

Raising Alpacas in Mountain Lion Country

By Eric Hoffman

Michelle Ing, DVM could hardly comprehend what she was hearing. A breeder in her area was on the phone reporting that all of their alpacas had been killed. The highly distraught caller described coming out in the morning to feed and finding a nightmare. Four pregnant females and a promising young male were dead. Each animal had been run down and killed in the same manner, a bite to the neck. Some of the animals appeared entirely unscathed other than a single mouth-shaped depression on the upper neck that was detectable only because the hair in the area was depressed and wet. In some instances there was no blood. It was only when the fiber was parted that the large holes made by the cat's canine teeth became apparent. Dr. Ing recalls, "When I first arrived it was as if a ghost had been there. There was hardly a trace of what had done the killing and the bites were precise, almost surgical. This was the work of a very strong highly efficient predator."

The silent scene told a story. What had transpired required stealth, lightning fast reflexes and precision. The mountain lion had to first work its way down a narrow lane with farms on both sides. On its silent journey it passed by horses and other livestock and went undetected past a 100 pound guard dog patrolling an adjacent property. It then sailed over a five foot, no climb wire fence into a two-acre pasture populated with alpacas.

Two alpacas were in the larger pasture where the cat first entered. The other three animals were enclosed in a catch pen adjacent to the barn that was in the middle of the property. This group of alpacas was

tucked away behind two sets of fences. The dead animals were strewn about relatively close to one another. Evidence of chase and panic was everywhere. Both the alpaca's well known banding instinct, seeking out the herd for protection, and the "see and flee response" were in evidence.

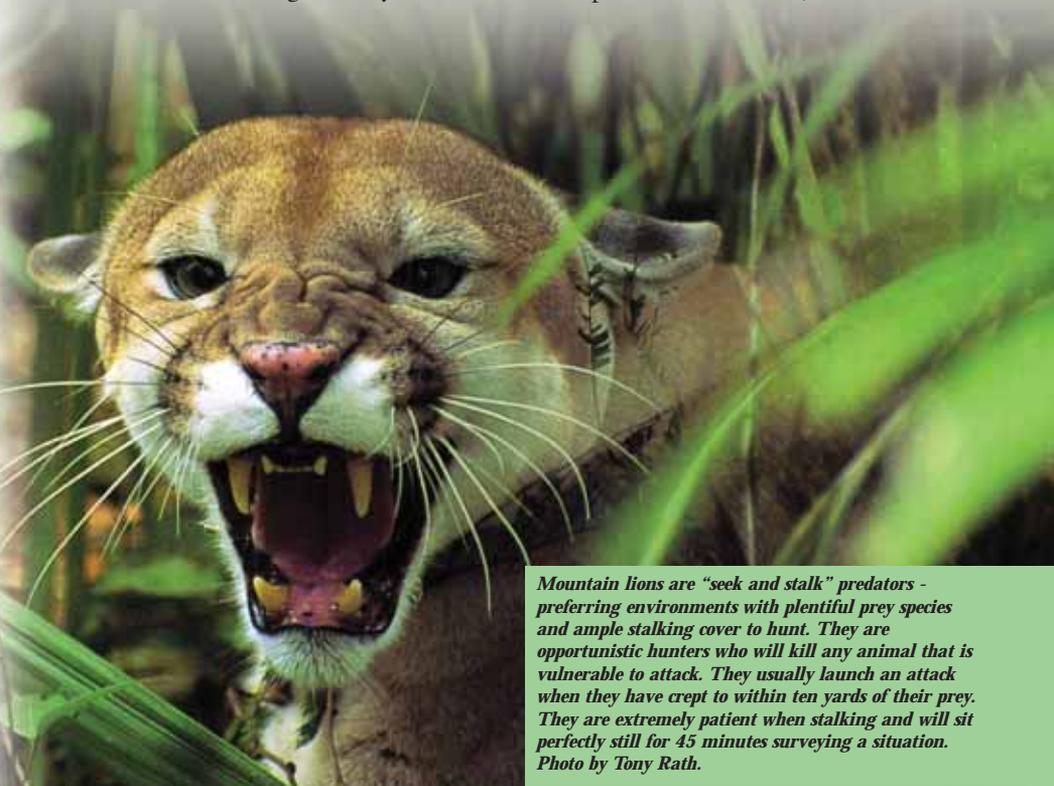
One of the alpacas in the outer pasture, where the lion had first entered, had somehow made it into the enclosed paddock where it was killed. This animal had probably raced to seek the protective company of the other animals near the barn. She may have been the first victim. The alpacas tried desperately to flee. Corral boards were snapped in half, broken outward indicating the alpacas in this enclosure careened against the boards to escape the lion. One escaped, only to be caught from behind thirty yards from the pen. The ground around most of the carcasses was undisturbed indicating the end came quickly with barely a struggle. For the most part the photographs taken the next day looked the same; a sprawled alpaca suffering from a single bite.

