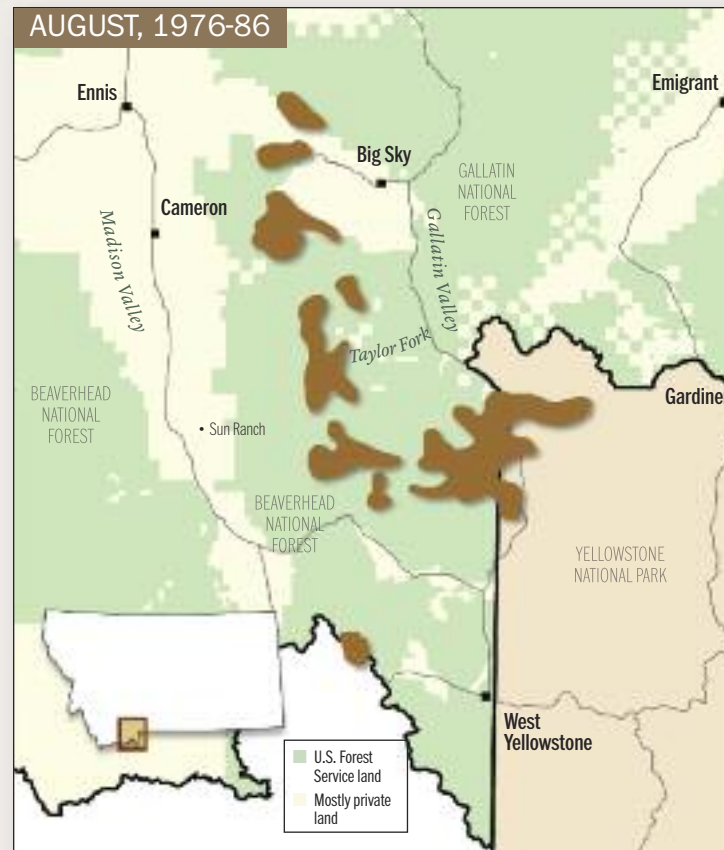
The Main Driver

What changes over the past two decades have caused the new elk behavior? Possible reasons, say wildlife officials, are more irrigated bottomland attracting elk, greater hunting pressure on public land, wolves and other large carnivores more abundant in the

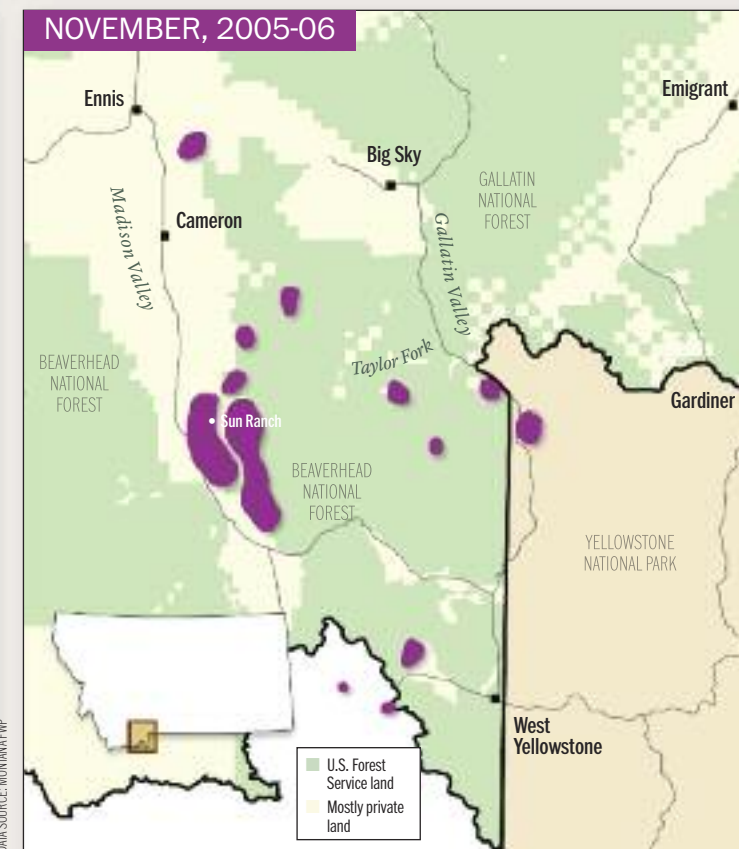
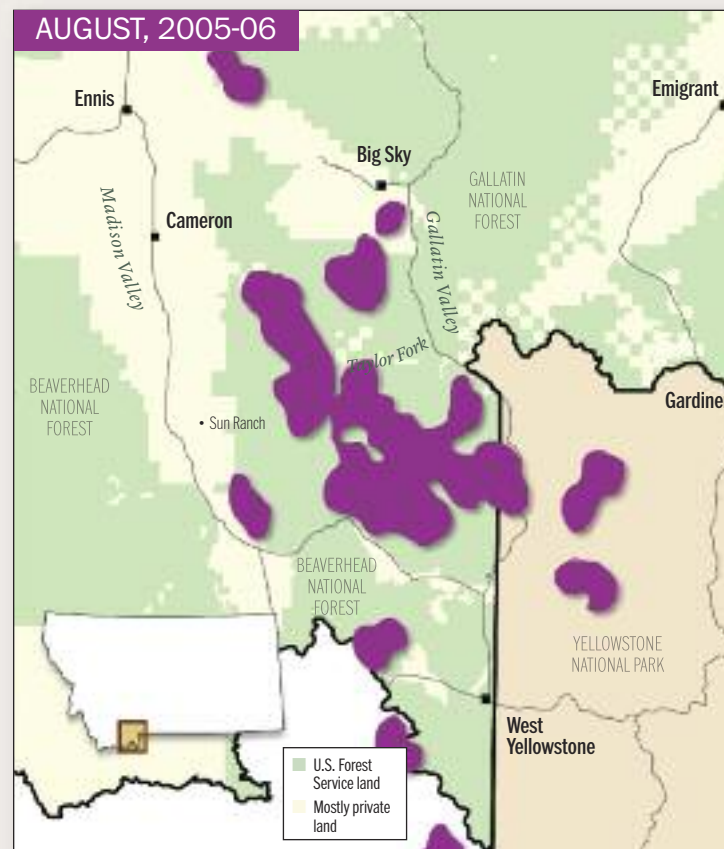
mountains than the valleys, and less grass and other forage in forests due to fire suppression and logging curtailment. “But the main driver seems to be the massive change in land ownership starting in the mid-1990s,” Cunningham says. “It went from working ranches that usually allowed public hunting to ‘amenity’ ranches owned by people who did not want public hunting. It’s not surprising that elk have figured out that the best place to spend the hunting season is where hunters are not allowed.”

