



Mountain Lions in America: Wild & Hazardous World

**One writer's foray into the controversies surrounding
America's most magical and beleaguered cat.**

by Noah Sudarsky

From the Mexican border to Washington State, Sudarsky's wide-ranging research and fieldwork over the course of two years has yielded an unsettling picture of the staggering challenges facing mountain lion recovery... and some dramatic encounters with *Puma concolor*.

It was after midnight, and sleep was eluding me. The sumptuous lodge near Bozeman where I was staying for most of the duration of the 10th Annual Mountain Lion Workshop was overheated. The trophies of African game adorning the vast living-room walls seemed out-of-place. An oryx gazelle, a kudu, and then a stag moose (to add a little local color) dotted my vista. I was almost surprised by the absence of a grizzly bear, or a Bengal tiger, jaws agape. Maybe those had been taken down. We were, after all, a bunch of environmentalists attending a science workshop. Well, except for me. I was a freelance writer recently commissioned to write an article about mountain lions.

Earlier that evening, I'd spotted mule deer, lots of them, standing in formation on the bluff that overlooked the ranch. At first, before my eyes could fully adjust to the darkness, I could only see their steady focused gaze, which glowed bright yellow and seemed curiously un-deer-like. I thought for a moment we were being spied on by a pack of wolves. Living in California for the past year, I still hadn't made it out to Big Sky Country. I was thrilled to be in Montana, staying not at the Holiday Inn where the workshop was taking place, but rather on a vast, isolated ranch 30 miles from Bozeman with no other manmade structure as far as the eye could see.



And so, feeling restless and a bit entranced by the sheer magnificence of the stark landscape and the infinite starry night, I donned my hiking boots and slipped outside through the big sliding-glass doors. A few hundred feet to the north was a small lake where I'd spotted a few sandhill cranes and harlequin ducks just before sundown. In the midnight hour, without so much as a ripple to disturb its smooth, burnished surface, it glinted in onyx-like splendor.

To the east, behind the house, a trail led into the mountains. I started up the steep rocky path. Reaching the bluff, it leveled out. I could discern the stack of hills to the east, dark silhouettes against the purple sky. It was a moonless night, yet the radiant stars gave off all the light I needed. A few isolated spruce and juniper bushes were all that broke up rock-strewn landscape.

I followed the path. The next rise wasn't quite as steep; I was midway up it when I spotted a shape slinking up the hillside about 100 yards to the south. I illuminated the creature with my LED flashlight—a small but powerful tool. I'd only seen one mountain lion in the flesh before this, but the broad muscular back and the long tail made this animal unmistakable. It was barely moving, crawling up the steep slope in a manner reminiscent of something both catlike and vaguely reptilian. The big cat seemed fused to the terrain, an organic part of the landscape—edging along with the tacit accord of everything that surrounded it. The trees, the stars and the mountains—all of them seemed to be intrinsically connected to this nocturnal predator, meshed together in a galactic wholeness. Everything about the stealthy carnivore seemed to be murmuring so softly that it was just a part of its surroundings—nothing more. And invisible is what it was, or very nearly so. The mountain lion reached a juniper bush, and disappeared from view. It was aware of me, of course, standing as I was out in the open. Even without its perfect nighttime vision, it would have detected my scent, heard my footfalls, long before I ever managed to spot it. Perhaps it was hiding from me, bunched up just behind those low twisted branches—or perhaps it was stalking me. Or, perhaps both.

I remained where I was, about as motionless as I could manage. Every time I moved, ever so slightly, I displaced a few of the loose rocks that made up the surface layer of the rough-hewn trail I was on. I didn't want to stumble, thereby showing the mountain lion just how clumsy and utterly vulnerable I really was. I felt utterly exposed. Eventually, I turned and slowly backtracked to the lodge.



Mountain lions are most active between dusk and dawn. A motion-activated trail camera snapped this photo of a mountain lion in California.

The next morning, I told my story over coffee. Steve, the Ecological Coordinator for the East Bay Parks district, thought my description sounded plausible. So, we went up into the hills to look for tracks. I had reached the ranch near dusk. By daylight, the landscape looked flayed; the terrain was nothing but rocks: big rocks and little rocks in a vast, blistering sweep. The hardy

trees stood out in forlorn patches, but they were stunted: too preoccupied with the business of survival to grow tall. No wonder the deer flocked to the lodge, where the sprinkler system maintained a flush lawn. Here, they could graze on the only green grass for miles. The ground was too rocky to say for sure what any particular paw-print might be; there were some traces around the area where I'd spotted the mountain lion, but they were nothing more than big circular indentations—nothing conclusive. The rest of the group was skeptical.

"Most mountain lion sightings are a case of mistaken identity," noted Zara McDonald of the Felidae Conservation Fund. I was being lectured to—not a good sign. If there had been a vote at that point to decide whether or not I had really seen what I thought I'd seen, the outcome would've been an overwhelming *niet*.

We settled down for breakfast. Brian, the farmer who ran the ranch (which was owned by a couple from Connecticut) and tended to the guests, was manning the griddle, frying our breakfast bacon along with my order of eggs over-medium with sparse, efficient motions. He overheard our talk. No one had thought to include him in the conversation.

"There are a lot of lion kills about here," he said during a pause. "Fresh ones."

Bad reporter, I thought to myself. Of course, while I was surrounded by specialists, I hadn't remembered the first rule of reporting when one finds oneself in an unfamiliar place: Ask the locals.

On the way to the workshop, Brian showed us three of the deer carcasses he'd spotted the days preceding. They weren't far off the road, meaning that there were probably more kills up in the hills and buttes that he hadn't spotted. Puncture wounds were visible on the neck of at least one dead deer. So the mountain lion I'd seen, in all likelihood, had come down from the hills to feed on a kill. And just like that, my sighting seemed more credible to the rest of the group.

I had just landed in Montana for a workshop; a conference for specialists that would bring me up to speed on the latest in cougar research and ecology—not to do fieldwork. But I'd already seen a mountain lion in the wild, something the majority of those in our little group had never managed.

As I continued to work on the story for two more years, the sheer enormity of it eventually hit me. People did not just encounter these creatures in the wild. Mountain lions are among the most elusive animals on earth. And yet...

The last day of August, 2010, a mountain lion was killed by police officers in the middle of Berkeley. That was how I landed in this story. The incident occurred half-a-mile from my house, practically across the street from the back entrance of Alice Water's gastronomical flagship, *Chez Panisse*. One of my neighbors had seen a mountain lion on the steps which lead down to the playground where I take my daughter not long before. I was hooked.

However limited the police's options may have been once confronted with a mountain lion in the middle of downtown Berkeley, the reaction of the local population was unequivocal. The day

after the killing, an ornate shrine to the slain cougar sprang up at a busy intersection near the spot where the young male was shot dead.



The Berkeley mountain lion's shrine on the corner of Shattuck Avenue and Cedar Street. The bag of flowers reads: Let's honor life by not killing wild animals. Instead, let's protect and cherish them, so rare and precious. Please forgive the ones who killed the mountain lion. They know not what they have done.

A week later, at the Live Oak Community Center in Berkeley, Zara was fielding questions from a pent-up audience about the police shooting. I was there. The town-hall-style meeting was a challenge, even for a specialist like McDonald, whose own uncannily panther-like gaze—kaleidoscopic in their blue, green, and yellow highlights—scoured the room.

"Think of the liability," she exclaimed at one point, after an umpteenth outraged outburst from a member of the audience. "For the police, it's a public safety issue. Law enforcement just isn't trained to cope with pumas. Tranquilizing a mountain lion is tricky business; they don't have the equipment or the know-how." Zara was correct, but the crowd wasn't interested in legalese or technical insights. To those present that evening, the mountain lion was a mystical creature, a sacrosanct link to the natural world.

One participant was convinced she saw the ill-fated feline not long before it was killed: "It was dusk and I was heading south on Wildcat Canyon Road when I noticed the mountain lion to my left. I stopped, and the next thing I knew it was loping across the road toward the Berkeley hills, long tail sashaying. There was an opossum on the other side and I thought for sure it was going for it, but instead it just went down a deer trail, with the possum following in its footsteps. It was magical. I never imagined that magnificent animal only had a few hours left to live."

In other California towns such as Los Gatos, Redwood City, Santa Cruz, and Sonoma, where cougars have been put down by local authorities or ranchers, the level of public outrage that ensues is often extreme.

"We were almost lynched," recalled National Parks Service biologist Jeff Sikich, after a young male mountain lion was shot and killed by the police in Santa Monica following a failed attempt to tranquilize the big cat in a courtyard in the middle of the popular Third Street Promenade.

That is how the citizenry of Berkeley and Santa Monica see this particular predator: a mixture of tearful protectiveness and awe. In other areas where this apex carnivore still roams, however, the view is so different it felt to me as though I was discussing an entirely different species. Regardless of the local spin one encounters, the mountain lion is a species on the move—and it is one that is poised to reclaim its rightful title as the nation's most wide-ranging apex carnivore.

Connecticut wildlife officials were dumbfounded when a healthy 3-year-old mountain lion was struck and killed by an SUV in Milford, CT. The fatal impact happened in June 2011—in a state where no cougar had been documented in more than 120 years. I had been working on my cougar article for a while already when the tragic collision occurred.

This made it even more personal. Connecticut is my home state, and it was the first to adopt a bounty system aimed at eradicating panthers and catamounts. The last reference I could find to a Connecticut panther (as these animals were typically referred to) was an article in the *Hartford Courant* dating back to August 8, 1891. "Quite a scare has been caused in Beaver Brook district near Danbury by the nightly raids of a panther," the piece begins. Said panther, which had its lair on Beaver Brook Mountain, had created a boneyard in the nearby woods. It had battled a bull and lacerated it so severely the animal had to be put down, and so on. And yet, despite the hyperbole—typical of the time—the descriptions of the big cat were specific enough to be authentic. It was a young mountain lion, for its coat was of "a bright yellow color, with dark shadings." Its tail was noted to be at least 3 ft. long. No other native carnivore could possibly fit that description. My grandfather began working at the *Courant* as a young newspaper boy just a few years after that fateful article was published, and he ascended the ranks to become vice president of the venerable Yankee daily. His career lasted 60 years. During that time, no other mountain lion was reported in the state. No more than in the 60 years that followed my grandfather's tenure. Until the individual that became known as the "Milford mountain lion" came along.