There was one notable exception. Judging by the paw prints and ground clearly disturbed by an alpaca's distinct cloven hooves, the predator and victim had struggled violently. This alpaca had fought loose and run quite a distance from the mayhem. As far as the cat knew this is the one that got away. In the



The ground around most of the slain alpacas was barely disturbed, indicating the cat was fast and efficient in running down its victims. However, the ground in this picture tells of a violent struggle by an alpaca that fought off its attacker. There are more than twenty deep gouges in the soil made up of mountain lion and alpaca footprints.

morning the alpaca who had struggled free was found kushed along the inside of the exterior fence, far from all the other animals. This alpaca, known for its tenacity, apparently survived for a time before succumbing to the trauma of the initial neck bite. It arrived at what would be its final resting place with enough control to kush but, as its life faded away, its neck and head had arched back and its tail flipped forward in a final gesture of submission. There were no signs the mountain lion had pursued this animal to where it now lay. Instead the wild cat returned to the original victims, ate a small part of one animal, batted another



Mountain lions are "seek and stalk" predators - preferring environments with plentiful prey species and ample stalking cover to hunt. They are opportunistic hunters who will kill any animal that is vulnerable to attack. They usually launch an attack when they have crept to within ten yards of their prey. They are extremely patient when stalking and will sit perfectly still for 45 minutes surveying a situation. Photo by Tony Rath.



This is the alpaca who broke free the mountain lion's grip and ran from the site where the rest of her pasture mates were found killed. Unfortunately, she had been fatally wounded by a bite to her neck before she broke free. She had enough control in her final moments to kush along a fence with her tail flipped forward in final gesture of submission.

around chewing on an ear, and left the area without sampling it's other victims.

In a matter of a few minutes a carefully thought out alpaca operation lay in ruins. Months later the owner has trouble talking about the loss. Small consolation for her emotional pain, but beneficial for her financial welfare, the animals were fully insured.

Mountain Lion Attacks

As a species, mountain lions generally avoid people and their activities and don't usually predate on livestock. There have

been a few well-publicized incidents involving mountain lions killing people since 1986, but the odds of this happening to you rate far below the odds of succumbing to a bee sting, lightning strike, snake bite, drowning or dog attack. From 1991 to 2003 the average death rate per year in California was .2. With Canada and the rest of the US added to this statistic the number of deaths to humans rises to about 0.8. Still an extremely rare occurrence, considering the number of people frequenting mountain lion habitats. In California



This alpaca was victim of a mountain lion attack. Note the mountain lion trademark bite (round in shape) to the neck. In this case the alpaca's ear was also torn. Most of the alpacas suffered only one bite to the neck. This attack resulted in five victimized alpacas and only one was partially eaten. Mountain lions sometimes kill over and over again as rapidly as they can, when they attack livestock in a fenced area. Wild life biologists call the phenomenon surplus-killing. The worst case on record is the loss of 192 sheep in a single night.

there were two fatal attacks from 1890 until 1909, and no attacks for 77 years. Since 1986 nine attacks have occurred in the Golden State, two of them fatal. Often the attacking cat is a young adult without an established territory. The attacks are almost always directed to a lone individual who is without other human companions, or has become separated from them.

When it comes to attacks on livestock, what occurs from one region to the next is highly variable. Looking at the big picture, dogs account for about twice as many livestock kills as mountain lions and coyotes combined. One commercial hunter who worked for the Federal government's Predator Damage Control Program, thinks about 5% of mountain lions cause most of the problems with livestock.

The hunter, who asked to remain anonymous, said he knew of no scientific studies verifying his "guesstimate" of 5% but many scientists agreed most pumas are content consuming wild game, providing it remains plentiful. However, if a mountain lion from the commercial hunter's "5% trouble makers" focuses on your camelids, you'll need to be smarter than it is to ensure your animals survive.

