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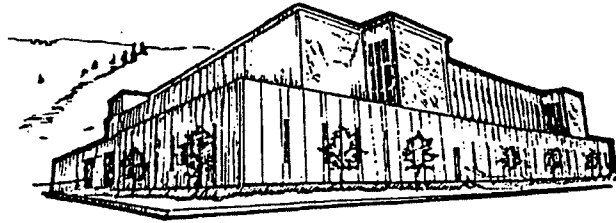
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WILDLIFE AND THE URBAN FRINGE

VANISHING HABITAT, PEOPLE-WILDLIFE CONFLICTS, AND HUMAN ATTITUDES

by

S.A. Snyder

B.Sc. University of Montana, 1988

B.Sc. University of Montana, 1988

Presented in partial fulfillment of the requirements

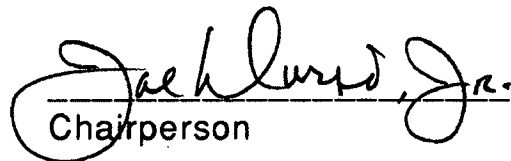
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## INTRODUCTION

Janet Roy dismissed her children's account of a big animal creeping up behind her while she weeded the flower bed in her Montana back yard. The kids told their mom they saw it sneak to within feet of her then suddenly flee quietly into the trees behind the house. Later, Roy's two girls, ages four and six at the time, pointed to a picture in a book and told her it was the animal they'd seen. It was a mountain lion.

Roy's neighbor, Shirley Johnson, didn't see a mountain lion either when Johnson approached a fawn in her back yard. That is, until it lunged into her field of view, snatched the fawn up in its jaws and ate it in the bushes just behind her house. Her small children missed the action. They were playing in the front yard.

"I really enjoy living here, but I don't like the fact that I can't leave my kids out in the yard alone," Roy says.

"If I didn't have kids, I'd probably keep binoculars in my kitchen instead of a loaded gun," Johnson says.

Although the Johnson and Roy kids weren't harmed, other

encounters have been fatal. In 1989 a five-year-old boy was attacked and killed by a mountain lion while playing alone in the back yard of his home in Evaro, Montana, near the city of Missoula.

Wildlife encounters similar to these are also happening in parts of California, Colorado, New Mexico, Washington, Texas and Utah. But you don't have to live in the country to experience them. Last September one of Missoula's 44,500 residents found a mountain lion asleep in her basement window well. Game wardens speculated that the three-year-old female lion may have wandered to the edge of the city during the night and was chased by dogs until she found refuge by the house near one of the busiest intersections in town.

Both Johnson and Roy, along with about a thousand other residents in the Grant Creek area, live just minutes from downtown Missoula. Semi-rural Grant Creek has all the amenities of an attractive mountain setting: grassy hillsides interspersed with wooded draws and benches, meadows flanking a creek that pours out from the 9,000-foot high Jocko Mountains to the north. It's quiet, slow-paced, and summer breezes carry the scent of pine through open windows.

Grant Creek residents have a phone tree. Whenever someone



sees a mountain lion in the neighborhood, everyone knows about it within 24 hours. Lesser known is why these typically shy, secretive animals (and until recently, rarely seen) are suddenly becoming a menace.

But mountain lions aren't the only animals that threaten or cause headaches for homeowners. Black bears, deer, elk, and smaller species like skunks, beavers, and sometimes even woodpeckers make the top ten list of most annoying creatures. And like mountain lions, grizzly bears pose a threat to some homeowners in Missoula County. Ironically, many people enjoy seeing these animals, with the possible exception of skunks. People who live in fringe areas (on the outskirts of town) are coming to know what Western ranchers have known all their lives: Wildlife is a threat to their crops and livestock. More unfortunate is that sometimes wildlife kills their children.

As in many popular Western cities, Missoula's commissioners, planning boards, citizens and wildlife are forced to adapt to the quickly changing landscape as people come seeking more refreshing lives away from violent cities. What some of those people discover, however, is a different kind of violence. The kind we know as Nature.

