



ARE MISSOULA'S ELK TOO TAME?

A recent study is helping FWP find ways to manage an exploding population in the city's northern suburbs. BY MIKE THOMPSON

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One of the many responsibilities of Montana Fish, Wildlife & Parks is keeping the “wild” in wildlife. The tamer game animals become, the more likely they are to threaten human safety and property and lose the characteristics that make them part of the natural environment. Nowhere is this more challenging than in places where elk and deer become habituated to Montana’s growing number of new semirural subdivisions on the “wildland-urban interface”—the open spaces on the outskirts of urban areas abutting wild, forested country.

One of the most pressing cases is in the North Hills north of Missoula. A recent study shows that local elk there are becoming increasingly comfortable sharing their living quarters with people.

There were only 40 elk in that herd in the early 1980s, when University of Montana (UM) graduate student Darrel Weybright roamed the North Hills. As part of his research project, he fitted 11 of the animals with radio collars. The elk wintered on cattle ranches at a time when the hundreds of suburban homes there today were foretold only by a single subdivision of 36 houses and numerous other lots drawn out on paper. Along with the increased and dispersed houses springing up over the

past three decades, the elk herd has since mushroomed to roughly 450.

In the mid-1990s, FWP biologists predicted that as elk numbers grew, more elk would learn that they could avoid hunters and competition from other elk by skipping the traditional spring migration to the high country in the Rattlesnake National Recreation Area & Wilderness, about 10 miles to the northeast. The North Hills had long been excellent winter range. As houses and irrigated ranching increased, the area began offering green lawns and lush fields that fattened the few elk that opted to remain year round. What’s more, those elk felt mighty secure. The same hunter who might pack miles into the backcountry to hunt an elk would never fire a shot at that same animal near a housing development, where hunting becomes a challenge because of safety concerns.

Would the few ever become the whole herd? Might the high parks of the Rattlesnake Wilderness fall silent in the rutting season as the historic seasonal migration of those elk disappeared?

SETTLED IN Elk congregate near a subdivision in the North Hills just outside Missoula. Many of the 450 elk now wintering here opt to stay year round rather than make the traditional summer migration to the higher-elevation Rattlesnake Area.

FWP wildlife biologists were concerned that too many elk might learn that humans are not worth worrying about when near houses and roads. When some elk learn to ignore humans in open grasslands dotted with houses, biologists call those animals “habituated.” When the whole herd habituates, biologists call that trouble.

One problem was that the growing elk herd was feeding on haystacks and standing crops as well as trampling fences on local ranches. Another was that the elk could eventually pose a danger to subdivision residents. “The last thing we want is rutting elk running down neighborhood streets,” says Vicki Edwards, FWP wildlife biologist in Missoula. What’s more, the disappearance of migration behavior would mean not only the loss of historic wildlife movement but also the loss of hunting opportunities in the Rattlesnake Wilderness. And because public hunting—the main method biologists use to control burgeoning wildlife populations—is becoming increasingly difficult in the North Hills due to growing numbers of homes, FWP biologists were concerned the elk population there would explode even further and become unmanageable.

In 2007 FWP called on UM graduate student Shawn Cleveland to reopen the question of elk habituation in the North Hills. With financial and labor support from FWP, UM, Rocky Mountain Elk Foundation, Safari Club International, and Hellgate Hunters & Anglers, Cleveland radio-collared 21 elk. Over the next two years, they led him across the same 150,000 acres, including the crown of the Rattlesnake Wilderness, that Weybright had traversed while following his elk a quarter century earlier.

What Cleveland found was that the migratory tradition of the North Hills elk herd had remained at least partially intact. Some elk were still moving to higher elevations in spring, though a smaller percentage than in years past. More of the herd were staying year round within sight of houses and roads.

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Mike Thompson is the FWP regional wildlife manager in Missoula.

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study was to measure the factors that make North Hills elk less—or more—likely to stay near human habitation. Years ago, FWP biologist Terry Lonner, now retired, came up with a memorable, if imprecise, way to categorize the wildness of elk. He described elk that hide from people and run from hunters as “wild-wild”—the way elk should be. At the other end of the spectrum are “defiled-wild” elk, like those that live on golf courses, such as around Canada’s Banff National Park, or are fed hay on feed grounds, like the animals in Jackson Hole, Wyoming. “Mild-wild” elk, under Lonner’s handy descriptions, are somewhere in between.