Mountain Lion Territory

My purpose in writing this article is to help you assess the vulnerability of the animals on your farm and identify strategies to minimize risks to your herd. Becoming knowledgeable about mountain lion behavior and the laws for dealing with them may help you reduce the likelihood of attacks.

The first surprise for many livestock owners is to find out that they live in mountain lion territory. For example, almost all of Oregon and Arizona are considered mountain lion habitat. Mountain lions sometimes live in close proximity to large urban centers. They exist in the Santa Cruz Mountains where they are hemmed in by the Silicon Valley to the East, the Pacific Ocean to the West and San Francisco to the North. In California one of their greatest densities (4-5 per 100sq km) is in the Mount Diablo Range directly east of the Bay Area and hemmed in by freeways. A general rule in North America west of the Mississippi is that where there are deer, there are (probably) mountain lions.



Mountain lions are solitary hunters that can measure eight feet in length from the tip of their nose to the tip of their tail. They are very efficient opportunistic predators with great athletic ability. They are stealth predators preferring to hunt at night making use of stalking cover to draw close to their prey. Weighing between 70 and 200 pounds, they have the agility of a small cat and the strength of a leopard. There are approximately 10,000 mountain lions living in Oregon and California and there are large breeding populations in many other states and Canada.

Getting to Know the Beast

Today's mountain lion *Puma concolor*, also known as the puma, cougar, panther, painter, catamount and a number of other names in native American and Spanish dialects, originated in South America. There are numerous subspecies. According to Mel and Fiona Sunquist in their highly acclaimed book, *Wild Cats of the World* (Chicago Press, 2002), no mammal in the US is listed in the dictionary under more names than the mountain lion. This may explain why there is some confusion about the species.

Mountain lions are found in the greatest number of habitats and are spread over the greatest geographic area of any of the world's large cats. They live from western Canada and US to the tip of South America. They are found in the Andes living above 15,000 feet, in the deserts of the Southwest, the jungles of Brazil, and the conifer forests of western North America. Adults usually weigh between 70 and 190 lbs, with the males usually being 40% larger than the females. The cats are at their smallest (50-60 lbs) in the tropics, and largest (70-190 lbs), in the southern (Patagonia) and northern latitudes (Montana, Washington, and throughout Canada).

Of the world's large cats, the mountain lion is the fourth largest, behind the jaguar (180-400 lbs), lion (200-625 lbs) and the tiger (160-700 lbs). Mountain lions may be the most efficient hunter of them all. Maurice Hornocker, PhD, a well known puma researcher, reported that forty-five mountain lions outfitted with telemetry

collars successfully killed the deer they stalked 82% of the time. This is a much higher success rate than other large cats.

A mountain lion will kill a large animal, such as deer or guanaco, every three days when a female has cubs to feed or when its kills are quickly scavenged by coyotes or other predator/scavengers. A single puma may go fifteen days between kills. On average a mountain lion kills one large animal a week. They commonly eat between three and eight pounds of meat per feeding, and usually return to a kill for several days. If they are dining on smaller animals, such as rabbits, ground squirrels, possums, rats, etc., killing will be more frequent.

Understanding Mountain Lion Territoriality

Today, more is known about mountain lion behavior than ever before. Foremost in evolving research is the realization that sport hunting (the traditional method to control numbers) and reducing livestock losses don't necessarily correlate. It turns out that mountain lions are highly territorial animals. Each female generally has its own specific range to which it stakes claim by constantly marking the borders with urine. The size of a territory will depend on the availability of food, the suitability of habitat and the closeness of other lions. An established male will typically have a range that overlaps female territories.

Imagine a grid with one animal per square. When territories are occupied there is general stability in the system.



The tale of two skulls. A mountain lion skull is placed over a deer skull, showing how well a mountain lion's dentition is designed for a swift, powerful, and penetrating bite to the neck of its prey. The second skull in this photo is from a deer, the most common victim of a mountain lion attack.



A mountain lion's mouth is well designed for both dispatching prey and eating meat. The large canines penetrate between neck vertebrae quickly killing the prey. The molars are sharp with scissor-like design for chewing meat. The mouth is round compared to a the long narrow muzzle characteristic of canine species. The round bite, with deep piercing wounds from the large spike-like canines, are indicative of a mountain lion.