To find out if the elk movement documented in the Madison is taking place elsewhere in Montana’s elk range—and, if so, what contributes to that behavior—FWP conducted several elk movement studies. For one project, led by Bozeman-based FWP research scientist Kelly Proffitt, researchers

PHOTO BY JESSE LEE VARNADO, INFOGRAPHICS BY LIME DURAN/MONTANA OUTDOORS



LEARNING TO AVOID HUNTERS Above: The maps show, in brown, general elk locations in August and November during various study years from 1976 to 1986. The locations show elk summering in the Beaverhead and Gallatin National Forests. By start of the firearms elk season in November, most of the elk were still on the national forests, accessible to public hunting. Below: The maps show, in purple, general elk locations in August and November in 2005 and 2006. Elk continue to summer in the national forests, as was the case 20 to 30 years before. The big change comes in November. Now elk have moved almost completely out of the national forests and congregated on the Sun Ranch and other private land generally off-limits to public hunting. “Elk aren’t stupid,” says one Forest Service biologist. “They go where it’s safe and there’s lots of food. These days that means private bottomlands that are closed to public hunting.”



DATA SOURCE: MONTANA FWP



BAD MIX In addition to grazing pasture and eating haystacks, elk in some areas pose a brucellosis risk to livestock during spring calving season when the animals may mingle. Private land closed to hunting allows elk to settle into bottomlands, increasing opportunities for transmitting disease.

captured and radio collared 45 cow elk in the western Paradise Valley and followed 49 cow elk previously collared in the Madison Range. Researchers tracked the animals, recording 190,000 separate locations and documenting factors that might cause them to move or stay put. Factors included the ratio of public to private land, human hunting pressure, presence of motorized vehicles, wolf densities, and the amount of forest hiding cover (200-acre parcels of high-elevation timber at least a mile from roads, where elk can escape hunting pressure).

One surprising new finding was that elk were less likely to use hiding cover in national forests than previously believed, unless it was far from motorized vehicle traffic. "It's basically a risk analysis by elk," says Proffitt. "They generally prefer to go down to private land with limited hunting access and longer growing seasons rather than stay in forests, where vegetation may be more sparse and hunting pressure by humans is much greater, even if there's hiding cover up there."

Compounding the problem is that "elk may be spending more time down on private land may lose their migratory habits and not pass that knowledge on to their young," says Proffitt. Meanwhile, elk that retain the trav-

Socializing, as much as science, may be part of the solution. FWP, hunting groups, and others will need to meet with landowners who limit elk hunting and find out what they want in exchange for opening their gates.

eling urge are more vulnerable once hunting season comes around. "These days it's mainly migratory elk being harvested, since those are the ones more accessible to hunters," says Proffitt.

After analyzing data from the study, Proffitt devised a way to estimate where elk will be in November in each hunting district, based on factors such as the percentage of national forest land or the level of hunting pressure. Says Justin Gude, head of FWP wildlife research, "Now our biologists can recommend regulations aimed at distributing elk where they want them to be, while the Forest Service can use the information to adjust their forest plans."

Possible Solutions

Another part of Proffitt's study, as well as others ongoing in the northern Sapphires

and Missouri Breaks, aims to identify how various management activities influence the number of elk on public land and available to hunters. "For instance, do nutritional differences on public versus private land drive these changes [in elk movement]?" she says. "Can we manipulate habitat on public land—maybe with prescribed burns or aspen regeneration or targeted timber harvest that opens areas to sunlight—especially for late summer and early fall, when cows need to put on fat for their next pregnancy?"

