

The Mysterious and Misunderstood Mountain Lion

Two hunters trudge through the snow, struggling to keep up with their dogs, on the scent of a mountain lion. The dogs' relentless pursuit forces the cat to scramble up a pine tree for refuge. Their job done, the hunters send for Hornocker, then settle in for the night. The cat watches from the branches of the tree.

Next morning, Hornocker tranquilizes the animal by firing a drug-filled syringe, then climbs the tree to retrieve the cat. The cat should be awake but manageable, so that Hornocker can tie a rope around its hind foot and lower it to the ground.

But when he gets near, it becomes suddenly apparent that the cat is not tranquilized after all. The angry cat, perched 10 feet above Hornocker's head, snarls a warning.

He climbs quickly up the tree, staying on the opposite side of the tree trunk from the cat. As he reaches the animal, the cat's tail flops around the tree. In a flash Hornocker grabs it, swinging the cat safely into the air, to land unhurt in a snowbank.

Life is exciting when you are a wildlife researcher.

This was one of Maurice Hornocker's first encounters with an American mountain lion. He was one of the first to study the cat in its own environment. A long-time fixture at the University of Idaho, Hornocker has made many important contributions to our knowledge about wildlife.

We talked with him about the animal that launched him into a distinguished career of wildlife research, and how he helped to change the cat's image and its chances for survival.

Theodore Roosevelt spoke of the American mountain lion as "the big horse-killing cat, the destroyer of the deer, the lord of stealthy murder." For generations the mountain lion was considered a dangerous, blood-thirsty animal, stalking about the countryside with evil intentions.

But in only 20 years or so, roughly the time that Maurice Hornocker has been studying the animal, the mountain lion has become the darling of Western wildlife.

Thanks in large part to Hornocker's research, the fate of the mountain lion has turned completely around. A well-known name in the field of wildlife research, and widely recognized as the world's foremost expert on big cats, Hornocker has made the University of Idaho his home base for 17 years.

During those years, as head of the Idaho Cooperative Wildlife Research Unit, he developed now-accepted methods of capturing mountain lions and other large wild animals ranging from grizzly bears to wolverines; he pioneered the use of radio telemetry to track secretive animals like the mountain lion and the river otter; he has collected hard facts about the mountain lion and how it fits into nature's scheme, where previously there was a dearth of information; and, by spreading the word to the public of the mountain lion's true nature, he has succeeded in busting some of the worst myths about the big cat.

The work done by Hornocker and the people he led in that mountain lion research project uncovered knowledge about the secret life of the cat Hornocker calls "the prince of predators."



Gary Koehler

"We didn't have any factual information about the mountain lion as little as 15 years ago," Hornocker said. That was before he began the first long-term study of the animal in the rugged mountains of the Idaho Primitive Area.

Hornocker is as good a writer as he is a wildlife researcher. His colorful stories and descriptions of the big cats have appeared in many magazine articles, including *Natural History*, *National Wildlife*, *National Geographic*, and research journals. His work was also the subject of a 1964 National Geographic TV documentary, *The Big Cats*.

The picture he painted of the nearly endangered species helped change the mountain lion's public image from an undesirable character to a majestic wild beast.

Lithe and Splendid Beast

Naturalist Ernest Thompson Seton wrote eloquently about the mountain lion. His description is worlds away from that of Teddy Roosevelt.

Seton described the American mountain lion as "lithe and splendid beasthood. His daily routine is a march of stirring athletic events that not another creature—in America, at least—can hope to equal."

The mountain lion is the latest word in versatile. It can live in the desert, mountains, plains, sub-alpine

This young female mountain lion was captured near the Taylor Ranch in the River of No Return Wilderness. A plastic ear tag identifies her, and the radio collar around her neck allows researchers to track her.

forests and swamps. It once ranged from Canada to South America, from East Coast to West.

Since it competed with early settlers for game animals, the mountain lion became known as vermine. As North America became more settled and the human population grew, the mountain lion slowly began to disappear. In fact, Hornocker said, every effort was made to completely wipe it out.

Most people used to think that, given the chance, lions would eliminate wild elk, deer and probably sheep. It was also believed that domestic livestock were in constant danger of being carried off. So it's not surprising the cat's numbers are not as numerous as they once were. Today lions can be found in sizable numbers only in the 10 western United States, parts of Texas, the Florida Everglades, Canada, and Central and South America.