The bloody bounty system born in Connecticut spread rapidly to other states. The idea of cold cash for dead cougars persisted widely until the 1940s, at which point breeding populations endured mostly in the remote mountainous patches of the West. And the practice still persists. In Jersey Valley, a rancher acting as a private Nevada Department of Wildlife contractor is being paid \$1,800 for every mountain lion he (or a member of his family) can kill. From Danbury to the Laramie Range in southeastern Wyoming—the easternmost point where the species maintained a claw-hold (outside of the inaccessible wetlands of the Florida peninsula), cougars were wiped off the map. It took less than forty years to eradicate this once-endemic carnivore from over two-thirds of the continental USA. And then, cougars started doing something no

other big carnivore had ever accomplished in America without human involvement. They began to recolonize.



Despite widespread skepticism, DNA analysis of the rangy 140 lb male killed in Milford revealed that it was, in fact, fully wild, and that it was probably born in Black Hills of South Dakota. Somehow, this remarkable predator had accomplished the impossible, and covered thousands of miles by hill, vale, and highway culvert. It went all-but unnoticed until a bizarre sighting which was dismissed by most was reported in Stamford, CT—an affluent suburban community less than an hour by car from New York City. This transient—as biologists refer to dispersing mountain lions—wasn't merely following some primeval wanderlust. It would have stayed put at any point along its continental crossing had it detected an available female—but a mate was precisely what proved most elusive on that odyssey transecting five states and at least one Canadian province.

And for good reason: Unbeknownst to our intrepid tom, having taken leave of the Black Hills, he already had forged past the easternmost redoubt for his species. For, with the exception of the endangered Florida panther, these majestic wildcats are not tolerated beyond the Badlands (though the species is protected, in theory, in certain Midwestern states where no viable populations exist). By bridging the northern Rockies and the Long Island Sound, the Milford mountain lion pulverized all previously-known distance records for a solitary carnivore. He even put the great African migration of the wildebeests to shame. In so doing, he paid homage to the unique history of his species.

Ironically enough, only months before the pioneering Milford lion was first spotted in Stamford, CT, the federal Fish and Wildlife Service declared the eastern cougar extinct.

Known as cougar, catamount, puma, wildcat, panther, and a staggering array of other names throughout its historic habitat, this conqueror cat was the uncontested King of the Americas until the last wave of European colonization, boasting the greatest range of any land carnivore.

Puma concolor spanned from the Atlantic seashore to the Pacific coastline, covering every latitude between Patagonia and the Yukon. With the abandonment of bounties in most states, and the establishment of strict hunting harvest quotas in other areas with dwindling populations, this mesmerizing carnivore is once again staking a tenuous claim to its ancestral homeland. And it is doing so without expensive translocation programs or any federal protection (with the sole exception being the Florida panther, which benefitted from the fresh DNA provided by the relocation of a handful of Texan females).

Moving back into populated lands has become an increasingly perilous proposition for this tenacious and adaptable predator, however. One-hundred centuries ago, our forefathers witnessed saber-tooth cats in present-day Los Angeles, 800 lbs. lions roaming the Yukon, and jaguars the size of Bengal tigers hunting the Wisconsin woods. The mountain lion is all that remains of this incredible big cat bestiary—which also included the cougar's closest relative—the American cheetah.



A disgruntled Arizona state wildlife employee takes a grisly photograph of 11 severed mountain lion heads stacked under a tree. The heads represented only one-fourth of the 44 lions killed in Arizona in 1989 by professional hunters working for the U.S. Department of Agriculture's notorious Animal Damage Control (ADC) program.

Man is up to his old tricks once again, which now include cynically inept carnivore management practices such as taxpayer-funded airborne predator-control programs. With its remaining range still relatively vast, this uniquely resilient species isn't endangered. Nevertheless, mountain lions are in peril in nearly all other conceivable ways. While the mainstream media has focused largely on a scant few dramatic encounters and the eastward spread of one or two isolated breeding populations, a determined group of wildlife "managers"—political appointees with strong ties to huntsmen lobbies—is on the warpath.

The sleet is coming down hard. As M62 emerges above the dark curtain of spruce, Pete Alexander of the Teton Cougar Project draws a sharp breath. The lion's sodden, muscular frame cuts a stark contrast against the ghostly Gray Hills in northwest Wyoming's Gros Ventre Wilderness. When he begins his graceful advance—slashing diagonally against the dramatic, ashen backdrop of the mountains like a feral wraith—it feels oddly like Kabuki theatre rather than mere field observations on a very cold, very wet day in the Bridger-Teton National Forest. GPS cluster points indicating a possible kill site and the presence of two mountain lions in the vicinity has drawn members of the Teton Cougar Project field team to this remote promontory overlooking the swollen Gros Ventre River; yet catching so much as a glimpse of this most evasive of big cats is un hoped-for. M62 turns, facing us flush. He sits back on his haunches, gazing toward the river.

"You must be the luckiest man alive," Pete says to me.

Anyone who has spent much time outdoors in the West has likely been observed by a mountain lion. The converse, however, does not generally apply.

"A California State game warden can go through his whole career and see a mountain lion maybe once," says National Park Service biologist Jeff Sikich, the capture specialist for a mountain lion study in the Santa Monica Mountains, which hosts an endangered population of big cats a mere stone's throw from Los Angeles. This is precisely why, a thousand miles away, Pete Alexander can hardly believe his eyes. Mountain lions don't just pop out of the woodwork—but this one did, and Pete wants to understand why.

At just over 24 months, M62 is still a juvenile in mountain lion terms. But he is already one very large, very daring lion—one that may be poised to claim the top spot in his native range. M62 has only two other options: death or dispersal. He can face off with the area's dominant male, M21, or leave in search of his own home range, possibly traversing extraordinary distances in the process, as most young male cougars must.

For now, M62 is focused on another imperative: keeping his sights on the elk carcass near the river, a kill made by an older, more experienced lion, a female known as F47. The two cougars have been feeding together, just one example of the newly-discovered social propensities documented by big cat biologist Dr. Howard Quigley and his team. Stationed as we are on the opposite bank, we are far enough from M62 to stay in place. Getting any closer is out of the question—the plan is to remain discrete long enough to hopefully decipher the scene we are witnessing.

While exceptional under any circumstances—even for cougar biologists—Teton Cougar Project coordinator Marilyn Cuthill had a precarious encounter after she inadvertently got too close to a female with kittens. "I found myself negotiating life," recalls Cuthill. "She was growling in a steady low pitch as I turned my head and saw her crouched in the roots of a downfallen log—ears back, chest heaving, muscles coiled in high definition. In the same second I saw her tail twitching, she launched herself toward me. When she landed, she stood before me close enough to touch. Our eyes locked. I held my 5'3", 120 pound frame solid and began a careful, steady,

retreat. Partnered in a slow cat walk, she followed each of my steps with an advancing step of her own."

F101 allowed Cuthill to leave the den unharmed, at one point swatting the air with her paw to let the biologist know she meant business. The close encounter left a searing memory. As Cuthill continued tracking F101 over the years, a lasting admiration was born.

"She always exhibited an exceptional tenacity and focus, raising four litters, two to three kittens each. She was cagey, outsmarting trailing hounds by meandering across logs and streams to hide her scent and tantalize them by bedding down, leaving scant but confirmed scent, only to elude the dogs seconds later. She denned in the thicket of downfallen trees at the crest of a mountain, using the wind to scent for predators. The cover offered a dry place for kittens and the vantage point allowed her to hunt at dusk and dawn, traversing the vast landscape with the ability to return quickly. While with kittens, she regularly took down elk up to five or six times her size. She died of old age, curled up at the base of a large Douglas fir, at thirteen."

F101's fate was unusual, for all wild mountain lions lead unimaginably perilous lives, and rarely die of natural causes. M62 has positioned himself against a clump of sagebrush, just below a crescent-shaped snowdrift, a safe distance from the riverbank. He gazes patiently at the scene below, which to us is completely obscured by the dense cover. We don't know what sparked his retreat, but chances are it wasn't F47. Predator dynamics—understanding more about how the top carnivores (bears, wolves, and mountain lions) relate to one another and impact the environment in the Greater Yellowstone Ecosystem—is one of the study's objectives.

While tracking cougars with Idaho state parole officer and houndsman Boone Smith the days preceding, we encountered wolf tracks shadowing cougar tracks, for wolves will actively seek out the big cats and kill them if they can. After locating a female, F51, bedded down beneath a high spruce, we went looking for her kill. With incoming tracks visible on a half-dozen fallen aspen trunks, we began to backtrack. The big clover-shaped paw prints were wider than many of the narrow, slippery boughs. Springing from dead tree to dead tree, F51's route to her current quarters has been mostly arboreal. Circumnavigating the spruce grove, we pass a road and forge along a swale on the other side. Boone, peering into the thickets alongside a drainage ditch, identifies another track heading north into the sage flats. Nearing a rise, Boone freezes abruptly and points out a set of wolf prints paralleling F51's tracks.

"One of these scouts is a huge male," my tracker notes, pointing to a paw print wider than his own gloved hand.

"It's incredible she came out this far in the open to make a kill, with all these wolves in the area," he remarks. We pass the sagebrush flats, finding yet more wolf tracks intersecting F51's. Trekking into a wooded area of deep snow, we spot a few magpies and a lone crow, a good sign. Eventually, well-hidden within an aspen stand, we find F51's cache: a full-grown female elk killed the previous night. Only the mound of leaves and bramble beneath the fresh snowfall reveals the presence of the dead cow. Mountain lions can spend hours concealing their kills, and it is a wise investment. In this case, the elk will remain hidden from scavengers for days, being feasted on surreptitiously by F51 during the night. Famished, F51 had no choice but to foray two

miles in the open to find prey, somehow outwitting a pack of wolves in the process. To limit the smell given off by her kill, F51 has avoided eviscerating it and eating the choicest parts: the organs. Only one shoulder has so far been consumed, which constitutes a surprisingly dainty feast for an expectant—and ravenous—female.