People come seeking quality of life, a '90s buzzword that has come to symbolize Small Town America, where the water and air are clean, strangers say hello on the street, and few are touched by crime.

"People have a sense that life here is more rewarding than elsewhere," Bill Farr says. Farr is a history professor and director of the Center for the Rocky Mountain West, a forum designed to explore the region's history and culture, based at the University of Montana in Missoula. In terms of societal harmony and community values Farr says, "Where other places have stopped working, Montana still works."

This belief is evidenced by the recent influx of newcomers. Montana's population grew by an estimated 2.1 percent in 1993, which is almost double the growth rate for the whole country. The most recent figures for Missoula County show a 4.7 percent increase in population between 1990 and 1992. Eight counties in western Montana have experienced an average population increase of 4.5 percent since 1990. The Census Bureau says that Montana is one of the fastest growing states and predicts its population will add 120,000 more people by the year 2000.

Prime real estate in Montana sells comparatively cheaply, and building a home away from other people is easy to do, since Montana's current population is only 839,000. But for those whose homes border national forests, wildlife refuges, ranches and forest recreation areas, wild animals replace people as neighbors.

The sparsely populated West has allowed wildlife to flourish, especially big species, like bear or elk, that need lots of room to roam. As people pack themselves into fringe urban areas, some wildlife species are crowded out. But not always. Many wild animals adapt well to people. It's people who often have difficulty adapting to wildlife. To help ease people-wildlife conflicts, the Missoula County Commissioners are developing a hi-tech, digital mapping system (in part based on satellite photos) to guide growth while protecting some wildlife habitat.

## CHARISMATIC MEGAFUNA

Historically, mountain lions avoided people. Lions are shy and secretive and, until recently, rarely attacked humans. Between 1890 and 1990 there were only about 50 lion attacks on people in North America. Seventy percent of those happened in the last two decades; ten were fatalities. Sixty-four percent of all victims were children under sixteen. During 1989 and 1990, 33 lion encounters with pets or humans were confirmed in Montana.

According to Keith Aune, a Montana Department of Fish, Wildlife and Parks biologist, a boom in home building in fringe areas (especially in white-tailed deer habitat) has coincided with increases in mountain lion encounters. Where they build, people bring with them green lawns, gardens and landscaping. Partly due to this constant supply of fresh, green food, deer numbers (and consequently mountain lion numbers) have soared. And, as Grant Creek residents know well, why should deer go foraging through the slim pickings of their natural environment when there's a fully stocked salad bar in people's back yards?

As deer frequent lush yards, their mountain lion predators

follow. When they find slower-moving, unwary pets in the neighborhood, lions sometimes switch their food preferences. Why should they waste energy chasing fleet-footed deer when there's a fully stocked meat locker of domestic cats and dogs available? And sadly, sometimes children fit the menu.

Shortly after the boy was killed in Evaro, the regional office of the Montana Department of Fish, Wildlife and Parks in Missoula was flooded with phone calls from people who said they had seen a mountain lion. It usually works that way, according to Lloyd Acker, warden sergeant for the fish and game agency. Acker says that whenever a mountain lion attacks someone, people panic. Apparently they hallucinate too. House cats, dogs and red foxes are among some of the animals reported as mountain lions. With the recent increase in mountain lion sightings, Grant Creek homeowners have become much more conscious of the dangers of where they live.

Mountain lions adapt fairly well to the presence of people. And so far lions are numerous enough that killing "problem" lions doesn't threaten the survival of the species. But other animals, like the grizzly bear, are more sensitive to the habits of people.

Grizzlies are a threatened species in Montana. This means it's

possible they could become endangered in the "foreseeable future." Grizzlies need lots of space to call home, about 500 square miles on the average for males in Montana and up to an average of 120 square miles for females. Much of that space is highly sought by people as well. Places that offer important food and shelter for animals (stream bottoms, grassy meadows and the edges of forests) are also attractive places for private homes or condominiums.