There used to be a bounty on mountain lions in most states, including Idaho, since most people considered the cat a varmint to be exterminated. But public opinion slowly changed as scientific evidence of the cats' real nature began to surface. Idaho's bounty was lifted in 1958, as were others. During the 1960s wildlife

researchers were proving the lion is not the threat to game and livestock it was once believed to be.

But mountain lions were still hunted until 1972, when the species was finally named a game animal. Now there are limits and regulations for hunting mountain lions, and hunters must be licensed by the state. Hornocker said about 200 were killed in Idaho last year.

Biologists from all over the West report that mountain lion populations are recovering, and that deer and elk populations are also doing well, proving all three species can simultaneously maintain healthy populations.

Strategies for controlling lions that raid livestock also changed during the '60s. At one time, mountain lions were indiscriminately killed *en masse*. But now, state authorities respond to individual incidents and complaints, indentifying and killing only offending lions.

The big cat is known by more names than you can shake a stick at: cougar, catamount, panther, painter, puma. In Mexico it's known as *leopardo* or *leon*.

Mountain lions are shy and secretive. They prefer dense cover or rocky, inaccessible terrain. For most of their lives they are loners, mixing with other members of the species only during the period of juvenile dependency on the mother and during adulthood for short periods in the mating season.

Contrary to TV westerns and widespread popular belief, lions do not stalk about screaming. In fact, they do not expose themselves visibly or by sounds.

Mountain lions shun baits, preferring to secure their own food. Because they are so secretive, they can only be successfully hunted using trained dogs. Lions fear barking dogs, and will climb trees, cliffs or rock outcrops to escape them.

Left alone, mountain lions limit their own numbers in an ecosystem through territorialism. Hornocker describes the lions' environment as an "apartment house" with only a certain number of apartments, one for each resident lion. The number of apartments in a given area is primarily determined by terrain and the amount of food available.

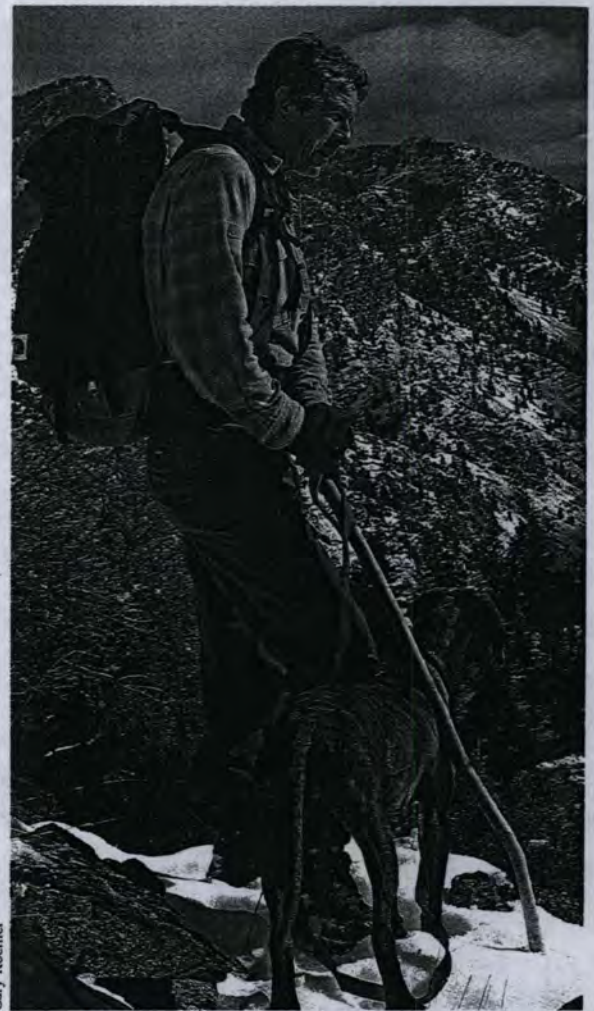
When the apartments are full, younger lions must go elsewhere. At about 2 years of age, after they are weaned, the young lions wander away from their mothers until they find an unoccupied place where they can make a living for themselves. These lions are called transients. When a resident lion is killed, a place is opened for one of the transients.

Male lions, in Idaho at least, have rigid territorial boundaries ranging anywhere from 50 to 150 square miles, which do not intersect those of other males. Females also maintain territories, ranging in size from 25 to 75 square miles, but these sometimes overlap with neighboring males.

Male lions mark their territory by leaving "scrapes" of leaves, dirt, fir or pine needles. They often urinate, defecate or place scent on these scrapes as well, a signal to warn other lions how recently they were there.