Boone identifies a telltale puncture on the elk's snout, and notes the absence of bite marks on the neck. F51 made the kill with a surgical choke-bite to the muzzle. Boone looks like a tougher version of Brad Pitt, and has been moonlighting as the study's houndsman for a dozen years. His unerring tracking abilities have taken him to places like Belize, Patagonia, and Afghanistan in search of rare or endangered big cat species—which mountain lions aren't, meaning Boone views the species essentially the way any fourth-generation houndsman hailing from the Wild West would: with a kind of lethal fascination. "I've given up hunting," my field-guide sighs. "But I'd still consider harvesting a big tom."

We repeatedly lose the track of one particular cougar; yet, even without his dogs, Boone is capable of spotting a partial paw print in a dried-up swale, a dense copse, or a rocky drainage ditch, and telling you just where his target is heading. You wouldn't want to be running away from this man. As we follow the cougar and wolf tracks into a sprawling aspen grove, Boone's primal hunting instinct kicks in: his bright eyes narrow to slits and he picks up the pace—a human bloodhound.



Photo Courtesy Boone Smith. All Rights Reserved.

Lefty, Boone's best lion dog, at the end of a successful track on one of the Teton Cougar Project's study cats. The field crew was able to replace the old collar on this mountain lion with a new GPS device.

The next day, Boone identifies M21's tracks in the Red Hills, heading east. He is closing in on M62. The big tom is a scarred, battle-tested veteran of these hazardous hills. A 175-lb. powerhouse, he is one of the rare cats to have survived a direct clash with a wolf pack and emerged none the worse for wear, lacerating his lupine assailants in the process. Now, he is eager to sniff out his younger rival. M21's current status as the Gros Ventre's top cat is nothing short of miraculous, for he and his siblings were unweaned kittens when their mother was slain by a hunter. Challenging long-held assumptions, the three kittens weren't fated to die of starvation. Rather, they were adopted by another female. In a testament to both the versatility and the unsuspected social proclivities of this secretive carnivore, an orphaned lion cub has become the ruling tom in the Gros Ventre Wilderness.

"Up until five years ago, adoption had not been documented in the social association of mountain lions," says Cuthill. "Dispersing kittens generally leave their mothers between 18 and 24 months of age. The Teton Cougar Project's first collared female, F1, was 12 years old with three 14-month-old kittens when an outfitter shot her in a legal hunt. Her kittens remained at the site. After two weeks, the female kitten left her brothers and was located feeding on a spike elk. The orphaned brothers, traveling together, later found their way to their sister and within 24 hours, radio telemetry matched them residing with another family group, F27 and her three 6-month-old kittens."

Cuthill's subsequent observations constitute a new benchmark, and may compel scientists to reassess the traditional view of mountain lions as entirely solitary, asocial carnivores.

"Over the next 3 weeks, F27 was hunting more and making kills more frequently to feed her new family," says Cuthill. "The *extended* F27 family group had opened a window into their secretive lives, and we began to immerse ourselves in *behavioral ecology*. Lying side by side, F27 and M21 would groom one another and take cat naps while dodging the playful pouncing of the 3 younger kittens. The day following an extensive display of rubbing and licking, mom and adopted kitten separated. M21 dispersed and became the resident male covering an area of 200 km² encompassing the territories of both his biological and adoptive mothers."

Hunting quotas for mountain lions have increased throughout the state, with the last 3-year harvest cycle breaking all previous records. The mountain lion population within the 2,300 km² Teton Project boundaries is smaller today than when Quigley launched his ambitious study in 1999. In the contested Wyoming side of the Black Hills, where a nascent population saw the day in the 80s, a proposal aimed at eliminating hunting restrictions on cougars has raised the hackles of biologists and advocacy groups alike. Simultaneously, studies emanating from the top research institutions across the West have shown that high hunting quotas substantially *increase* the problems associated with the presence of mountain lions in the ecosystem, due to the startling havoc unselective kills wreak within the knotty cougar social order.

Read more about
Dr. Wielgus' research
on teenage lions



"Hunters will, by definition, target resident cougars, the very ones that have achieved a home range and have often learned how to cope with humans," says Rob Wielgus of Washington State University's Large Carnivore Lab. We were standing in the cold in the parking lot outside the Bozeman Holiday Inn. Wielgus put out his cigarette, twisting his heel a few too many times, until I could hear his heavy hiking boot grinding on the pavement. He gave me a long, piercing stare. "In other words, hunting leaves a void—one that's quickly filled by inexperienced subadults. Imagine a human society dominated by teenagers and you get an idea what high hunting takes do for cougar dynamics."

Jill Schad, a travel agent from Las Vegas, couldn't wait to retire to the Black Hills, where she and her husband had purchased a small property on Spearfish Creek in the middle of National Forest land. "For ten years, my life here was bliss," says Schad. Then, on Memorial Day 2011, things changed. Her Shetland collie, Kay'D, went missing, and Jill had a sinking feeling something was wrong. Her other dog, Jan'D, a tricolor collie, was barking and agitated. Jill began a search. Quickly, she spotted the first mountain lion, sitting calmly on its haunches on her lawn. Waving her arms and shouting, Jill chased it off. It was only when she reached the boat barn at the rear of her property that she found Kay'D—her head in the vice-grip jaws of a second lion.

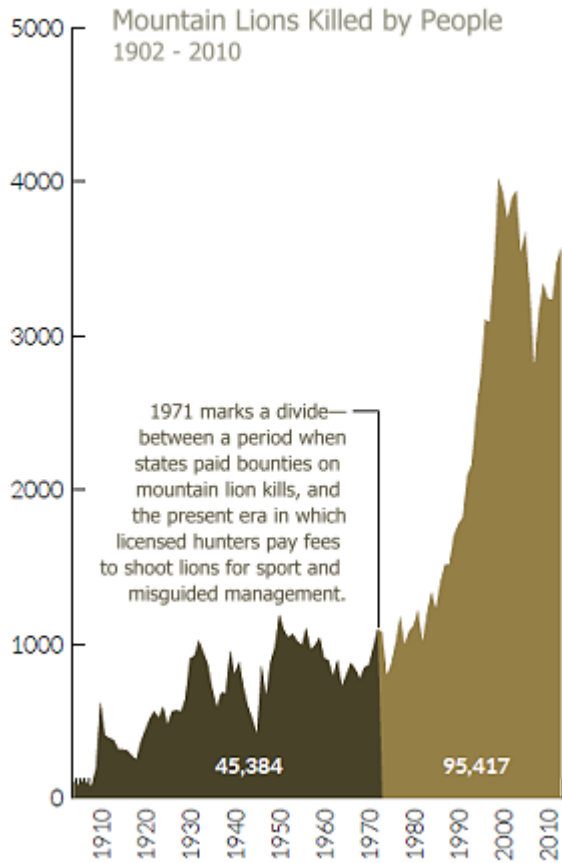
"Just then, Kay'D let out a death scream; it was the most horrible sound I ever heard," recalls Schad, her voice cracking. Without hesitation, she grabbed the first weapon she could find (a bottle of antifreeze) and rushed the young lion. "He tried to get out of the barn with Kay'D, but the space between the two posts he tried to squeeze through was too narrow, and he had to let her go. My husband arrived with a gun after what felt like forever. The lions were both on the hillside, looking down at us, and he fired a shot at them. They slinked off up the mountain. I was holding Kay'D, she was alive but her head had been partly crushed and her throat was ripped open. The next bullet had to be for her."

The two mountain lions, a yearling brother and sister team, were located by wildlife officials that very day and destroyed, but not before the male who had attacked Kay'D could reverse course back to Schad's property, seeking out his kill—typical behavior for a mountain lion. Alerted by Schad, wildlife officials rushed back to the site with the lion dogs, hoping to tree the 70-lb juvenile. Uncharacteristically, it turned on one of the hounds. "They saved the dog and killed the cat, said Schad. But that hound never tracked another lion." Schad now spends her days making art. "My peace of mind is gone," she reflects. "I feel apprehensive when my husband goes out back to chop wood, and I don't even care to sit on the porch. I keep staring at that bluff above the house."

The response of game commissioners in South Dakota to cougar incidents has been to up the ante, dramatically increasing seasonal takes, year after year. Using the rising levels of conflict as well as the perceived threat to elk populations as the justification for ever-higher quotas, wildlife managers are only making the situation more volatile. For the embattled mountain lion, in other words, it's a perfect—and perverse—catch-22. But it's a catch-22 that's bad for people too. No one wants to have to salvage her dying dog from the jaws of a starving mountain lion—a yearling whose mother was (and here I can only make an educated guess, since there is no other predator in the Black Hills that can readily kill an adult mountain lion) probably killed by a hunter and could no longer provide for its cubs. Juveniles can remain with their mothers up to two years—long enough to learn how to fully exploit the prey base in their ecosystem. For elk and moose are much harder to take down than a border collie.

"Eliminating every last mountain lion from the ecosystem will also eliminate the conflict, obviously," Washington Department of Fish & Wildlife carnivore specialist Rich Beausoleil confided at a cougar workshop in Bozeman, Montana. "Barring that kind of scorched earth policy, low hunting quotas are better."

Dr. Maurice Hornocker, the first researcher to place a radio collar on a big cat of any kind in the wild, and whose efforts to understand cougar dynamics span fifty years, called human/cougar conflict "...the single biggest issue in cougar conservation in the near future." Statistics in Washington and Oregon have comforted Dr. Hornocker's long-standing view that "...tenured territorial males literally hold the local population in check." Like throwing a monkey-wrench into a sophisticated machine, he argues, randomly removing resident cougars through hunting allowances is simplistic, and breaks the system down. "Ironically," says America's most distinguished big cat biologist, "instead of the apparently intuitive conclusion that more hunting should reduce problem animal kills and complaints, the reverse applies."



More than twice as many mountain lions were killed from 1971 to 2010 than were killed during the previous seven decades by bounty hunters. Wildlife management agencies continue to ignore the science and insist the only way to increase the safety of people and domestic animals is to kill even more lions... thus creating the conflicts they are trying to prevent.

Because game managers have traditionally defined management strategies for cougars based on a few hardwired assumptions and the desires of their most avid constituents—hunters—rather than biological truths, the recolonization of mountain lions in North America will hinge on the capacity of wildlife officials to develop a deeper understanding of cougar social organization. This task will not be easy. Environmental biologist Rick Hopkins, who conducted a long-term cougar study in California's Diablo Range, is categorical: "Many game managers and wildlife services," he states, "expend considerable energy ignoring the best available science that clearly demonstrates efforts to manage predators by broad lethal efforts, fail." Indeed, the mantra that hunting is the most effective management strategy for the species remains an article of faith among many game managers.