Bears are highly intelligent, as Tim Manley, a grizzly bear specialist with the state fish and game agency, knows well. Last year he trapped a grizzly bear that had been marauding outfitter camps and horse barns in search of food. Once the bear had broken the windshield of a Suburban to get food stored inside. Another time she removed the back window of a pickup truck, without breaking it, thinking there might be food in the cab.

The key here, Manley says, is that the bear was rewarded for her efforts with food. Leaving food in camps, cars and barns is not the only bear attractant. The same reward principal applies to homeowners and their habits. Whenever people leave garbage cans outside in bear country, they invite bears to the table. And once a bear is rewarded, it will keep coming back or search out other

similar situations for an easy meal. Manley says this can spell eventual death for a bear as long as people continue their habits, intentional or otherwise, to attract and reward bears. The reason is that bears that continue to be a nuisance or start acting aggressively toward people are usually shot.

Because it's hard for some people to get the message, Manley's position was created solely for the purpose of resolving conflicts between people and grizzlies in the Flathead and Swan valleys. Much of his work involves talking to people who've had problems or encounters with grizzlies. He tries to convince people that bears won't bother them unless there's a chance for a meal. Troublesome bear behavior is preventable as long as people take responsibility and literally clean up their acts.

"The question is, 'Can we have bears and people intermingling and living together?', and I think we can." Manley says. But he adds, it becomes a question of tolerance both for bears and people. "How much human activity (from hiking to homebuilding) will grizzly bears tolerate before they won't use an area?" Manley asks. He doesn't know the answer, but says he can make some good guesses by looking at which areas bears use and which they avoid. So the

question becomes "How much grizzly activity will people tolerate?"

"Some people are willing to have bears walk through their back yard and others aren't," he says. Adding to that is a negative perception about grizzlies. "A lot of people think every grizzly is out there to kill you and eat you," Manley says. He tries to assure people that unless bears have a good reason to hang around, unless they are continually rewarded with food, they typically won't be a problem.

So what happens to bears that do become a nuisance?

Montana's fish and game department follows guidelines to determine a grizzly's probation or death sentence. Although each case may differ, in general, adult males that get into garbage, destroy property or threaten people or livestock usually get one strike. On the second one they're out, meaning they're sent to zoos or more likely killed by wildlife officials. (Most zoos won't take "problem" bears and many already have enough bears.) Females that get into trouble are given two chances before they're sent to zoos or destroyed. No bear gets a second chance if it attacks someone or is "unnaturally aggressive."

Since 1985, wildlife officials have sent four grizzlies to zoos and accidentally killed three in relocation efforts. Twenty-three



grizzlies were killed intentionally either by wildlife officials or in self-defense. Wildlife officials classified 14 kills as poaching. Some of those were under investigation at the time of this report. Two other grizzlies were injured and eventually died from vehicle collisions. Of the 23 intentionally killed, one of the females had two female cubs which were sent to Washington State University for research. Manley says researchers conduct experiments on those bears, which are killed once their usefulness expires.

Thus, a total of 46 grizzlies were killed or sent to zoos in the past seven years because of clashes with people. Eighteen of them were females lost from the threatened breeding population. Manley says that can hurt the population, which already suffers from critically low numbers, if most of the dead females come from a concentrated area. In this case, he says, they didn't.

What happened to the bear with a knack for breaking into cars? She was sent to the San Antonio Zoo. And her cubs? No zoo would take the male cub, so he was killed. The female was sent to a wildlife rehabilitation center in Oregon and escaped from a maximum security pen. She was shot four months later after settling into a small community, threatening people and pets. From

her mother she had learned to associate people with food. Because of human habits, she lost her fear of people, and her life.