A pattern of behavior involving these scrapes, which Hornocker dubs "mutual avoidance," helps protect males from injury in defending their territories. He believes this behavior to be essential to survival of the species.

Male lions who happen upon recent markings left by another will quickly abandon the area, rather than challenge the resident lion. This, Hornocker theorizes, is



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Maurice Hornocker pauses while on a lion hunt. The dog, Maggie, is a plot hound, used to chase lions up trees and keep them there until researchers arrive.

because solitary predators such as the mountain lion depend entirely on their own well being to survive. They cannot afford the luxury of fighting in defense of territory, since an injured lion may not be able to provide his own food. So the scrapes and other markings serve as warnings to potential intruders. Even resident lions in their own territory avoid any newcomers, preferring to stay aloof until the stranger moves on.

Female lions have litters, usually of two kittens, at about two-year intervals. The kittens are dependent on their mothers for about two years, while she teaches them to hunt and survive in the wild.

Hornocker thinks that when lions travel and hunt together, they communicate by means of a whistle-like sound. His theory rests on his experience with two orphaned kittens he acquired during his research.

"From the time they were very small these kittens made interesting sounds," Hornocker reported. "These could best be described as whistles, and resembled bird calls more than anything else. They used different tones when greeting me or each other, when alarmed, or when calling. Other sounds (along with a rumbling purr) indicated pleasure and contentment.

"At no time did I hear them scream, nor have I ever heard anything like a scream in the wild. They could,

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The Wildlife Research Institute

Maurice Hornocker has captured hundreds of cougars. He was the first to attempt to catch and investigate large numbers of cougars, or mountain lions, although at that time no one really knew how it should be done. So he had to discover for himself how to tree a cat with dogs, use an automatic firing syringe to drug them, which drugs to use and how much. After years of tracking them on foot through the winter snow of Idaho's Primitive Area, he pioneered the use of radio telemetry to keep an eye on his lions.

It's hard, cold, backbreaking work. He loves it.

"It's the pure joy of the pursuit of knowledge," he said. "I want to make long-term, lasting contributions to knowledge."

Recently Hornocker set up the Wildlife Research Institute at the UI, to pursue knowledge of wild animals, especially those rare and endangered animals about which we know so little.

"The institute has been my dream for a long time," he said. Funded through grants and contracts to do wildlife research, and by endowments from the National Wildlife Federation, Hornocker said the WRI has the flexibility and freedom to conduct long-term projects of lasting importance to the field of wildlife research.

Currently six graduate students from the UI's College of Forestry, Wildlife and Range Sciences and two biologists are conducting research that Hornocker describes as landmark. They are studying the lynx of eastern Washington; grizzly bears in the Selkirk Mountains; black bears in northern Idaho; the bobcat in the River of No Return Wilderness; fishers (a big weasel) in the Bitterroot Selway Wilderness; ocelots in southern Texas; and jaguars in Brazil. Within the next year four more projects should be starting up.

Each of these projects tackles a single species. The object is to find out everything there is to know about the animal, and then discover how it fits into the big picture.

Hornocker has a special vision of his institute. "I want to hire people who want to change the world," he said. "I want to give young, professional wildlife researchers a chance to work on what they love, and then get out of their way. Opportunities like that are rare."

But world-changing research comes out of opportunities like that.

It's not surprising that Hornocker believes so strongly in this approach. He got started in much the same way.

In college at the University of Montana, Hornocker thought he'd like to be a forester. But a part-time job with John Craighead changed his mind. "He opened my eyes to a whole new world of wildlife research," Hornocker said.

John Craighead and his brother Frank are



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This bobcat kitten was raised by Hornocker and associates in order to study the cat's behavior. After repeatedly saying "come here, come here" to the kitten, they began to call him Kamir. Now fully grown, Kamir resides at the Olympic Game Farm in Washington.

famous in wildlife circles for their definitive work on the grizzly bear in Yellowstone Park and on birds of prey.

While working on his master's degree, Hornocker joined the Craigheads in their famous research on grizzlies. Afterward he worked with them for three years, then moved on to earn a doctorate degree from the University of British Columbia.

In the early 1960s the Idaho Fish and Game Department contracted with Hornocker to study the mountain lion, an animal severely reduced in numbers. He headed off into the wilderness, starting from scratch, to find out if the lion really deserved its bad reputation.

After 10 long years of excruciating research, Hornocker burst out with the news the cat had been getting a bum steer.

Continuing his work on the mountain lion, Hornocker joined the UI as leader of the Idaho Cooperative Wildlife Research Unit, where for 17 years he headed one of the most respected groups of wildlife scientists in North America.