Completely absent from the isolated Black Hills of South Dakota and Wyoming since the 1930s, mountain lions staged a dramatic return in the mid-nineties, venturing 150 miles east from the Laramie and Bighorn Mountains. After the number of resident cougars on the South Dakota side of the Black Hills reached an estimated 250 individuals in 2005, local authorities bowed to hunter pressures and began a campaign which has since reached hysterical proportions. While

management officials trumpet loudly that they want to keep the numbers down but not eliminate the big cats, their basic strategy demonstrates a kind of self-inflicted ignorance of cougar ecology. The number of mature cougars in the Black Hills—the ancestral lands of the Lakota Indians, who honored *Igmu Tanka* (the "Great Cat") as one of the *Wakan* (sacred) animals and believed that anyone who did harm to a mountain lion would be punished—has since been reduced to a level longtime cougar biologist John Laundré calls "ecologically inefficient." Meanwhile, in the absence of the territorial toms, young cougars are free to occupy the landscape at higher densities.

On March 1st—the very day the quota of 45 females was reached, officially closing the 2012 season—I put a call through to Dr. Jon Jenks of South Dakota State University's Department of Natural Resources Management. Jenks disagrees strongly with Laundré's assessment; yet biologists all concur that the age and sex structure of the population has been altered. With a higher proportion of immature cougars, "More of them are wandering into town," says Jenks—a state of affairs which was entirely predictable.

Dr. Brian Jansen, who worked under Dr. Jenks in the Black Hills, found that "...subadult males were more frequently involved in conflicts of all types than other sex and age classes within the population." Despite the inherent risks of altering the sex and age structure of cougar populations with high hunting takes, both Wyoming and South Dakota are striving to reduce the number of mountain lions in the Black Hills, in part because hunters are convinced these carnivores are bringing elk and deer numbers down.

Regional wildlife manager John Kanta of the South Dakota Department of Game, Fish and Parks doesn't believe that's quite the case. "When you compare [the number of elk killed by cougars] to hunter-harvest mortality, it's miniscule," he points out. A full-grown cougar needs the equivalent of one deer-size animal per week to survive. And yet, in the Black Hill, the belief that the local population of big cats will grow exponentially and run amok unless they are systematically culled has become gospel. And, no one has told the good folks of South Dakota otherwise.

Ironically, instead of the apparently intuitive conclusion that more hunting should reduce problem animal kills and complaints, the reverse applies.

Dr. Maurice Hornocker

"There are many many factors that the decision was based on," the chairman of the South Dakota Game Commission, Jeff Olson, told me in reference to the decision to keep killing more cougars. "The commission's role is to listen to the people of South Dakota, hunters, non-hunters and landowners. We also listen to the data presented, biologist's opinions and their boss's opinions. [It was] very far from a simple decision. [There was] lots of discussion and input taken over two months. [There's] not one thing I can point to that caused the commission to vote the way we did on this difficult issue."

With most of the mountain lions appearing in the frontline states of the Midwest (and even the Eastern Seaboard) seemingly originating in the Black Hills—where, until recently, mature cougars have been pushing out dispersers—the decisions taken by game commissioners in

Wyoming and South Dakota are having an impact across the nation. The astonishing recolonization of this historically endemic carnivore is now, more than ever, in the hands of game managers who are, for all intents and purposes, indistinguishable from the hunters who want to shoot as many mountain lions as possible. Thus high hunting quotas could be making *people*, rather than merely hobby animals, less safe.

Nearly a quarter of all worldwide cougar-related deaths (24 percent) have occurred around Vancouver, and 57 percent of all confirmed attacks have occurred in British Columbia. During one of our talks, Dr. Hornocker shared a particularly unsettling thought: "I've speculated that the lions that survive in intensely-hunted environments have evolved certain behavioral characteristics." Characteristics that could be detrimental to the humans living and recreating in close proximity. "With other species, we've already found that hunting is a powerful selective force."

In British Columbia, sport hunting has been historically intensive, and dozens of specialized outfitters cater to an international clientele willing to pay C\$8,000 for the privilege of gunning down a cougar treed by dogs—effectively reduced to the equivalent of a furry fish in an arboreal barrel.

As a result of hunting pressures, the cougar population in that province is made up largely of transients that aren't provided much of a chance to grow into their environment or to adapt to the constraints of living in a world dominated by humans. By contrast, permanent residents of the big cat variety don't grow old by getting into conflicts with people. What's more, there may even be added benefits to allowing cougars to live out their natural lifespan. Like humans, mountain lions need the checks and balances which their own social order enforces.

Alpaca rancher Eric Hoffman is 6'5", drives a beat-up old pickup, and sports a mane of untamed white hair. He is California's answer to the gentleman farmer. When he takes me for a tour of his 13-acre ranch, he walks with the sprightly step of a man half his age. We reach a spot where, alerted by the alarm calls of his alpacas, he once found a fresh mountain lion kill pushed up against his perimeter fence. It was only a six-foot "dog fence," and the lion could have cleared it with ease—but the big cat had no interest in Hoffman's herd, and was merely taking advantage of a good game trail in Fall Creek State Park adjoining Hoffman's property (and perhaps exploiting the strategic obstacle which the fence presented for the young buck).

"The generations of cougars whose territory has included our farm," says the patrician Hoffman, "appear to be satisfied with a diet of deer, rabbits, and wild pigs. In 35 years of farming llamas and alpacas, we haven't suffered a single loss due to cougars. Our resident big cat keeps out other cougars which might have an entirely different view of what to eat. Ironically, the mountain lion sharing our area with us has most likely made it safer for our livestock."

Still, Hoffman isn't naïve, and he doesn't rely on the good graces of a top carnivore to keep his alpacas safe. Numerous cougar sightings and the fact that some of his animals are valued northward of \$50,000 spurred him to devise an ingenious "soft fence." Hoffman's tall fence is both cheap and highly effective; with plenty of slack to the wide-link wire mesh that encircles his

dog fence—like an elevated fishing net—it effectively cancels the climbing ability of this most agile of predators.

"Prey preference is a combination of opportunity and learned behavior," says Hoffman. "I built my 600 foot cougar fence for \$2000. That small investment removes the opportunity."

Throughout the West, ranchers with vast herds of cattle or sheep must allow their livestock to graze freely on open pastures. In those cases, large defensive dog breeds of the Great Pyrenees or Anatolian shepherd lineage are effective against cougars.

Pete Pulis just had a bad year. He's a rancher with 600 head of sheep and goats, and he estimates he's lost as many as a dozen members of his flock in 2012 to cougars.

"Maybe I need more dogs," Pulis admitted to me. But his "big white dogs" don't get along with his herder's border collies, and so he's been reluctant to get more. In the years prior, the guard dogs did well, and he suffered only one loss—when Blanca, the female, went into an adjoining barn and promptly fell asleep on duty. Are cougars learning how to trick the dog's vigilance? Are the dogs growing complacent? I paid a visit to his flock in Morgan Hill, the site of the very first cougar-provoked deaths of the 20th Century in America. A woman and child were attacked by a rabid cougar, and contracted the virus. Santa Clara County Park Ranger, Phil Hearin, helps me locate the flock, by no means a simple task. The sheep are grazing near Coyote Creek—one of the Bay Area's last remaining wildlife corridors. I spend a minute or two speaking to the herdsman in bad Spanish before Phil's truck reappears, driving at breakneck speed on the popular bike path, lights flashing. The ranger truck skids to a stop near my Dodge Caravan, and Phillip pounces out of the driver's seat, arms shaking like cymbals.

"A mountain lion was just spotted!" he yells. "Get in!"

Once inside the ranger truck, Phil points out a utility tower no more than a hundred yards from the flock. "That's where it crossed the trail. This is only our second sighting this summer, and you happen to be here. Pretty queer." I can only nod in agreement. We drive up and down the watershed for an hour in Phil's big truck, to no avail. Of course, the creek isn't really visible from the bike trail, and our quarry is most likely to be inching along the creek bed, where the dense vegetation provides good cover. I gladly would've spent the entire day trying to locate the cat, but I was scheduled to meet a cougar researcher from the National Forestry Service in Los Angeles.

"So what happens now?" I ask Phil.

"Nothing at all. The cougar crossed the path in front of a biker but there was no interaction. We don't file a report."

In practical terms, this means that merely being spotted by a recreating human will be of strictly no consequence to this particular cat. As I would find out, the Santa Clara County protocol is by no means universal—even in California.

When I finally get back to the flock of sheep, the herdsman is gone, leaving the herd in the capable paws of his two guard dogs. Pete Pulis puts a call through to me the following week. He informs me that a mountain lion passed through the middle of his flock on the very night of the sighting. The dogs did their job and chased it off. There were no losses.

Since California effectively banned hunting in 1972, the number of cougars targeted for stock raiding or causing harm hasn't skyrocketed—as the standard management model would predict. After a brief jump, the number of big cats destroyed by wildlife officials and ranchers every year has actually fallen consistently.



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Blanca with her flock in Morgan Hill, the site of the first cougar-related fatality of the 20th Century. That very night, Blanca successfully protected her flock from a mountain lion. Dogs are effective, if not surefire, deterrents. Individual dispositions and the number of guard dogs matter.

As with Pete Pulis, there isn't much love lost between the Taylors and the carnivore class. I drove to the Taylor Ranch on my last day in Jackson Hole, because Dr. Howard Quigley had told me they were an obstacle to his ongoing study. Quigley had organized a meeting with a different rancher harboring a more favorable outlook, but I wanted to meet the Taylors and try to understand just why they were apparently such a thorn in the big cat biologist's side.

Glenn Taylor hails from one of the oldest ranching families in Wyoming, and they've been raising cattle on the Gros Ventre River for generations. He tells me about the days before electric power was brought to his ranch, when no amount of shoveling could get the kids to school when

the road was snowed in. They were poor back then, and despite his flashy cowboy digs, he still thinks of himself as poor today.