Less threatening but more annoying for some homeowners are animals like deer and elk. In addition to landscaping, wildlife managers blame the absence of hunting for an over-abundance of these species. Biologists rely on hunting to keep wildlife from growing too numerous and to maintain a fear of people. Because homes now dot fringe areas, hunting is no longer safe there.

A little more than a decade ago, Grant Creek was mostly private ranch land. A large herd of elk once wintered in the stream bottom. Historically, hunters kept elk numbers low so that there was always more than enough food for the herd. Hunting is no longer allowed because several housing developments line the creek and surrounding meadows and hillsides. The elk have increased as a result. So far that hasn't been a problem partly because of the plentiful food supply. But Bob Henderson, a fish and game biologist, warns that as homes continue to creep up the hillsides, elk are pushed farther into areas with less food. He believes the elk will eventually reach their population limit and be faced with a "food crisis."

"I think you can predict, pretty easily, that with less forage and less cover and less space that the potential of the population is going to be reduced," Henderson says. In other words, a few very severe winters coupled with increasing habitat loss due to home building may be enough to kill up to half of the Grant Creek elk herd.

Today, Missoulians can watch elk graze on the hillsides from town or from I-90. But Henderson believes that won't be possible much longer if development takes over those hillsides. More disturbing are biologist Les Marcum's observations. Marcum, a professor at the University of Montana, has studied elk for 24 years. He says there's many more elk in Missoula and surrounding counties than there were 10 or 15 years ago. Winters have been fairly mild and elk hunting near town reduced, allowing elk to increase. If the trend continues, elk could eventually lose their fear of people. And unlike deer, elk can pose far greater threats.

In Banff, Alberta, elk have begun spending winters in town, munching on shrubs and trees. Some elk have charged and injured people seriously enough to put them in hospitals. Both Marcum and Henderson believe that as elk are no longer hunted near town, becoming less fearful and more used to people, Missoula could

eventually experience similar problems. Further, as other animals, like deer, mountain lions and bears, lose their fear of people and become more numerous, Marcum worries that people will no longer value wildlife. Instead future generations may view these "charismatic megafauna" as common and pesky or savage and dangerous creatures.

## THE PLIGHT OF THE LESS CHARISMATIC

In the short-term, mountain lions, bears, deer and elk effectively exploit human-caused changes of their habitat. Other species aren't so adaptable. Often birds, amphibians and reptiles disappear unnoticed when subdivisions move in. Although recent evidence shows declines in amphibians and reptiles from "pristine" areas, these species are disappearing due to development in non-pristine areas.

Many reptiles and amphibians are highly sensitive to plant and pest poisons and fertilizers. In the Missoula Valley the tailed frog is especially affected when underbrush near streams is cleared for the manicured look people prefer. More homes mean more roads. Cold-blooded amphibians and reptiles use these roads to warm themselves and consequently end up as "road pizza." Domestic cats and dogs also take a serious toll on these species. And as for creatures like snakes: "People go out of their way to kill them," Sam Manno, a specialist with the Craighead Wildlife-Wildlands Institute in Missoula says.

In spite of the negative impacts, people can actually create

food and shelter for snakes, lizards and frogs. They do this inadvertently by building small ponds in their yards or by having woodpiles, sheds and garages. These elements provide shelter and breeding places for insects that reptiles and amphibians eat. But chemicals applied to lawns and ponds, as well as housepets, may negate any positive effects of the food and shelter created.

Dick Hutto, an ornithology professor at the University of Montana, says that no one has studied the effects of urban growth on birds in Missoula County. But, he's sure that many bird species are suffering losses due to the changes in landscape, as evidenced in other parts of the country. Hutto says that clearing brush from streamsid es, changing natural grasslands to lawns and cutting down trees destroys habitat for species that are particular to each of those elements. For instance, grasshopper sparrows live strictly in grasslands, nesting on the ground. The short grass offered by lawns isn't enough cover for the sparrows to nest successfully, and predators like housecats are deadly.