Females and males go about their business, hunting, marking their territories and meeting up briefly to mate and produce the next generation. When adults holding territory are taken out of this system, instability occurs. It's like reshuffling a deck of cards. New cats fill the territories.

What's interesting is there are now numerous studies assessing the impact of hunting pressures on mountain lions. In one study in Montana, an optimum lion habitat brimming with lions, the population was reduced by more than 40% through sport hunting. In two years the population was back to it's original levels. This "natural restocking" came from two sources:

- Birth and maturation from the surviving population, and
- Immigration from adults in adjacent territories.

The key factor in replenishing the population to it's original levels was the quality of the habitat, with its stalking cover and plentiful prey species. Hunting pressure aimed at reducing predation will decrease the overall population but there are many other variables involved in how this may or may not adversely affect threats to livestock. If livestock predation is ongoing eliminating the cat doing it will protect the livestock. However eliminating a cat, simply because it is there, may open up a territory to a mountain lion that will attack livestock. Lastly, often when a livestock killing puma is hunted and killed, it is found to

be either a young adult (often male) without a territory, or one that is past it's prime and no longer an able hunter.

Preferred Habitat

Regardless of the region or continent there are some common environmental factors mountain lions need in order to optimize their success. First is ample prey. Second is stalking cover. i.e., brush, trees, down timber, or rock outcrops. They prefer diverse habitats with frequent cover and amphitheater-sized open areas and irregular topography. They are often found in steep canyons where they can watch for prey and descend undetected. They employ a "watch and ambush" style of hunting and often will draw within ten yards before attacking, usually from a higher point on a slope or from an overhang (rock or tree). Rarely will they launch an attack from further than 100 yards.

Mountain lions avoid broad flat areas with no natural cover. This is probably because they sense prolonged exposure increases their own vulnerability. However, when necessity demands it and because they are incredibly agile, they will chance hunting in the open. There are accounts of mountain lions running down jack rabbits by matching them turn for turn until they overtake them.

Mountain lions, usually most active at dawn and dusk, will hunt throughout the night. They are not adverse to hunting during the day if the habits of their prey

demands it. They are solitary hunters and usually hunt only within their specific territory, defined by urine sign-posting. They criss-cross streams and game trails until something catches their eye. Pumas, living alongside suburbs and ranchettes that border their territory, become adept at picking off pet dogs and cats by strolling close to houses at night. They can seek out game by scent but they are a primarily sight-reactive predator, often stalking when they detect motion. They respond aggressively when something moves away from them and often close in quickly, preferring to attack from the rear.

Fiona and Mel Sunquist conclude, "Pumas will kill almost any animal that puts itself in a vulnerable position."

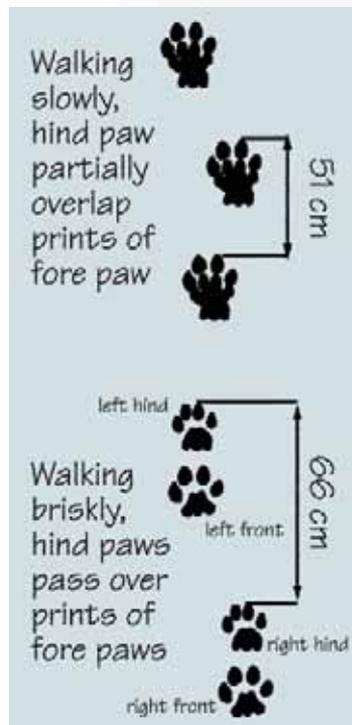
Selecting Prey

The Sunquists point out that dietary preference is driven by availability and learned behavior. Some pumas will readily hunt domestic stock when wild game is plentiful while others don't. In their book the Sunquists' explain how mountain lion cubs learned to identify a prey animal. A couple of kittens came across a possum. They batted it around like domestic kitten with a rubber ball and moved on without eating it. After scavenging several road-killed possum, the cubs killed and ate the next live possum they encountered. This would explain why in some areas pumas attack domestic stock when wildlife is plentiful, while other populations stick to wild game. Mother pumas teach their young what to hunt. And, often mature female pumas set up their territory adjacent to their mother's, which results in more pumas over a greater area with a similar prey preference.