The morning I showed up, Glenn Taylor had run out into his field to chase off two wolves. One was a white wolf he called "a giant;" the other, a smaller black wolf. The description corresponded perfectly to the prints Boone spotted hot on F51's tail. They were scouts, just as Boone had called them: trailblazers on the lookout for new opportunities for the 22-strong Buffalo pack, the biggest of the four wolf packs that patrol the vast Gros Ventre Wilderness. Taylor would have shot the pair, but because of his proximity to the Atherton Creek campground—and the fact that "Everyone can see what the heck I do here..."—he restrained himself.

Glen's wife Marian offered me a cup of coffee as we sat down to discuss cougars. Glenn wanted to know why the "lion tamers" were still around, using up federal funds for no good reason. Hadn't their study gone on long enough? The scientists had access to roads that were closed to everyone else in the winter months, which ate at him. He believed there were fewer elk antlers to be harvested, and he assumed the cougar biologists were using their privileged access to the national forest land for purposes other than research. Elk antlers provoke a kind of gold-rush mentality in Wyoming, with the most impressive specimens fetching over \$300/lb. in Jackson. I told Glenn I doubted very much that the cougar researchers were trafficking in elk contraband, and he was stunned to learn the study didn't receive a single dollar of federal or state funding.

"But why are they doing it?" It was a sincere question. No one from the study had sat down with the Taylors to explain what it was all about, and why the research was necessary. I did my best, and added that humans have always strived to understand other species, why they do what they do and what role they play in our world. He nodded thoughtfully.

"As an outfitter, I do the same thing. Trouble is they've shortened the elk season, and the odds of winning the moose lottery are next to nothing. I can't really make a living outfitting anymore, and I sure as heck don't make a good living with these cattle."

Cougars, in other words, weren't really the problem for Glenn Taylor. Life was the problem. With the exception of a grizzly that took down a heifer calf in 2010 (and was quickly relocated by Wyoming Game & Fish), the Taylors had never so much as suffered a single stock depredation. The wolves he wanted so badly to shoot had never pursued a Taylor cow, and he'd never spotted a mountain lion near his ranch.



Photo Noah Sudarsky. All Rights Reserved.

Glenn and Marian Taylor on their ranch near Atherton Creek.

And yet, fear and loathing towards carnivores runs deep in the region. On August 19, 2005, a Jackson-based Wyoming game warden—acting under the assumption that one of the Teton Project's study cats was preying on trumpeter swans from his own captive breeding program—gave chase to F32 and her kitten near Atherton Creek, using hounds. After treeing and shooting both mother and kitten, the official decapitated F32—and then proudly delivered the severed head to the Teton Cougar Project's lead scientist. The depredations on the captive swans, protected by a mere 36 inch chicken-wire fence, continued unabated. The game warden turned down an offer from the conservation organization Craighead Beringia South to pay to predator-proof the swan's enclosure on Teton Valley Ranch.

"That sort of thing shows you what we're up against," sighed Mark Elbroch, the new Teton Cougar Project manager. Cumulatively, poaching, poisoning, road deaths, trophy hunting, and destruction allowances (cougars eliminated for wandering into town or killing livestock) account for the vast majority of mountain lion fatalities in the United States. And yet, in the areas that have been recolonized by cougars over the course of the last three decades—the Black Hills and more recently the Nebraska Panhandle—there have, as yet, been no attacks on humans, though statistics for the Black Hills of South Dakota don't bode well. In the five years prior to the legalization of cougar hunting, nine individuals had to be put down. In the five years which followed the adoption of escalating quotas, 69 problem lions have been euthanized or shot for

wandering into town, stalking hikers, or livestock/hobby animal depredations. The quotas for 2013 are dramatically higher still, with the local campaign of officially-sponsored fear and loathing still gathering steam. Unfortunately, it is the elimination of the territorial males (the trophy toms) that has allowed the population to grow to higher densities than what would occur in a natural, self-regulated population.

For years, the Gros Ventre Wilderness was one of the rare exceptions to the cougar mortality paradigm. Here, humans did not destroy more big cats than would die of natural causes. The reason was simple: the gray wolf. For there is a paradoxical benefit for cougars in sharing the ecosystem with their ancestral enemy. Though they compete for the same resources, wolves can't readily kill adult mountain lions—unlike hunters. Up until 2007, hunting takes were the biggest cause of death among the Teton Project's collared cats, but with the spread of gray wolves out of Yellowstone to the wildlands adjacent Jackson Hole, the situation changed. The cost of using hounds to tree and kill cougars increased radically. So real was the threat of wolves—which have torn asunder packs of hounds—that no cougar was harvested in the Gros Ventre in five years.

Boone, my tracker, had a few close calls, and now takes the threat extremely seriously: no longer does he let his own lion dogs run loose. Thus, while wolves do pose a threat to cougars, these grim sentinels are in effect thwarting the sport hunting of mountain lions in an area that is so vast and rugged the odds of bagging a big cat via a simple boot hunt are remote to naught. However, federal protections for Wyoming gray wolves expired in the summer of 2012, and with wolves now scarcer in the Gros Ventre, the wolf/cougar/hunter dynamic is beginning to shift yet again: two female cougars and one yearling have already been slain by hound hunters in 2013.

M62 has now maintained his perch above the spruce for an hour, seemingly impervious to the driving rain which, on this day in mid-May, has succeeded the snow and sleet. The young male is still fully focused on the scene unfolding below, oblivious to both the small group of humans on the opposite side of the gorge and to the climactic caprices of the worst winter in decades. Reluctantly, as though loath to abandon the elk kill near the riverbank, M62 begins to climb up the mountain, embracing the natural cover of boulders, sagebrush, and gnarly wind-beaten pines. Though inexperienced, he is already a powerful cat, his 150 lbs. of whipcord-like muscles and sinew rippling effortlessly beneath his ochre coat as he advances gingerly over the steep terrain. Radio-telemetry for F47 indicates she is stationary—near the bank, yet invisible to us. Nearing the barren crest of the Gray Hills, M62 rounds a knoll and vanishes. The biologists surrounding me exchange puzzled looks. The reason for M62's flight to higher ground becomes clear as, center stage, a grizzly bear pops up over the treeline like a shaggy jack-in-the-box. The bear doesn't dawdle; making a beeline up the mountain, it hurtles up the steep slope at breakneck speed, disappearing into the same saddle as M62. We can only gawk. The elk kill by the river has now become a nexus of the very predator dynamics the Teton Cougar Project hopes to scrutinize. Whatever sent the grizzly into panic mode, we can only hope F47 is by now safe atop a spruce.



The young male known as M62 pausing briefly on his cautious ascent of the Gray Hills in northern Wyoming. Shortly, he was followed up the mountain by a grizzly.
Photo Noah Sudarsky. All Rights Reserved.



M62 next materializes on a bluff overlooking the river. After melting into the mountain, the young male has somehow reversed course in broad daylight and backtracked back to the river bluffs—wholly unnoticed by the highly experienced team of human onlookers whose sole purpose is to locate and observe. "Ghost cat" was the term favored by some Native American peoples, and it's easy to understand why.

M62 continues his wary sidelong advance—a sleek shadow hugging every contour, every topographical detail. As he follows a series of rocky ridges that taper out near the floodplain, he is at one with the stark, forbidding landscape. He proceeds nimbly along a narrow aspen stand, while, in the plain no more than a few dozen yards away, a herd of elk browses obliviously. Veering near the embankment, the young cougar pauses only briefly before wading into the swollen river. Swept downriver by the raging current, he eventually makes it safely across with mighty strokes and vanishes into the dense mantle of spruce. Having spent, collectively, dozens of years in the field tracking cougars, the aquatic crossing was a first for the members of the field team—though mountain lions have been known to cross even large bodies of water.

The next day, equipped to forge the river—or so I thought—I return to the site with wildlife biologist Jesse Newby. Thoroughly soaked and bruised by the time we reach the outer bank, we penetrate the forested area and locate the elk kill. The cache of pine needles, snow, and dirt has been obliterated, and the carcass has been savaged. The ungulate's skull has been ripped apart,

and what remains of the braincase is licked clean. Oversized paw prints all around us confirm the presence of a very big grizzly—a behemoth powerful enough to pulverize the skull of an adult elk.

Newby cuts into a thighbone with a compact Oregon saw, and the elk's marrow is investigated to determine the condition of the animal; he finds it was on the far side of starvation, its marrow reduced to a dark, pulpy mush after the hard winter. These winter kills on weak or diseased individuals are the norm in western Wyoming: of the three cougar kills we located during my time in the Gros Ventre, all had burned through their fat reserves.

Manifesting an as-yet ill-understood ability to identify vulnerable browsers and pick off the weak, depleted, or sick, this selective predation is, in effect, strengthening the herd. The mere presence of mountain lions in the wild also alters the foraging behavior of large herbivores, preventing critical habitat degradation. Ground birds such as grouse, as well as frogs and beavers—even fish and butterflies—can depend on the presence of cougars. Known as the Cascade Principle, this complex interconnectedness is now recognized as a generative process—one that creates an interlocking dynamic of life through the effective top-down management of the ecosystem by predators. Scientists believe that apex carnivores have become all the more important for biodiversity in an age of warming climate. Addressing the effects of past and ongoing extinctions, evolutionary biologist Dr. James Estes of UC Santa Cruz states that "The loss of apex consumers is arguably mankind's most pervasive influence on the natural world."

Newby completes his kill sheet, noting the forensic details while keeping a wary eye out for marauding bears. Before they were dispatched by not one, but two scavenging grizzlies, a pair of unrelated mountain lions were sharing this kill. Instances such as these may contribute, ever so slightly, to solving the riddle of cougar dynamics.

The species is less solitary than previously assumed, for starters. Nor can the cougar claim the title of apex carnivore in the Greater Yellowstone Ecosystem. Just as they do in Belize and other areas south of the border where their territories overlap with the powerful jaguar, cougars will stand down where necessary—and live to compete another day. In Wyoming, cougars cannot rival a pack of wolves or an adult grizzly for sheer ferocity or force, and they will abandon their kills without a fight. But these opportunistic carnivores nevertheless hold the advantage in terms of stealth, a remarkably high kill-rate, and perhaps by way of this inherent disposition to avoid conflict with other predatory species—a characteristic that has proved vital in a world dominated by humans. Of the five species of big cats that called the present-day US territory their home when ice-age hunters crossed the North American land bridge some 11.4 thousand years ago, only *Puma concolor* remains. Scanning the area for M62 with his radio antennae, Newby confirms that, with bears emerging from hibernation all around and M21 in the vicinity, the young male has opted to move on—for now.