Others like veerys, American redstarts and northern waterthrushes need streams and rivers as part of their habitat. Hutto says housing developments along streams and rivers can

disturb these birds not only when streamside vegetation is removed, but when "dogs, cats and kids with slingshots" roam the area, scaring birds off nests. Also, an interesting twist of fate occurs when people provide bird feeders. Because squirrels raid feeders, they benefit from the food and their numbers grow. Unfortunately, squirrels are known bird nest predators, and people may actually be helping squirrels gain a competitive edge.

## CHANGING HUMAN BEHAVIORS

For those who already live in fringe areas, wildlife biologists offer some tips. Bears raid garbage and eat the harvest from fruit trees, the two most common complaints about them in Missoula County. The garbage problem is easy to remedy. Keep trash in a garage or shed and put it out only during the day it's collected. Fruit trees take more effort to protect. Much of a bear's diet are wild fruits, which it needs lots of in autumn before hibernation. Bears (like lions, deer and elk) won't spend much time foraging for sometimes scarce wild fruits when they've found a reliable source in someone's yard. Biologists suggest picking fruit as soon as it ripens or expect to lose some or all of it to wildlife.

Compost heaps also attract bears, as well as pet food left out on the porch, or improperly stored feed for horses, sheep and llamas (quickly replacing horses as trendy pack animals in the West). Pet food can also attract mountain lions, and fruit trees are attractive to deer and subsequently mountain lions.

The solutions seem simple and indeed may be common sense. But the downside is that neighbors could attract bears and be



unreceptive to changing their own behaviors. Biologist Tim Manley hopes that neighborly peer pressure will take care of situations like those so that offending bears won't have to be trapped and moved or killed. He doesn't want to encourage tattling, but stresses the safety issue of grizzlies near people.

(An interesting observation that Manley and other biologists have noticed is the effect of weather on animal behavior. Bears, as well as deer and elk, tend to be less of a nuisance during wet years when there's more available natural food. In the dry summer of 1992 Manley says his department trapped more than 50 nuisance black bears compared with two or three black bears trapped in 1993 when western Montana was drenched in rain.)

In addition to housing densities, *where* homes are built can potentially destroy at least local wildlife populations, all the way from toads to grizzlies. Clustering houses closer together leaves larger tracts of undeveloped land. These tracts may provide important winter feeding areas for deer or elk. Or they might be what biologists call travel corridors-- strips of land typically with some sort of cover (like forest) that animals use to move between winter and summer feeding and breeding places. When travel

corridors are developed for houses, it disrupts animal movements or cuts them off entirely from much needed habitat.

Leaving undeveloped land that borders water courses (riparian areas) also reduces negative impacts to wildlife. Riparian areas support more plant and animal species compared to non-riparian areas. Habitats that border streams, lakes and rivers are also the most sensitive to changes (like human disturbance) and therefore easily damaged by careless, unplanned development.

## FINDING SOLUTIONS

It's precisely this haphazard development that has many Missoulians worried. Citizen's groups are fighting to keep every last vacant lot or bit of open space in their neighborhoods building-free. But Tim Hall, a rural planner for Missoula County, says that for every vacant lot "saved" in town, developers put more pressure on fringe areas where wildlife flourishes. In those places there are few if any homes and no one to say "no" to a proposed subdivision.

This is where the Missoula County Cumulative Effects/Carrying Capacity Project comes in. Pat O'Herren, a land-use planner for Missoula County, was hired by the commissioners to help guide Missoula's growth. The project he's pulling together was developed in response to what O'Herren says is a crisis situation. Between January 1989 and December 1993, 2,354 subdivision lots were approved in Missoula County. The county is growing so fast that, in addition to threatened air and water quality, wildlife habitat is disappearing. O'Herren has evidence to prove it.

With scientific data collected by environmental groups, natural resource agencies and research facilities based at the

University of Montana, O'Herren can look at computerized maps of grizzly bear travel corridors, bull trout spawning streams or elk calving grounds. He can show the county commissioners where developments would pose a threat to those resources and where they wouldn't.