Surely the North Hills elk herd was wilder in Weybright’s day than in Cleveland’s; it had far fewer animals and less human contact. But, how far toward “defiled-wild” had it fallen since then?

The North Hills fall-winter range is an ideal study area for measuring elk wildness. It contains a patchwork of public and private lands, some open to hunting and some not. In early fall, and longer on some properties,

MIDDAY AT THE OASIS The North Hills historically has been excellent winter habitat for elk. New irrigated meadows and lush lawns from ranchettes and subdivisions have turned the area north of Missoula into even more of an elk paradise. The challenge for FWP biologists is how to get the animals to move.

hunting is limited to archery only. During late fall and in “damage hunts” on several ranches, hunters can use rifles. Intermixed are individual homes, residential subdivisions, and protected open space where some landowners do not allow hunting. Cleveland also looked at other elements influencing elk movement and behavior, such as the area’s forests and grasslands, storms and drought, and roads or road-free areas.

Thanks to new GPS technology that recorded locations every six hours, Cleveland could see exactly where his collared elk went. He amassed roughly 39,000 “re-observations” of 9 adult female collared elk (the other 12 collared elk did not have GPS

trackers). What he and UM assistant professor Mark Hebblewhite found after studying these movements over three years was that elk moved a lot when hunters were around. But within a month or so after hunting season ended, the animals were back to congregating closer to where humans live and where the animals degraded their own habitat and ate forage meant for cattle. “That dispersal behavior might seem obvious to hunters,” says Edwards, “but this was the first time it was documented in the North Hills. It allowed us to show landowners, on maps, just how well hunting works to move elk across the landscape.”

The study was also able to identify different behaviors among the “wild,” “mild,” and “defiled” elk for future use by biologists in Missoula and elsewhere. For example, a wild elk should avoid roads, mild elk might avoid them only during hunting season, and defiled elk might be difficult to coax out of the driveway.

“We want elk to maintain their distance from people, and we can use this information to figure out new ways to keep elk acting wild, whether that’s by instituting variable hunting seasons at different times of year, or using other human activity—like people out walking their dogs on a leash—to redistribute elk,” says Edwards.

Cleveland documented how elk hung out between roughly half a mile and three-quarters of a mile from houses—an intermediate distance given the available longer distances. That means the North Hills elk are willing to live closer to houses than “wild-wild” elk are, but not too close—just near enough to obtain the benefits of lower hunting pressure.

Edwards says this work is extremely valuable to her and other biologists. “Now we have a benchmark,” she says. “The North Hills elk are teetering on a very thin line between the minimum level of habituation that they need in order to share their winter range with humans, and the healthy fear of humans they also need so they can continue to be wild and maintain their spring migratory patterns.”

One of Edwards’s biggest challenges is finding ways for hunters to access North Hills elk in order to keep the population at a healthy level. “That may entail options



like restricting hunts near subdivisions to shotgun only, as they’ve done elsewhere in Montana,” she says. (Shotgun slugs don’t travel nearly as far as rifle bullets and are thus safer near residences.) Even more important is convincing landowners unwilling to allow public hunting to reconsider so that elk numbers don’t mushroom and cause undue depredation and safety problems for them or their neighbors.

Preserving the wildness of elk is a matter of public safety, ranch economics, and hunting traditions. It’s also about keeping intact a process that has occurred over thousands of years. If elk stop following the natural eruption of native vegetation into higher elevations of the Rattlesnake each summer, as they have for generations, that means “something natural is broken,” Edwards says. “I don’t want the North Hills to turn into a

ELK REFUGE Safe on growing numbers of ranchettes off limits to hunters, the North Hills herd has increased tenfold over the past 30 years. That causes headaches for traditional ranching families in the area as the elk knock down fences and eat forage meant for livestock. A new study has given local wildlife biologists information to justify using early hunts, late hunts, and other options to help reduce elk numbers and keep the animals from congregating.

place where elk hang around all year and are viewed as pests. That’s just unnatural. And so is not having elk go up into the Rattlesnake. It would break my heart if someday a hunter or hiker went up there in September and did not hear an elk bugle.”

LEFT TO RIGHT: FROM TOP, PAUL QUENEAU