The 2-year-old cougar that was slain in Berkeley's Gourmet Ghetto didn't have any such option. As a young male in search of territory, like M62, his choices were limited by the scarcity of good wildlife corridors in the Bay Area, though heading west into town from Tilden Regional Park was probably the worst gamble of all. Alerted to the presence of a mountain lion, a phalanx of police officers gave chase through several blocks of residential streets, hitting the young male

repeatedly with gunfire as it vainly sought a way out of the confusing urban maze. The wounded lion was finally dispatched with multiple shotgun blasts as it hunkered beneath an azalea bush on Walnut Street.

"It was so incredibly sad," said Ursula Schulz, who witnessed the final moments of the encounter from her balcony across the street, and saw the cougar lying dead in her mother Justine's driveway. "But I understand why the cops acted the way they did."

An ultra-marathoner, Zara McDonald's own fascination began with a close-up encounter on one of her daily runs through the Marin Headlands, which dominate the San Francisco Bay. Rounding a bend on a steep trail, she saw a ghostly head emerge from the dense foliage at eye level. Realizing it was a mountain lion, and that it was a mere six or seven feet from her—the equivalent of a bunny hop—McDonald froze. The large predator was clearly intrigued by the six-foot tall, raven-haired biped. The lion's amber gaze transfixed her, and McDonald froze—unable to shout, or wave her arms, or try to make herself appear bigger, or do any of the things wildlife officials suggest when confronted with a cougar. And yet, in that brief window, which to her felt like an eternity in its own right, McDonald sensed that the lion's intentions weren't hostile.

"I was awed by the beauty of the animal and how naturally it occupied the landscape," recounts McDonald. "Ten seconds later, it bounded off into the thickets, vanishing as mysteriously and as suddenly as it had appeared, as if by enchantment." Like others who have had peaceful encounters with mountain lions in the wild, the memory took on a life of its own.

"The experience changed me in ways both powerful and surprisingly subtle," says McDonald, who launched the FCF soon thereafter to assist wild felids all over the world through local educational programs and scientific initiatives.



Photo courtesy the Felidae Conservation Fund. All Rights Reserved.

Zara McDonald collaring a young lion in Patagonia with Boone Smith.

There has been no legal cougar hunting in the Golden State since Governor Ronald Reagan declared a moratorium in 1972, yet California's mountain lions are confronted with other problems. With the human population projected to top 60 million by 2050, and with one of the biggest highway networks in the nation, research is focusing on the human/cougar interface and on "connectivity" issues—the challenge of maintaining genetically healthy populations in an increasingly segmented habitat.

With the Pacific flanking them to the southwest and a dense network of highways and cities all around, the cougars that inhabit the Santa Cruz Mountains can't just get up and go to avoid intraspecific strife or low genetic diversity. The very characteristic that has made cougars such a successful species—their amazing dispersal ability—is the very thing that is being thwarted by encroaching humans.

Peering over Silicon Valley and the booming city of San Jose with California Fish and Game houndsman Cliff Wylie, it's easy to see the Promised Land: From the top of the Kennedy Trail in the Sierra Azuls, there is an unobstructed view of Mount Hamilton and the 1.5 million acre Diablo range—the last remaining unbroken stretch of wildland between the Bay Area and California's Central Valley.

11F, a three-year old female that is part of the Santa Cruz Puma Project, spent close to a week exploring a highway retaining wall in a densely populated suburb of San Jose, trying to reach the Diablo Range. Unnoticed by residents, 11F eventually turned around and returned to the Sierra Azuls on the northeast fringe of the Santa Cruz Mountains, unable to cross Highway 85. Frustrated dispersal and its corollary—depleted genes—are the most urgent issues facing California cougars.

Wylie indicates a spot near a manzanita bush where the faint traces of an old scrape site linger. Two males, 5M and 6M, were competing for territory here; now, they are both dead—killed for eating a few goats. There is still at least one female, 7F, in the area, and we catch her signal a few days later in a saddle off Priest Rock Trail. The scrubby chaparral stretches around us on all sides. Along the live oak, knobcone pines, French broom, madrone, lupine, and bush poppies, Wylie has no trouble finding tracks made by mule deer, wild hog, turkey, coyote, and bobcat. More of the same lower down in the oak savannah, and in the lush foothills surrounding Mount Umunhum and its cyclopean, Cold War-era observatory. It is a resplendent spring: the wooded slopes are bursting with colorful wake robin and fairy bells.



In California and most other western states, pet and livestock owners are not required to take any preventative measures to protect their animals from wild predators. Hobby sheep and goats—sometimes kept merely to keep the weeds down—are an easy meal for a mountain lion. Falling for this temptation often results in the lion being killed by a Wildlife Services agent, at no cost to the owner.

Though it has been a year since the last tom was shot, Wylie has yet to find any male tracks in the Sierra Azuls. No male cougar has managed to cross Route 17, which slashes through the Santa Cruz range and is a deadly obstacle for the resident cats and other wildlife. Soon after the two males were killed, another resident of the Azuls, 13F (a female dubbed "Half-tail") was slain by a rancher in Los Gatos—a town so-named because early Spanish explorers witnessed a battle between two cougars in the foothills. And in June, 9M, a male yearling that had just taken leave of its mother, was similarly destroyed for eating a goat.



"Predation problems usually involve hobby ranchers—mostly exurbanites who own a few head of livestock to get a tax break," says McDonald. Such rapid-fire eradications in a closed-circuit system like the Santa Cruz Mountains have a biological impact.

Just south of Big Basin State Park, in an off-limits watershed, California's apex carnivore still reigns. In the dead of night, the heavy silence feels alive as we begin our ascent up a remote, rocky trail. The primeval expanse of spectral sequoias stretches in every direction. Buried deep in the folds of this vast canopy, a satellite emitter placed on a cage trap baited with deer meat has

alerted the Santa Cruz Puma Project field team that something has been taken. The rush is on to locate the trapped animal. Gradually, as we ascend the rocky trail, a low, sporadic snarling begins to sound. The noise rapidly morphs into a loud, persistent growl—the closest thing to a roar a mountain lion can produce: a clear warning to stay clear. Undeterred, lead field biologist Paul Houghtaling locates the kill-site buried deep inside a redwood grove—a spot where generations of cougars have come to feast on their prey. The plan is to tranquilize and outfit it with a GPS collar within minutes, to reduce the stress caused by the capture. But there's a problem: The young, agitated female pacing up and down the cage looks small.

Ignoring the cluster of humans milling about her, the feline patrols up and down the long cage. Her strides are now punctuated by a recurring, fleeting mew—a kind of low lament. Occasionally, she stops to gently paw the steel mesh, head tilted inquisitively. Darker patches are still visible on the subadult's speckled coat. Her size is borderline, her weight possibly below the 50-lb requirement needed to affix the technology-laden accelerometer collars being used in the cutting-edge Santa Cruz study, which provide a kind of 3D imagery of movement patterns—and hopefully new insights into mountain lion behavior. The jab-stick with the syringe is dismantled. Letting the young female go is a blow to the team, as mountain lion captures are few and far between; yet, the release provides the opportunity to see a wild mountain lion up close, in all its nonsedated splendor. The cage door is rigged to open from a remote position, where the team waits, grouped together so as to provide the female with a clear escape route.

The lion is released. Seemingly out of her cell the very same moment the wire-mesh door is yanked open, the cougar unexpectedly arcs sharply to the right—precisely to where I am standing. She stops dead in her tracks just a few feet away, and transfixes me with a wide-set emerald stare. To my untrained eye, she appears at such close range to be far heavier than her estimated weight.

Elongated, with massive forepaws and well-muscled hindquarters, cougars may as well be spring-loaded. Considered by some specialists the strongest cat in the world pound-for-pound, these felids are capable of wrestling down animals as large as moose—the equivalent of an African lion taking down something the size of a rhinoceros. Their bite will pierce the skull of an adult elk or a gray wolf—or a human being. Yet there is no hostility in this lion's gaze, and she seems unruffled, even after her forced detention. Her fluffy ears are pointed inquisitively up, her tail relaxed and swaying gently. In that tranquil pose, she lingers, almost motionless, seemingly as curious about me as I am about her. During the time our gazes were locked, I felt an inexplicable connection. Paul decides our close encounter has lasted long enough, and lets fly a strident "Scat cat!" With a flick of her impossibly long tail, the young female obliges, indolently striding off through the redwoods. Gliding silently over pine needles and bramble, she vanishes into the starry expanse of the mountain range. To me, inexplicably, she evoked a kind of distinguished debutante leaving the ball: one who maintains flawless bearing and composure throughout a particularly trying evening, and exits flawlessly.

"Given the choice, pumas don't want to have anything to do with people," says Zara McDonald. Avoiding humans altogether in 21st century California is an impossible task, on the other hand, even for this notoriously elusive species.

Spanning both Orange and San Diego counties, Winston Vickers' and Walter Boyce's UC Davis study area holds the dubious distinction of encompassing the sites of two lethal attacks. The first occurred in 1994 in Cuyamaca Rancho State Park, not far from the spot where Vickers keeps his own camper, claiming the life of 56-year-old Iris M. Kenna, an avid birder on the way up to Cuyamaca Peak in the early morning hours. The second fatality occurred to the north, at Whiting Ranch—where a few weeks before my arrival, a mountain lion deemed a public safety threat was captured. A couple caught the young male nonchalantly crossing a hiking trail just in front of a coyote they were filming, not far from where they were standing.

Soon afterwards, DFG officers hazed the mountain lion with both beanbag and pepper-spray rounds to get him to move on, which he did—a short distance. The placid juvenile wasn't aggressive, and maintained his cool-as-a-cucumber demeanor, even in the cage in which he was later trapped. In an unusual twist, wildlife officials sent Serrano, as he was baptized (after the trail on which he was first spotted), to a feline sanctuary. For the typical outcome for mountain lions that attract the attention of DFG officers for lingering near people is of a more definitive nature.

"Nothing really seemed to faze him," remarked Vickers.