Commissioner Ann Mary Dussault says this method is the first of its kind in the country. In large part it will use the presence of natural resources to determine whether or not a development gets the green light. In all, 64 different factors (from Indian burial grounds to wildlife habitat) are plugged into the equation, the merits of each scrutinized.

"We're committed to developing every tool available" to determine the impacts of growth, Dussault says. And now with tighter regulations on subdivision of property in Montana, Dussault says the commissioners will be have more power to protect areas that have sensitive or valuable natural resources, including wildlife habitat. That power is significant. In the Swan Valley (where grizzlies thrive) 57 percent of the private land falls within areas that have threatened, endangered or "sensitive" species habitat. In Evaro, where the boy was killed by a mountain lion, 96 percent of

private land is classified as such.

Developers and private individuals will be required to get building permits. The mapped resources will then be used to evaluate whether or not a subdivision or single home will cause irreversible harm to those resources. A lawyer is counselling the commissioners every step of the way to make sure their actions are defensible "when, not if, (they) get sued," O'Herren says.

For example the commissioners might say "no" to a development that cuts off a grizzly bear travel corridor. Or they might give a conditional "no" forcing the developer to redesign the subdivision so that houses are clustered near one end, allowing grizzlies to pass through at another. Dussault claims commissioners aren't able to stop growth, so if they do say "no" to certain areas, it will naturally force development in other places in the county.

"The key then is to find those areas where we're willing to sacrifice conservation resources in order to enable us to protect resources elsewhere," O'Herren says. "We will make some errors in small places, we know, but we have to act quickly."

When homes are proposed for places known to have bears,

lions, deer, elk or other species that may create conflicts, the commissioners will impose strict covenants. Open-pit bar-b-ques, for example, are forbidden in places with bears. Garbage cans cannot be stored outside. Compost heaps are not allowed, and in some areas planting fruit trees is also forbidden. If neighborhood groups want to change any covenants they must have the commissioners' approval.

Some argue that covenants are only as good as neighbors are willing to enforce them. But, O'Herren says, with the aid of fish and game, covenants may be better enforced. If someone plants apple trees that eventually attract bears, and those bears become aggressive, the homeowners would probably call fish and game to remove the animals. Game wardens, knowing these people violated the covenants, can inform the county, who then issues a fine.

Further, according to O'Herren, "If we lose a grizzly bear then all hell will break loose, because then we're dealing with a (threatened) species. That person will have knowingly broken the law that resulted in the taking of a threatened species."

And, that person could conceivably find himself in district court. That situation hasn't happened yet, and grizzly bear biologist Tim Manley can't predict the outcome if it did.

However well-functioning the new covenant system seems, there are still skeptics. Nick Kaufman, a land-use planner in Missoula, designs subdivisions with developers and understands people-wildlife conflicts. He says it's easy to design homesites that minimize impact to wildlife, but difficult to control what people do once they move in.

"Americans by nature are very self-centered when it comes to their values," he says. "So if Joe wants to put his garbage cans out and not protect them, then Joe is going to put his garbage cans out and not protect them."

Kaufman thinks the covenant system won't work simply because there's too much red tape and not enough enforcement power. The key, he says, is education. He believes that people are likely to change their behavior "once they see the picture of the dead bear," referring to the consequences of a once-too-often nuisance animal.

Others agree that imposing covenants is not the panacea. They also don't believe that well-placed subdivisions and education are the only answers. Groups like Five Valleys Land Trust and Montana Land Reliance buy land outright to keep it from being developed. They

also help private landowners preserve their property for the wildlife values they hold. Conservation easements (parcels of land set aside in perpetuity as wildlife habitat) are these groups' specialty. Conservation easements cannot be developed with houses or other structures and restrictions are passed along with the deed.