Above: A mountain lion's foot has a distinct "m" pattern on the rear most pad. Also the claws are retractable so they will usually not be present on a footprint when a puma is walking (below).

Above right: A mountain lion comes equipped with sixteen one inch retractable claws, one on each toe. The claws are formidable weapons but are primarily a hunting aid to secure game that is then bitten high on the neck to kill it.



Surplus Killing

In the lexicon of wildlife biologists the killing of more prey than can be consumed is called "surplus killing." A mountain lion usually takes only one animal at a time, and consumes it by revisiting the carcass over several days. Nonetheless, surplus killing is a well-documented phenomenon, especially when a mountain lion starts attacking fenced domestic livestock. The worst incident on record was the killing of 192 sheep in a single night. According to wildlife managers this kind of



This footprint was found in the barn in the catch area where most of the alpacas were killed. This mountain lion was unusually bold to enter a doorway into an enclosed structure. The foot print is more than 4 inches across indicating a large mountain lion did the killing.



The five-foot no-climb fence around the pasture where five alpacas were killed was carefully constructed to keep out dogs and coyotes. The gates were modified to be the height of the fence and cement strips were poured under each gate to prevent a predator from pushing under a gate. The base on the entire perimeter had been reinforced with two strands of barbed wire. The animal control officer responding to the mountain lion attack noted that "the fence was more than adequate," but a mountain lion can jump a six-foot fence while carrying an animal in it's mouth. Mountains are capable of jumping twenty feet horizontally or vertically.

idiosyncratic mountain lion behavior usually involves sheep or goats – and now alpacas. Dog packs also have been known to indulge in surplus killing.

In the case of the alpacas described at the beginning of this article, animal control officers called to the scene quickly identified the perpetrator as a mountain lion. To the casual observer the calling card was practically undetectable. There were a few footprints that were distinctly mountain lion. One footprint was inside the barn showing the marauding cat was bold enough to enter the doorway into an enclosed stall. The other telltale signs included the aforementioned surgical-like bite to the upper neck and eating that usually starts on the underbelly and genitals.

The animal control officer noted the fence was more than adequate, compared to most livestock operations in the area. The professionally installed five-foot high perimeter fence made of t-bar and heavy gauge no-climb wire, with a dog-proof base and reinforced gates had



A telltale sign of cougar attack: a surgical-like bite to the upper neck

eliminated dogs or coyotes.

Mountain Lion Populations

Mountain lions are increasing in numbers throughout Canada and the western United States. This trend is likely to continue due to existing laws and policies. According to wildlife biologists, Oregon and California have a combined mountain lion population of 10,000 animals. Washington, Idaho, Utah, Montana, Nevada, New Mexico, Arizona, Colorado, Texas and Wyoming all have healthy populations. In Canada mountain lions are common in British Columbia and Alberta. There are some reports of mountain lions re-colonizing areas in parts of New England and Eastern Canada. These sightings have not been confirmed and even with a few lions roaming about, the threat is minimal compared with the West where the breeding populations live.



The Political Reality of Puma Management

It may seem easy to conclude the best solution to problems with mountain lions is to shoot every one of them. This was essentially the approach for 200 years. This explains why, except for about fifty puma in southern Florida, there are no known breeding populations east of the Mississippi River, where they were once plentiful.

There are two new variables that are

part of the discussion other than "shoot on-sight." First there is strong sentiment in the public that is supportive of mountain lion protection in both the United States and Canada. This is reflected in the policies found in all areas where they now live. The idea of instituting the policies of yesteryear are unlikely to gain much traction any time soon, given the politics of mountain lions. Simply put the conservation lobby, who would champion the vote for mountain lion rights over the traditional rancher attitude towards indiscriminant predator

eradication, have been winning at the ballot box and public opinion polls for many years. In fact, when broaching this subject with Fish and Game officials and commercial hunters working for the federal government, many were reluctant to comment for fear of reprisals of some kind.

After the alpaca herd described in this article was killed, the breeder began to ask questions and learned that a 4-H sheep project had ended just as abruptly from a similar attack. In the same general region an experimental goat herd owned by UC Davis was totally annihilated. The herd was reduced from eighty animals to no survivors in a period of months. At first one or two goats would simply disappear. Since there were no carcasses the goats' managers assumed poachers were stealing them. Eventually a few carcasses were

found. The lion was hiding its victims and feeding on them later. All of this went unreported in the local newspaper, despite the benefit of awareness it would have given to other livestock owners in the area, “because of politics.”