The attack that occurred at Whiting Ranch on August 8, 2004, involved a mountain lion with a different kind of disposition. While the precise circumstances which cost the life of competitive cyclist Mark Jeffrey Reynolds will remain forever shrouded in mystery, the 35-year-old's bike was found derailed just off the trail. Reynolds body was later located by a ravine below the trail, buried and partially consumed. Just a few hours after Reynolds was killed, another mountain biker, a former Marine, was attacked from behind while riding her bike. Badly mauled by the same 3-year-old mountain lion that had killed Reynolds, Anne Hjelle survived the ordeal thanks to the dogged determination of her riding partner, and some fellow cyclists who arrived at the scene and hurled large rocks at the 110 lb. male.



In an attempt to identify the circumstances behind the unprecedented one-two attack, Vickers set up a video camera facing the exact location where Reynold's bike was found; he discovered that a sharp turn in the challenging Cactus Ridge Run combined with a sandy substrate causes a high percentage of bikers to lose control and fall off their aluminum mounts.

"I wonder how long that mountain lion had been observing flailing bikers before he decided to try his luck?" notes Vickers, adding that "Even if you aren't falling over, mountain biking is a risk factor. Rapid transverse movement can trigger an immediate predatory response." As we

head into an unfamiliar stretch of the Anza-Borrego Desert to look for cougar sign, Vickers grows pensive. "With that said, you could still bike in Whiting Ranch every day and you'd still stand a better chance of being hit by lightning than jumped by a cougar."

While cougar attacks on humans do occur, they are exceedingly rare. Deaths even more-so: There have been 20 documented human fatalities since 1890 in Canada and the United States, half of which were children. Between 2005 and 2010, cougars claimed one life in all of North America: Robert Nawojski, a 54-year-old man living alone in a trailer near Silver City, New Mexico. Black bears caused 10 times more fatalities during the same period, in the course of which 104 people in the US were killed by a single breed of dog—the American Staffordshire terrier.

We spend the day scouting the desert along the Mexican border. Vickers doesn't know what he'll find. Hiking up scalding creek beds and bone-dry drainage ditches, we tread gingerly among the withered yucca blossoms and the pervasive barbs of cholla cactus. We penetrate a big culvert, and Vickers warns me that they are a favorite lair for diamondbacks. He was cornered by a rattlesnake once, and escaped by the skin of his teeth.

After demanding to know what we're doing scouring the desert in the middle of August, a cute US border patrol agent who, as luck would have it, is a UC Davis graduate, gives us permission to check a promising mile-long stretch along the 20-foot steel border fence. We find some promising tracks along game trails on the north side of the patrol road, and one cougar print near the top of a peak where the skeletal steel fence ends, replaced by some loose barbed wire. If Vickers can find a few discrete spots where he can hide trail cameras without attracting the attention of the runners who ferry hopeful immigrants past the border, he'll put in a few over the following days so as to document cougar activity in the area.

North of Vicker's study area, the National Park Service directs the other Southern California cougar study, which is currently monitoring half-a-dozen individuals in the Santa Monica Mountains and one young male who made it to Griffith Park in Los Angeles, passing unnoticed through a good chunk of LA and crossing two superhighways along the way.

"We're keeping close tabs on him," says Jeff Sikich. But P22's prospects aren't very bright. An abundant supply of mule deer provides a good prey base, even in Hollywood. When the desire to find a female pushes P22 to look beyond the frontiers of the eight-square-mile stretch of parkland, he will have only highways and the nation's most sprawling metropolis to look towards. We are but a few miles from the world's biggest highway interchange.

As we glassed the hillside overlooking the Hollywood Reservoir with our binoculars, a mule deer doe and her fawn scampered up the canyon, ears twitching nervously. P22's signal was coming from a location no more than a few dozen yards distant. Even as his radio signal indicated he was inching slowly up the hillside, stalking the deer, he remained invisible to us.

The cougar population that inhabits the urban-wildland interface in and around LA isn't sustainable, despite unwavering public support. Inbreeding is pervasive, as the resident lions are isolated by highways and ever-expanding urban sprawl.

"DNA testing tells us we have a problem," says Vickers. "Lions are appearing with the same clipped tails as were common only in the fully isolated Florida panther, indicating critically poor genetic health."

Sikich is on the same page: "The Santa Monica population isn't doing well. Fathers are breeding with daughters. We need to connect existing habitat on either side of 101." Interagency cooperation has been less than ideal, and the team's last attempt to secure federal funding through Caltrans to build a wildlife corridor was turned down by the federal government.



Photo Noah Sudarsky. All Rights Reserved.

Serrano at the Cat House, a captive big cat breeding facility in the Mojave Desert, where he will live out his days. Serrano did nothing wrong, he merely didn't steer clear enough of people.

Before leaving Southern California, I paid a visit to Serrano, the tom captured at Whiting Ranch. The young lion is being held in a captive feline facility in the Mojave Desert. Standing near Serrano, as he rested in a small pen while being treated for parasites, he looked relaxed but forlorn, as though he could sense that he was now seated to live out his days in captivity. "I'm not sure why they didn't just put a collar on him and let him go," noted Joe Maynard, the colorful owner of this facility. "That would have been my first choice."

With his spiky singed-saffron hair and blazing green eyes, Dr. Brian Jansen is a rarity in the politically-over-sensitized universe of mountain lion research: a straight-shooter who doesn't mince his words.

"Hunter rule the roost," he tells me soon after I locate his campsite in the middle of the Nevada Desert National Wildlife Refuge—at over 1.6 million acres, the largest refuge in the lower 48. "In California, you'd have to beat the bushes to find a hunter. In South Dakota, you'd have to beat the bushes to find someone who doesn't hunt." And therein rests the basic difference in the management policies of those two states, according to Jansen: from the absence of a hunting season in the former, to ever-higher cougar quotas in the latter.

"Hunters know how the system really works. They call their game commissioner when they want something. Members of the public might dial their elected representative," which Jansen compares to barking up the wrong tree. And because hunter dues support Fish & Game budgets in all states, huntsmen carry a lot of clout. Renowned wildlife photographer Tom Mangelson, cofounder of the Cougar Fund, aptly calls the situation "one giant conflict of interest."

Adding another layer of complication, all scientific studies need to obtain necessary permits from wildlife agency nomenclatures. Alienating the constituents who pay the bills simply is not an option.

In the first Mojave Desert mountain lion study, Dr. Jansen is contributing his skills to a community ecology project for the US Fish and Wildlife Service designed to determine if cougars are keeping the number of desert bighorn sheep down, following a drought in the late 80s which decimated the population. Despite Jansen's extensive experience with mountain lions in the Black Hills, he isn't the top scientist in the Sheep Range—he's the houndsman. His main job is to capture and collar mountain lions. Jansen's four blue tick hounds are now cavorting around the campsite, sensing a looming chase. But mountain lions are becoming rare in the desert ranges.

Bighorn sheep are considered a "buffer" species for mountain lions—a surrogate resource to which the carnivores can turn if their primary prey species (in this case mule deer) become scarce. It is taken for granted that a buffer species will suffer where its territory overlaps with a primary prey species, yet thus far, little actual evidence of this dynamic has been unearthed in the Sheep Range. Only one of the 30 bighorn sheep that have been outfitted with GPS collars has fallen to a cougar in two years.

On my last day in the field with Brian Jansen, which is also his last day working on the project, we cover 126 miles by ATV, traversing the sprawling, muddy expanse of the Dry Desert Lake, flanked by scattershot swaths of Joshua tree, prickly pear, and beavertail cactus. From the adjoining creosote valley, we ascend slowly into the mountainous peaks of the Sheep Range to over 6000 ft. before finally reaching an icy creek where Jansen had previously placed a road-kill deer outfitted with sensors to indicate possible cougar activity.

Fresh snowfall covers the boxy pinyon pines and spindly juniper bushes, and Jansen hopes a closer inspection will reveal that the deer has been visited, but no luck. His baying hounds won't

be able to run a mountain lion. We deliver the dead deer to the chief cougar researcher on the project, Dr. David Choate, who has been camping at a site even more remote amid the frozen summits of the Sheep Range's pinyon-juniper forest. Choate has ten snares set up around the upper reaches of the Sheep Range, but he hasn't caught any mountain lions. The dedication of scientists who won't hesitate to spend months, even years, trying to study this ethereal carnivore under the harshest conditions is provided its starkest expression here. Not to mention the immense difficulty of conducting cougar research in the Mojave Desert.

"This is an ultra-low-density population," Jansen explains. In over eighteen months, he hasn't crossed any male mountain lion tracks, and doesn't believe *any* toms currently remain in the 1,500 square kilometer Sheep Range.

"There is intense hunting pressure on lions all around the refuge," explains Jansen. Cougars are also being singled out for destruction by a state-sponsored predator control program in the adjacent Delamar Mountains, in an effort to maintain desirable bighorn numbers. Three such programs in Nevada are targeting cougars, and are currently costing the state approximately \$400,000 per year. Despite the premium on dead cougars, there is scant evidence that the prey which these carnivores typically target is being devastated by cougar predation. Scientists tend to agree that wider-ranging phenomena (such as climate, which has a powerful impact on the number of fawns born every year) account for the annual fluctuations in mule deer population throughout the West.

"Historically," says Carl W. Lackey of the Nevada Department of Wildlife, "harvest limits were calculated by biologists and those recommendations were reviewed and sometimes altered during the public meeting process. Since 2003 harvest limit recommendations were not formulated in this manner, but rather have been indiscriminately chosen with little input from Department biologists by the Wildlife Commission."

The cougar hunting season in Nevada is year-round, and every hunter can obtain multiple tags. Between 2007 and 2010, a three-year legislative effort backed by the Nevada Wildlife Commission aimed at delisting mountain lions from the game mammal to the unprotected—or vermin—category. The bill was eventually defeated, in part because hunters themselves did not support such a radical measure. Jansen calls it "supply and demand" management. The supply, however, could be dwindling fast.