So far, Five Valleys Land Trust (based in Missoula) has helped place about 900 acres of land in Missoula County in conservation easements. They also own about 50 acres, most of which are small parcels along the river donated by private citizens. Tracy Stone-Manning, Five Valleys' executive director, says a lot of compromising goes into land deals. She says some people are truly committed to saving what they own and approach the land trust group for help in doing so. Other times Five Valleys, along with the Forest Service and the Montana Department of Fish, Wildlife and Parks, will approach landowners whose property has significant wildlife values and either offer a land swap, persuade them to preserve it, or in rare cases outright buy the land.

Last year Missoula County jumped into the arena and traded subdivision lots for severely restricted development rights on 500 acres of private land in Grant Creek that borders an elk refuge owned



by the National Wildlife Federation.

Region-wide Montana has set aside more acres in conservation easements than any other state in the West, with 115,000 acres preserved by local land trust organizations. That figure doesn't include lands held in trust by the Nature Conservancy, which has protected more than 170,000 acres in Montana.

Bob Kiesling, formerly of the Montana Nature Conservancy, helps landowners establish easements on their property. Kiesling believes that Montanans are chopping and developing land faster than they can protect it. As a result he says Montana now risks losing those natural assets "that make this place a great haven for wildlife and people.

"You just don't find this kind of quality habitat in the abundance that we have it anywhere, anymore. We better damn well protect what we got before we lose it," Kiesling says.

## CAN PEOPLE AND WILDLIFE CO-EXIST?

Shawn Riley, a Ph.D. student at Cornell University, is studying human attitudes about wildlife. Riley, a wildlife biologist with the state of Montana and a mountain lion expert, wants to know how people's attitudes change over time as people-wildlife conflicts increase.

In Montana Riley has dealt with hundreds of people-wildlife conflicts. He has seen much unfettered and rapid development in the Flathead Valley, one hundred and twenty miles north of Missoula. He says that as more people move to the state, those "living in and around (fringe) areas are going to begin to experience animals."

He has worked with Flathead County planners to determine in which people-inhabited areas larger carnivores will be allowed to roam free and in which they won't be tolerated. But he's quick to point out that in areas where wildlife conflicts won't be tolerated, managers are reluctant to control wildlife because often that means killing it. The alternative isn't desirable either. Translocating problem bears, for example, is costly and ineffective. Riley is about to publish a scientific paper that shows that 50 percent of bears

that are trapped and moved to other areas are dead within two years. Most continue their "bad" behavior and end up shot, either by landowners with a "shoot, shovel and shut up" mentality or by fish and game personnel who can't afford to keep responding to complaints.

Riley thinks people are learning how their own behaviors can affect wildlife, but whether that translates into longterm thinking, he doesn't know yet. "For the most part, people love animals, but until they have an encounter and are *forced* to develop an attitude, they don't give (wildlife) much thought," he says.

Living in fringe areas is definitely risky, and Riley thinks that risk is not adequately communicated to homeowners. He thinks developers, commissioners and land-use planners, as well as wildlife biologists, are responsible for educating people about those risks. Riley says people have a "Disneyesque" image of what wildlife is supposed to be: cute, cuddly and obedient. But when their dog gets eaten by a mountain lion, it redefines their ideas of wildness. And, he adds, when it's our children that get killed, "it cuts through the fat of our society."

Some wonder whether chronic wildlife conflicts promote

negative attitudes about animals. Mike Hillis, wildlife biologist for the Lolo National Forest, thinks that having no contact with wildlife is harmful too. "If you provide people an opportunity to explore wildlife, then it maintains an ownership and a love of that resource, and then they're more willing to pay a price so they can retain that," Hillis says. "I think once it's gone you get to an inner city situation, and nobody cares."

Hillis says Missoula is unique because many people still have wildlife in their back yards. But, he adds, if residents want to keep that, they're going to have to pay a high price. That price might be monetary, paying higher taxes to preserve habitat, or restrictive of personal freedom, always keeping an eye on children in the yard or foregoing vegetable gardens and fruit trees.