So What Can You Do?

1 Get an accurate assessment of the risk in your area.

The first order of business is to determine if you are in primary mountain lion habitat and if there is a history of livestock being attacked by mountain lions. Keep in mind some reports of mountain lion attacks will actually be dog attacks which, in many areas, kill more livestock than mountain lions. To get a fix on the dietary habits of your local pumas, tap reliable sources of information. Don't rely on storytellers and rumors.

Contact animal control officers (county employees) or the regional office of Fish and Game in your area. The closest office of the United States Department of Agriculture can put you in touch with a government trapper familiar with your region. If the response you receive is a generalized description of mountain lions and what one did somewhere else, keep asking. That is not good enough. You want to know specifically if any lion attacks have been confirmed in your area. If the response is “yes”, you want to know when, how often, and how close to you. Risk needs to be assessed on a regional basis. The question is are your animals at risk?

2 Know how to respond to a mountain lion attack and make use of government assistance.

All states and provinces allow a stock owner to shoot a mountain lion caught in the act of killing stock. Catching a puma in the act is extremely rare. Most attacks are discovered after they happen. Authorized governmental entities, usually the state department of fish and game, have a depredation permit (even California, which otherwise bans all hunting) program aimed at eliminating a mountain lion that has attacked livestock.

Each state has slightly different requirements but in general, an attack should be reported to the appropriate officials within twenty-four hours. A fish and game officer or wild life biologist will

need to verify the attack by inspecting the sight. If a puma is the suspect, a permit will be issued that will be good for ten to fourteen days. Usually, the livestock owner then contacts a “trapper” who uses dogs to track down the lion and kill it. If you respond slowly there is a good chance a permit won't be granted. The idea behind a depredation permit is to eliminate the offending lion, not just any lion. If the kill is fresh, chances are the lion is less than a mile away.

There are several important steps to keep in mind.

- Know who to call and have the phone number readily available.
- If an animal(s) is attacked take pictures of the victimized animal, it's wounds and any evidence of the attacker (usually just footprints).
- Do not move a carcass until you have had veterinarian and/or animal control officer visit the scene to make their own determinations.
- Be careful not to walk on tracks of animals found near the carcasses or in the general areas.
- Contact your insurance company as soon as possible.
- Lastly, there are different types of “trappers.” In the course of researching this article, the trappers working for the USDA were described by several sources as well-trained and professional.

3 Beware of changes in nature that will increase the threat.

Be especially vigilant in times of drought, forest fires, unusually high snow levels or diseases affecting deer herds or other prey species. If a plentiful prey species population suddenly plummets or if a natural catastrophe occurs, resident mountain lions may turn to domestic animals as an alternative.

4 Develop preventative strategies

How much energy and expense you put into this will depend on your assessment of the potential problem and how much money you want to spend. The first-line of defense may be to eliminate stalking cover that borders your pastures. Several cattle operations reporting losses to mountain lions, cited removing thick brush adjacent to pastures as helpful. In

general mountain lions are reluctant to cross expansive open areas where a quick retreat isn't possible.

Eliminating trees and limbs that make it easy for a puma to climb into a pen is another step in the right direction. Mountain lions have been known to leap fifteen vertical feet to evade a pack of dogs. This makes most fencing schemes seem entirely inadequate. A puma can clear a six-foot fence without touching it. In Monterey County in California a mountain lion was filmed climbing over a nine foot fence topped with three strands of barbed wire to drop into enclosure housing exotic deer. This enterprising cat made use of a tree next to the fence. Exotic animal breeders, who have raised mountain lions, keep them in large cages with a mesh roof.

A man who once owned a mountain lion thought an eight to ten foot fence that angled out at the top two to three feet would keep a puma out. “They need to climb and if they bump into something at the top this should deter them.” Others thought double fencing with each fence height being six feet or higher might be an effective deterrent. This would create double barrier that interrupts stalking, throwing the puma off his game. Visual barriers were also suggested. It needs to be noted that none of these suggestions were seen as foolproof by the people suggesting them, nor did anyone want their suggestion attributed to them.