"I don't encounter a lot of floaters around here," says Jansen, referring to transient subadults. "If there is some kind of directional dispersal occurring, as I found evidence for in the Black Hills, then all the young males may simply be heading in the wrong direction." Instead of finding the desert sanctuary where they would be off-limits to hunters, dispersing lions may be ending up in heavily-hunted management units or areas with vigorous predator control management policies in place—where their chances are slim to naught. In the Delamar Mountains and other protected wilderness areas in Nevada, records for the past few years show that every mountain lion suspected of killing a bighorn was relentlessly pursued, and if possible, destroyed. Reintroduced into the Delamars and other remote areas, these transplanted sheep aren't as good at avoiding mountain lions and other predators as their native-born brethren—virtually ensuring that any population of mountain lions unlucky enough to be caught in the middle of a bighorn

reintroduction effort will pay a very steep price. "Translocated sheep are very naïve," says Kathy Longshore, the bighorn specialist directing the ungulate side of the Sheep Range study.

So "politically charged" is the topic of mountain lions in Nevada that, to paraphrase Carl Lackey, that other biologists working on cougar studies in the state did not respond to requests for comment. Alyson Andreasen of the University of Nevada, Reno, was a case in point. But I had already talked to Andreasen in Montana, where she had presented her research. She has now completed a vast genetic analysis of cougars in both the Great Basin and the Sierra Nevada Mountains to better understand the nature of the "source-sink" cougar dynamic specific to the region. Employing the most sophisticated DNA mapping techniques available, Andreasen found far lower levels of genetic diversity in hunted populations in the Sierras. At the workshop, she coined the term "black hole sink" to describe the hunted areas into which dispersing cougars will venture, but never reemerge. "There is no back immigration into the source," says Andreasen. "This negatively affects the genetic diversity in source populations." In other words, with population numbers dwindling in sink areas and restricted gene flow even in source areas, Nevada cougars are ailing. The source-sink dynamic in the state is, like elsewhere, driven by hunting pressures; but here, current management practices may also be taking a toll on the overall fitness of the population. Nevada's current Predator Management Plan recommends "that efforts to snare lions be increased" in the Delamars, and expanded to other areas, using fixed-wing aircraft and helicopters where necessary.

Hunting would take a less abstract turn for me on my way back from the Desert National Wildlife Refuge. Driving west on route 375, or Extraterrestrial Highway, I pass a pickup truck leaving the snow-covered desert flats some 10 miles from Mt. Irish. Two hounds are prancing on the old flatbed, on which a limp cougar is lashed down, the big head dangling lifelessly from beneath a battered blue tarp.

Mike McBeath, Nevada's new Wildlife Commissioner, told me that the situation in Nevada may not be quite as bleak, or clear-cut, as it would appear. Despite the year-round hunting season and the potential for virtually unlimited mountain lion tags, the harvest in the state has been consistent at around 150 to 200 individuals per year—less than the number killed in neighboring Arizona. In the Sagebrush State, the jagged topography in the elevated summits of the Sierras and other mountainous ranges ensures that certain areas will remain off-limits to people, and thus provide a refuge for these intrepid cats—so long as they are not being annihilated via helicopter for killing their natural prey.

Despite McBeath's reassuring words, and his contention that Nevada's new Wildlife Commission isn't as obsessed with the perceived threat of predators, game management nomenclatures in the United States are culturally obsolete.

"Wildlife management agencies favor the special interests of hunters while too often discounting the interests of virtually all others," says Susan Clark of Yale University's School of Forestry & Environmental Studies, who along Dr. David Mattson of the US Geological Survey has focused much of her work on carnivore management.

"These ancestral institutions of wildlife management were built on deep, positive ties to large ungulates and on beliefs that demonized predators as threats to the very survival of game populations," adds Mattson. Management agencies have resisted the shifts in public perspective away from traditional anti-predator policies. Clark and Mattson have documented an overwhelming public support for sustainable cougar populations and the habitat they require in western states.

An analysis of the attitudes in Arizona following two highly-publicized incidents found that the public at large did not want mountain lions to be managed via lethal methods. Rather, the idea of "personal accountability" should be generally applied in the case of these predators—meaning using proactive measures and a good dose of common sense in mountain lion habitat. Say Clark and Mattson: "State wildlife agency commissioners and hunters shared a narrative that featured killing cougars to solve problems, making cougars and those who promoted this intrinsic value of cougars culpable, and retaining power to define and solve cougar-related problems. Personnel from affected state and federal agencies shared a similar narrative. Most other participants (i.e., the public) shared a narrative that defined *'the problem'* primarily in terms of peoples' behaviors, whether when around cougars or, relative to agency personnel, when formulating of implementing policies."



This picture of Dan Richards, lately the Chairman of California's Department of Fish & Game Commission, with a mountain lion he shot and killed in Idaho, shows the astounding disconnect

between wildlife nomenclatures in the United States and the people—even in states where mountain lions are fully protected.

The study notwithstanding, game commissioners in Arizona recently doubled the state's mountain lion quota. In 21st century America, it would seem, the habituated public is quite willing to assume a small degree of risk or cost in order to maintain, and protect, a keystone carnivore like the mountain lion. Even surveys conducted on the East Coast find strong support in areas that could host sustainable cougar populations, such as upstate New York.

"It's time for a fundamental reevaluation of our relationship with these carnivores," says Cougar Rewilding Foundation president Christopher Spatz. "The forest systems in New York State, which has an estimated one million white-tail deer wiping out saplings with ground-nesting habitat, and other vast expanses of the Eastern Seaboard, are in full arrest. Cougars are indigenous to the Adirondacks. Allowing them to return home would begin the recovery of our old-growth forests."

The Pueblo, Zuni, Navajo, and Cheyenne people worshipped the mountain lion as a friend and benefactor, and the haunting Shrine of the Stone Lions in New Mexico attests to the importance of mountain lions to America's early inhabitants. Perhaps Native Americans already knew something we are slowly coming to grasp. Studies have demonstrated that cougars play a critical role within the ecosystem, actually promoting biodiversity in natural environments made increasingly fragile by global warming.

"Mountain lions have an essential ecological role to fill," says Dr. Howard Quigley. "When we eliminate the cougar, it can have devastating impacts on other species."

Though any large carnivore poses a risk to people, livestock, and pets, it is a risk that most of those who have coexisted with the species for generations, in California and throughout the West, willingly assume in order to ensure the perpetuation of their resident wild cats. Good husbandry practices and a few basic commonsense precautions can all-but eliminate the danger posed by the presence of cougars in the ecosystem. I regularly go for hikes in cougar habitat with my family, but I carry a hefty walking stick and I wouldn't contemplate letting my 2-year-old venture out of sight, as remote as the peril may be (considering there have been no mountain lion attacks in the Bay Area in over 100 years). I too, after all, am human, and I share the ancestral, partly irrational fear of predators which made some kind of sense before civilization turned the tables on the natural scheme of things. Yet, from ancient petroglyphs to the latest cutting-edge studies, the argument for both preserving this beguiling feline throughout the West and letting it naturally recolonize its historical range across the nation is rooted in indigenous culture and in the best available science. In areas where cougars have been absent for generations due to intense human persecution—and where they could yet return—specialists must educate, and prepare, the public.

Even in Texas, a state where mountain lions are officially considered no better than vermin, and may be killed on sight, the devastation wreaked by invasive feral hogs that provoke millions of dollars of damage to crops every year has given certain residents pause. For the mountain lion is

the only predator that has learned how to make a living off these large and aggressive pig hybrids.

Dwelling further on the issue of tolerance vis-à-vis this most emblematic of American cats, I often find myself harkening back to a particular encounter in the Kelly Cliffs just north of the National Elk Refuge. My field-guide Boone had been tracking F51. Leaving the ridge trail which meanders over the river, the snow became waist deep and we sank in, breaking the thin, crusty topping at each step. F51 had been bedding down in this elevated, densely-wooded area, abandoning her hilly refuge at dusk to hunt. She hadn't made a kill in days, and after mating with M21 two months earlier, she was a very pregnant, very hungry lion.

Following the treeline, we entered the woods gingerly, pausing often to scan our surroundings. Boone finally got a visual fix on F51, and we hunkered down to observe the recumbent feline. Nestled in a cushion of soft earth and pine needles below a tall fir, F51 lifted her head lazily and looked our way, blinking slowly. "She feels safe behind all that underbrush," Boone remarked. We were but a few dozen feet from the big cat. Her hypnotic gaze settled on us, but only for a little while. Her eyelids grew heavy, and F51 dozed off right before our eyes.



Just as this female mountain lion decided to place her trust in us, why shouldn't modern humans learn to think of cougars as something other than "dangerous predators," and so place our trust in the natural principles that have regulated mountain lion society for eons?

Using hunting takes to manage the species makes people *less* secure than they would be in an environment where the normal mechanisms of territoriality are allowed to work as they were intended. Lawmakers and wildlife managers should carefully consider the fact that the most populated state in the nation, which also happens to have more mountain lion habitat than any other at the human/cougar interface, has less cougar-related problems per capita than other states where cougars are being gunned down systemically, reduced to so many furry fish in an arboreal barrel. The California experiment has proved that the prospect of sharing our parklands with this endemic felid needn't be a source of anxiety or dread. Forty years without hunting or bounties has elevated California's apex carnivore into a symbol of the achievable coexistence between human and wild cat. Hopefully, the indescribable sense of wonder I now share with so many

other Californians when we forge into mountains, mesas and canyons that surround San Francisco, Los Angeles, or Sacramento, can one day be shared with all Americans in the ancestral land of the majestic mountain lion.

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This article is dedicated to Dr. Maurice Hornocker, for his pioneering conservation work with mountain lions and other big cats.

More about Noah Sudarsky



Noah Marcel Sudarsky was born in Hartford, CT. He grew up in Connecticut and New York, and has lived in France, Switzerland, and West Africa. He is a freelance writer and international correspondent currently based in Berkeley, CA—and an avid outdoorsman, mountaineer, surfer, and diver. Noah studied Political Science and biology, and was a forester in the Peace Corps. He has participated in various coastal ecology programs over the years—including a long-term study of the endangered Mediterranean Monk Seal in the Ionian Sea.

Noah's articles focus on politics and the biosphere. They have been featured in *The Village Voice*, *New York* magazine, *Salon*, *Publisher's Weekly*, *The East Bay Express*, *Tikkun*, *Explorersweb*, *The New York Times*, and *Earth Island Journal*—along with many other publications. He is currently the Project Manager at the Berkeley-based non-profit Center for Environmental Structure.

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