Now he is director of his own dream-come-true, the Wildlife Research Institute. He doesn't get out into the field as much as he'd like to, but Hornocker is a happy man.

"When people mention this institute," he said, "I want them to think of it as a small cell of excellence. I want people to think of the quality, deep-digging research done here that makes lasting contributions.

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and did, make many sounds similar to that of housecats, but much louder.

"I am certain that lions in the wild communicate by means of these whistle-like sounds."

It is not true that mountain lions kill only the fattest and the best prey. "They kill whatever they can catch," Hornocker said, which usually means an animal that is somehow less fit because of age, physical condition or smarts.

It is also not true that mountain lions could wipe out

The Outdoor Lab

"I suspect mountain lions have spent many more hours watching me than I have spent minutes observing them," Hornocker wrote in a 1970 article in *Natural History* magazine, about midway through his first mountain lion study. "Although I studied them for six years and spent months in their remote mountain sanctuaries, I rarely got more than a glimpse of a free-roving lion—and then it was usually because he had seen me and was moving away."

Since at that time there were no established methods of capturing mountain lions, Hornocker began to develop some. He worked with veterinary schools, drug companies, and other wildlife researchers to come up with the right drugs and the right doses to use. Then he learned from experience, his best teacher.

Eventually Hornocker turned to radio tracking as the only way to track an animal so secretive that Hornocker and his associates were sometimes caught unawares. He tells of some close calls that reveal a great deal about the big cat.

Wilbur Wiles, long-time resident of the primitive area and a veteran mountain lion hunter, was hired to assist Hornocker in capturing and tracking the cats. In one of Hornocker's stories, Wiles was pursuing a male lion who had sought refuge on a narrow ledge, but then disappeared from view. Wiles, thinking the lion had gone around the bluff, climbed the ledge to see where he had gone and suddenly found himself face to face with the cat. Wiles crouched on the ledge; the lion had nowhere to go but toward Wiles.

"With a mighty effort, the lion leaped directly over Wiles' head and was gone," leaving the man without a scratch, Hornocker said.

In another incident, Hornocker and Wiles set their tracking dogs on fresh tracks of two lions, male and female. They passed under a small fir tree where the lions had slept. Glancing up, Hornocker saw the male lion sitting in the tree about 10 feet above Wiles' head, calmly gazing down at the situation. But the lion didn't attack. In fact, Hornocker said, in several instances a cornered lion would lash out at the dogs, but never attacked, and never attempted to reach the two men, even when they were within striking distance.

The Blinding Glimpse of the Obvious

Once in a blue moon a wildlife researcher reaches a glorious point in his research. Hornocker calls this the blinding glimpse of the obvious.

"It's when you've spent years of excruciatingly slow, hard work, and you have all the piece of the puzzle—but somehow they just don't fit. You're stumped.

"Then suddenly, bingo! You know what's going on, everything comes into focus. It all looks so simple then. You get a high..it's like skiing deep powder."

Once this blinding glimpse of the obvious is achieved, the wildlife researcher can predict how animals will behave, Hornocker said, and can design experiments to prove it.

"That's where we are now with the mountain lions," he said.

In January of this year he embarked on another mountain lion research program, this time a 10-year effort in New Mexico. It will take the WRI researchers under Hornocker's supervision five years just to gather information about the mountain lion population of a secluded area.

After learning all they can about the population, Hornocker's team plans to move into phase two of the study. They will manipulate the situation by removing some of the animals, in order to study the effect of this "simulated disaster" on the population. Selected cats will be captured and relocated.

Hornocker hopes to be able to prove his apartment house theory. If it proves correct, it will be helpful in wildlife management. Whatever is learned in these unchanged areas can be applied to areas where man has changed the environment.

"That's what wildlife management is all about," he said. "We need to be able to predict what will happen if we do this or do that, to help us make management choices.

"Wildlife management in North America is state of the art," Hornocker said, "the best in the world." Still, he explained, there is much to learn, and he and his colleagues are ready for the challenge.

all the deer and elk in Idaho. Although they do depend on these game animals for winter food, Hornocker said that the actual effect of mountain lions killing deer and elk is minimal.

"Weather, winter food and human hunting have the most effect on the populations of deer and elk," Hornocker said. "The effect of mountain lions is similar to the effect of automobiles on the human population. Sure, people are killed by automobiles, but that's not the major factor in determining human numbers, and we're certainly not being wiped out by them." ❁

by Beth Goff Grubb