Mountain lions are amongst the most athletic cats in the world. They can leap 20 feet vertically and can clear 30 feet on a horizontal surface. They have the agility of a small cat and the strength of a leopard. They are a stealth predator preferring stalking cover to get close to their prey before leaping on it. Though most mountain lions leave livestock alone, some seek out livestock. There are approximately 10,000 mountain lions living in Oregon and California and many healthy populations in much of Canada and west of the Mississippi River in the U.S.

5 Enclosing livestock at night.

This concept is obvious and often overlooked. From time immemorial livestock have been gathered in the evening and put in a safe place. On the atiplano *canchones* (rock or mud brick corrals) serve this purpose. To this day, in the Andes, traditional pastoralists round up their animals daily to protect them from Andean fox, unsupervised dogs and mountain lions. The Masai in Africa enclose their cattle behind thorn brush corrals to make it hard for hyenas, lions and leopards to reach their cattle.

With mountain lions, walls aren't as effective as a barn or catch area with a mesh roof, similar to those in large aviaries found in zoological gardens. Rounding up alpacas and securing them in a barn or "roofed/ covered" enclosure at night doesn't entirely eliminate the risk, because there are still the daylight hours to consider. However, most attacks occur at night and pumas are more likely to take a chance moving across a pasture under the cover of darkness. If you are reasonably sure most lion activity in your area occurs at night-if they are preying primarily on deer, chances are it does-this may become a very effective strategy.

6 Using other kinds of animals to protect your llamas or alpacas.

This can take many forms. Most camelid breeders are familiar with guard dog breeds. i.e., specially developed breeds of dogs, Great Pyrenees, Komondors, Maremmas, Anatolian Shepherd etc., who live with herds of livestock and repel predators of all kinds. In the correct circumstances some of these breeds have proven themselves to be very effective. However, this is not as easy as just locating a dog to buy. There are differences between breeds (some being overly aggressive towards people, creating significant liability risks) and differences between bloodlines.

Good research and careful handling may produce the desired result. If you are in active mountain lion country, and you opt for guard dogs, two is the recommended minimum. A single dog may be killed and eaten. Two large dogs confronting a mountain lion are usually able to protect a



If mountain lions are preying livestock locking the livestock up at night in a covered shelter may be warranted. Livestock guard dogs, such as the Komondors (left) and the Anatolian shepherd (right), also may help, but if you opt for the use of dogs, two is the minimum. A single dog may also become a victim.

herd. The lion seems to sense there's too much risk and will retreat.

There are other protective animal options; donkeys, mules and llamas can all be confrontational. An adult mountain lion can quickly dispatch a guard llama, although an aggressive challenge from one towards a puma may result in it becoming the victim instead of others in your herd. Donkeys have survived in desert areas in prime mountain lion habitat with only minimal predation. In fact there are instances of donkeys and mules turning the tables on mountain lions and injuring or killing them.

Though equine stock have been preyed upon by mountain lions, most lions stay clear of horse-like creatures. They are just too big and too dangerous to tackle. However, putting mules or donkeys in a pasture with camelids carries very real risks to the camelids, should the donkey or mule decide to attack them. There is no contest, should this occur. However, putting a few mules or horses in pastures that would need to be crossed by a cougar to get to camelids might be an effective deterrent.

7 Noise and light deterrents.

This is uncharted territory but does deserve mention. Bruce Elliot, a retired California Department Fish and Game biologist, feels that mountain lions are deterred by human voices. His suggestion is to play talk radio in isolated area on a property during the night. He felt a constantly changing "unnatural" auditory experience would trigger wariness, and send a cat elsewhere in its hunt.

Concluding remarks

The mountain lion is here to stay. Knowing it is "out there" is the reality we must live with in much of North America. Most mountain lions avoid us and don't eat livestock. Detering a mountain lion that will cross the line requires being aware of numerous changing environmental factors, assessing the vulnerabilities on your particular farm, and developing a combination of strategies that give you the best possible chance to decrease the odds of a devastating loss.

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About the Author

Eric Hoffman is the primary author of the second revised edition The Complete Alpaca Book, (Bonny Doon Press, 2006). He wrote the first scientifically based alpaca registry (today known as ARI) in the world and is author of hundreds of articles on all four species of camelids. His articles have appeared in International Wildlife, Animals, Pacific Discovery, California Living, Wildlife Conservation and many other publications. His speaking engagements on camelids have taken him to many places including Australia, New Zealand, Sweden, Switzerland, Peru, Germany and England in recent times.