Research by Proffitt and others is causing forest managers to rethink elk management policy, says Tomasik. In the past, national forest elk management plans focused on creating hiding cover for elk and security from hunters using motorized vehicles during the hunting season. "That made sense back when FWP was trying to grow the statewide



NO LONGER ENOUGH? Since the 1980s, national forest managers have created 200-acre blocks of hiding cover where bull elk could escape hunting pressure. As elk increasingly abandon forests for the safety of private bottomlands, managers may need to also find other ways to lure—or push—elk back to the mountains.

BELOW: JESSE LEE WARD; ABOVE RIGHT: DUSAN SMERNA

elk population," Tomasik says. The dense forest far from roads allowed biologists to provide liberal seasons with no bull harvest restrictions, giving hunters abundant opportunity while ensuring bulls weren't overharvested. That approach, it now turns out, may be insufficient. "In addition to maintaining

hiding cover and security to hold elk during hunting seasons, we may need to create more forage that will entice elk, especially cows, to stay on national forests earlier in the year," Tomasik says.

In other words, retain the thick, remote habitats but also produce grass to lure elk away from irrigated bottomland.

Another way wildlife managers can move elk to more desirable locations is by adjusting hunting seasons and regulations. "An option might be to temporarily decrease the number of cow tags in some national forest hunting districts," says Gude. "That way you would have less hunting pressure up there for a few years and elk would get used to not being bothered." That would require hunters to give up some current opportunities, says Gude, "but it might be worth the trade-off in producing more accessible elk in the future."

According to McDonald, FWP could also stagger season dates to create random pulses of hunting pressure that keep elk moving—hopefully from private land to public. Or, as it already does in some areas, the department could limit cow hunting to private bottomlands only, making nearby national forests safer for antlerless elk. "For this to work, regulations have to be customized for each area in cooperation with local landowners and hunters, as has been

the case in recent years in the Madison, Missouri Breaks, Bitterroot, and Devil's Kitchen areas," says McDonald. "A one-size-fits-all approach won't fly because too many different factors are at work."

Socializing, as much as science, may be part of the solution. FWP, hunting groups, and local communities will need to meet with landowners who limit or prohibit access in hunting districts where elk have abandoned public forests. They'll have to find out what property owners want in exchange for opening their gates—such as, for nonresident landowners, tags, permits, and licenses to be more accessible. And they'll need to make a more compelling case than just "it's the public's wildlife" for why more hunters should be allowed on closed properties.

For Mike Harmon, the Taylor Fork hunter, the new elk movement patterns make sense. "Back 150 years ago, elk were in the valleys and we drove them up into the mountains," he says. "Now they're coming back down again to where they used to be." Forest and wildlife managers say that more hunters will need to understand why elk aren't where they once were, what can be done to change that, and how elk management in Montana has been transformed. "Many people still don't comprehend how radically things have changed from 20 or 30 years ago, when FWP was trying to increase herd size," says McDonald. "Now Montana has surpassed elk population objectives in much of the state, and we need to reduce numbers."

McDonald acknowledges that the concept of "too many elk" doesn't register with hunters seeing fewer cows and bulls every fall. "But in most cases, the elk are definitely still in the hunting district," he says. "The problem is that too many are now on private land beyond the reach of hunters. That's the problem we're trying to solve." 🐾

To participate in a community group working on local elk management, contact your local FWP wildlife biologist. To comment on the elk habitat component of management plans in a national forest where you hunt, call the supervisor's office and ask if planning is under way and how you can be involved. Participation can range from emailing comments to taking part in meetings and discussions.

Landowner versus landowner

If ranchers don't want elk on their property—because the animals eat hay and forage meant for livestock and, in some areas during spring calving season, can increase risk of disease to cattle—then why don't they open their land to public hunting?

For the most part, those landowners do.

When it comes to elk and elk hunting, there are two basic categories of landowners. A growing number have bought ranches then reduced or discontinued the cattle operation. They enjoy having lots of elk on their land—either to see the animals or sell exclusive hunting access, mainly for trophy bulls, via outfitters. The more elk, the better.

That's not the case for nearby working ranchers who are losing hay and grass to overabundant elk in the valley. Because they want elk numbers trimmed, many of these landowners open their property to public hunting.

The problem is, elk are highly mobile. When rancher Johnson allows hunting in November on his working cattle ranch, the animals simply move next door to landowner Wilson's property, which is off-limits to hunting. The animals hang out there all hunting season, not

harming Wilson's bottom line because Wilson runs no cattle. Then in December, after the season closes, elk jump the fence and eat Johnson's haystacks and graze his pasture. And if they stick around during calving, in some parts of Montana they can increase the risk of brucellosis transmission to cattle.

"What it can get down to is landowners who don't allow public access doing actual harm to their neighbors' financial situation," says Ken McDonald, head of the FWP Wildlife Division. "It's an issue that needs to be resolved between landowners as much as it is an issue between our department and landowners." ■



HERE THEY COME After the hunting season ends in late November, elk that found refuge on private land off-limits to hunting head to neighboring ranches to eat hay and forage meant for livestock.