

Tracking for a Living

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One of my most memorable experiences in the field occurred while I was studying a cougar population in the back country of Yellowstone National Park and the surrounding ecosystem. The experience brought home to me the range of scent information that is opaque to us but is discernible daily to large carnivores.

The principal investigator of the study, Maurice Hornocker, had conducted prior work documenting the return of cougars to Yellowstone after an absence of fifty years. Now, assisted by other field biologists, I was responsible for capturing and radio-collaring cougars, monitoring their movements, predation, survival, and sources of death. This work, performed from 1987 to 1996, provided a baseline “pre-wolf” data set for comparison with similar information collected from 1998 to 2006, the period of gray wolf restoration in the park.

Every day, our assignment was to hike in close to a radio-collared cougar by “homing” on the signal, approaching closely enough to be confident of which patch of trees, brush, or rocks held the cat, and to leave without disturbing it. The second task was to return to locations obtained the previous day and record what we found - a kill, bed site, or footprint, a fresh scat or cougar latrine, or a scrape indicating communication with other cougars. We followed snow trails in the winter and used tracking hounds in the summer, and watched for subtle clues like the behavior of scavenging ravens. Once the cougar had left a kill, we examined the prey animal for sex, age, physical condition, the pattern of cougar feeding, and whether other carnivores used the kill. We did this work yearlong on foot, often in pairs but sometimes alone. There was as yet no global positioning system (GPS) technology available that we could rely on to provide frequent and accurate animal locations. New Mexico cougar researcher Kenny Logan dubbed our technique the “beat-the-bushes” method.

Hazards in the Rocky Mountains are many, ranging from avalanches to rattlesnakes, and working in grizzly country kept us watchful, especially around food sources that might attract bears. Both black bears and grizzlies readily detect carrion at a distance using their powerful sense of smell, and may walk boldly to a cougar kill looking for a free meal – unnerving for a biologist already at the site. My colleagues and I had numerous encounters with bears, often at kills. Early in our study, veterinarian Dr. John Murnane, later of the Interagency Grizzly Bear Study team, predicted we would eventually discover that grizzly bears were scent-trailing cougars for long distances to find cougar kills. Although we documented many cases of bears displacing cougars from kills, we never actually documented what Dr. Murnane suggested. My most memorable encounter with a cougar was scary but illuminating.

In June 1994, I was trying to keep up with a large male cougar while working alone. Originally captured inside the park, he eventually shifted his range northward to the adjoining wilderness. After getting a close location on him, I hiked to where I had circled him the previous day, a park-like opening in a mature stand of lodgepole pine with little understory. There, I found the remains of a mature cow elk. The elk’s shoulder had been fed upon and there was drag trail, but the carcass was not covered with sticks or

pine needles. I proceeded clockwise around the elk and then walked away in a broad arc up a little swale and sat down to enjoy my lunch.

I was working on my third pretzel when I noticed a dark form approaching. At first I thought it was a moose, but as it came through the trees I realized it was a grizzly male, dark brown, silver-tipped, and large. His arrival caught me by surprise, as grizzly sightings in the area were fairly rare in those years. I suppose I should have hollered immediately to signal him that I was there, but I was struck motionless by his unexpected appearance. My instinct was to remain silent and hope he would detect me and move off, as bears often do.

When the bear reached the elk, instead of feeding as I expected, he put his head down like a hound and began following my circle round the elk. When he got to where I had left the carcass, he turned and continued along my arching path, all the time with his nose to the ground. By the time it dawned on me that he was following my scent, he was about ten meters away. At this point, it was obvious that there was not going to be an easy way out for me. Running might trigger his instinct to pursue, and he would easily overtake me. Some confrontation was likely, and I needed to prepare. I reached down and pulled the flap on the holster containing my canister of pepper spray, a recommended deterrent for bears. The Velcro that secured the canister sounded its characteristic chrrrrt in the quiet forest, startling the bear. He instantly started up on his rear legs, wheeled around toward me, but then completed a U-turn and galloped off, the pads of his big front feet and long claws flashing backward at me. After catching my breath, I hastily packed up my gear, made a quick inspection of the elk, and got out of there, lest he might return.

On the long downhill walk back to the truck, I reflected on my good fortune. The outcome for me could have been much different had he reacted aggressively. Perhaps his large size (and presumed old age) stemmed from a pattern of tolerance during encounters or even from outright avoidance of people. Undoubtedly, he had some experience with humans, as he lived in an area where there were livestock growers year-round and many elk hunters in the fall. He had ample opportunity for conflict with people carrying weapons.

I took from this an appreciation of the tracking ability and intelligence of grizzlies. His behavior reinforced what I have seen in other carnivores – wolves trailing wolves, and cougars trailing other cougars, both on bare ground and in snow and apparently for a variety of reasons. Training tracking hounds for work and pleasure has given me a special appreciation for the sense of smell among carnivores and the importance of scent trailing for territorial defense and acquisition of food. Undoubtedly, there is much to learn about the role of scent in the world of predators. But I hope the next time a master tracker like a grizzly teaches me something about scent trailing, I will just get to watch from a distance.