Hillis also thinks Missoula County has more than enough growth in its fringe areas. He believes too much wildlife habitat has been sacrificed for housing. "Growth is finite. In a relatively short time we'll find that the Earth is used up, but we've destroyed everything in getting to that point."

Biologist Les Marcum sometimes feels pessimistic. "It bothers me to think that the future of wildlife management may develop into

controlling problem animals," he says, rather than protecting and enjoying them. Marcum hopes his grandchildren's generation won't have to resort to large-scale killing of problem wildlife such that no one values it anymore.

Homeowners Shirley Johnson and Janet Roy both know that they have to make adjustments living in deer and lion habitat. Both have changed some of their habits to reduce conflicts. After Johnson's encounter with the hungry mountain lion, she and her husband cleared away shrubs and undergrowth in the woods behind their house. Now lions can't hide undetected so close to the house. Roy doesn't spend much time perfecting a beautiful flower garden that she knows will be eaten by deer. But lions and deer still come into the neighborhood. The Johnsons and Roys still don't feel safe enough to let their kids play in the yard unattended.

"It would definitely be a reason to move back to town," Roy says. "It's my own fault, but I do get mad sometimes."

Roy says they have a neighborhood watch that keeps tabs on people who bait deer into their yards. Doris Fischer, a city planner for Missoula, witnessed deer baiting when she lived in Grant Creek. When she moved to Missoula four years ago, she was thrilled to see

deer in her yard. Then that thrill became "horrifying" when she realized people were putting out salt licks for deer, which in turn brought in mountain lions. She also didn't like to see people climb the surrounding hills to take pictures of the elk that wintered there. Those experiences are part of what prompted her to move back to town. "I had no...," she pauses, "*none* of us had any business living in what used to be (wildlife habitat)."

Shirley Johnson grew up in Montana. She hunted, and bears and lions were always a part of the wild she was used to. But until she witnessed the lion killing the fawn in her yard, she never realized the potential for it to harm her or her children. Her story made the local paper along with dozens of other mountain lion stories during the summer of 1991. At the time a particularly elusive mountain lion was hanging out in Grant Creek. The Department of Fish, Wildlife and Parks answered calls daily from people who saw it or claimed to have.

Mobilizing houndsmen with their dogs before a cat's scent is lost can be difficult and often frustrating for game wardens. At times they know it's useless to bother responding to a mountain lion sighting. Often cats will slip away as quietly as they came. And

unless a cat has threatened someone, there's nothing they can do.

Game warden Lloyd Acker expresses his frustration when people in fringe areas call to complain about mountain lions or bears. Of the animals he says, "Hell, that's where (they) *should* be!" He adds that people are building their houses where there shouldn't be houses.

Also people must expect to have problems with wildlife and learn to deal with them.

Homeowners are frustrated, too. They want wardens to kill or relocate nuisance wildlife, which is costly and often ineffective because other animals take their places. Some, like Johnson, feel the wardens aren't doing their job. When Johnson was quoted in the *Missoulian* (the local newspaper) as saying she wouldn't hesitate to kill a lion to protect her kids, it prompted letters to the editor both in support of and critical of her stance. "I got hate mail for three or four months afterward," she says. Some shared her concerns for child safety, while others chastised her for invading wildlife territory.

Bob Kiesling may be in the latter camp. He would like to see more protection of the wildlife and habitat that Montana already has. His warning about unfettered development is direct.

"If we cater to every man's (sic) dream of having five acres and a cabin in the woods,... soon enough our landscape will be just fragmented beyond repair."

For the mountain lion who found brief refuge in a Missoula window well it may already be too late. Although she was tranquilized and released in the mountains along the Montana-Idaho border, she's not far from humans. She will likely find herself in contact with them again. She and many other wild animals are quickly adapting to changes in their landscape brought about by people. How well they survive will depend largely on how much space and tolerance people are willing to afford.



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