

Tracker at home in animal kingdom

Expert in demand to catalog wildlife

By Gary Gerhardt

Rocky Mountain News Staff Writer

When most people see animal tracks, they know an animal was there.

When Jim Halfpenny sees animal tracks, he reads an entire page from the animal's life.

"From the condition of prints, you can tell when the animal passed through the area. From its gait, you can tell how large it was, whether it was simply ambling or fleeing or chasing," he said.

"Follow the tracks and you may see where prey and predator came together, matings took place or animals were at play."

Halfpenny, 43, holds a doctoral degree in zoology from the University of Colorado and works at the Institute of Arctic and Alpine Research in Boulder.

But it's his expertise in tracking wildlife that has federal and state wildlife agencies calling when seeking rare or endangered species, or simply cataloging the numbers of species in a given area.

Halfpenny's interest in tracking didn't come at the knee of some great trapper. Rather it came from the Boy Scout handbook.

At age 11 in Scottsbluff, Neb., his scout leaders encouraged him to read the works of Ernest Thompson Seton, chief tracker for the Boy Scouts, and it was Seton's stories, more than his techniques, that fired Halfpenny's imagination.



Cyrus McCrimmon/Rocky Mountain News

Jim Halfpenny, a skilled tracker of wildlife, inspects tracks left by a raccoon along Boulder Creek in Boulder.

trap and dispatched the animal. No other reliable evidence was found.

He once worked with a team at Big Bend National Park in Texas studying climatic changes over a 40,000-year period by examining pollens found in pack-rat dens.

To determine the animals' range, pack rats were captured, put in a bag containing non-toxic dry fluorescent powder, shaken and let go. The powder flaked off the fur for about three days, and by using infrared equipment, the trackers could plot the animal's route.

"We found some incredible stuff," Halfpenny said. "Pack rats shinnied up sequoias filled with spines to chew the fruit off, climbed through cactuses, up 15 feet into trees, and even went up the underside of overhangs. How do they do that?"

While the fluorescent tracking was efficient, it had a couple of drawbacks — rattlesnakes and scorpions, he said.

"You'd be down on your hands and knees at night looking for pinpricks of powder and suddenly a rattler would be at your nose," he said. "We brought snake-proof capes with us, but didn't realize we'd be leading with our noses."

They also found that scorpions are naturally fluorescent, and every once in a while, they'd be tracking powder tracks when suddenly one of the "tracks" would take off running. It was a deadly scorpion.

Halfpenny says his most famous exploit, however, was in Yellowstone National Park. He was hired to teach park naturalists to identify animal signs.

"I got to Mammoth Hot Springs in the morning and had about an hour to go out and find signs," he said.

"I came across some fresh bear tracks, so that's where I headed with the class. We were walking along following them when suddenly the whole class walked right up on a black bear in its day bed," he said.

"It was hot in May, and this bear was laying on its back, spread out, flopping its arms over, snoozing. It didn't even know we were there.

"But when we got back and word got out, the park people thought I was the greatest tracker in the world. I never could convince them it was just damn dumb luck."

From Seton, Halfpenny graduated to Adolph Murie's *Peterson's Field Guide on Tracking*, the tracker's "bible."

"A good tracker has to be a good naturalist," Halfpenny said. "You have to understand the nature and behavior of an animal before the tracks make sense."

After years of study and practice, he was hired in 1969 by the National Outdoor Leadership School, a non-profit educational program based in Lander, Wyo., to teach outdoor skills such as climbing, fishing, hiking and tracking.

In 1976, he received his first government contract from the National Park Service to survey the animals at Great Sand Dunes National Monument in the San Luis Valley of Colorado.

"Mostly I cataloged what you'd expect — deer, small mammals. But one thing in particular I remember was finding a dead mountain lion with a face full of porcupine quills," Halfpenny said. "It made quite an impression."

Equally memorable were two other lions, very much alive, that tracked the tracker one night in the sand dunes.

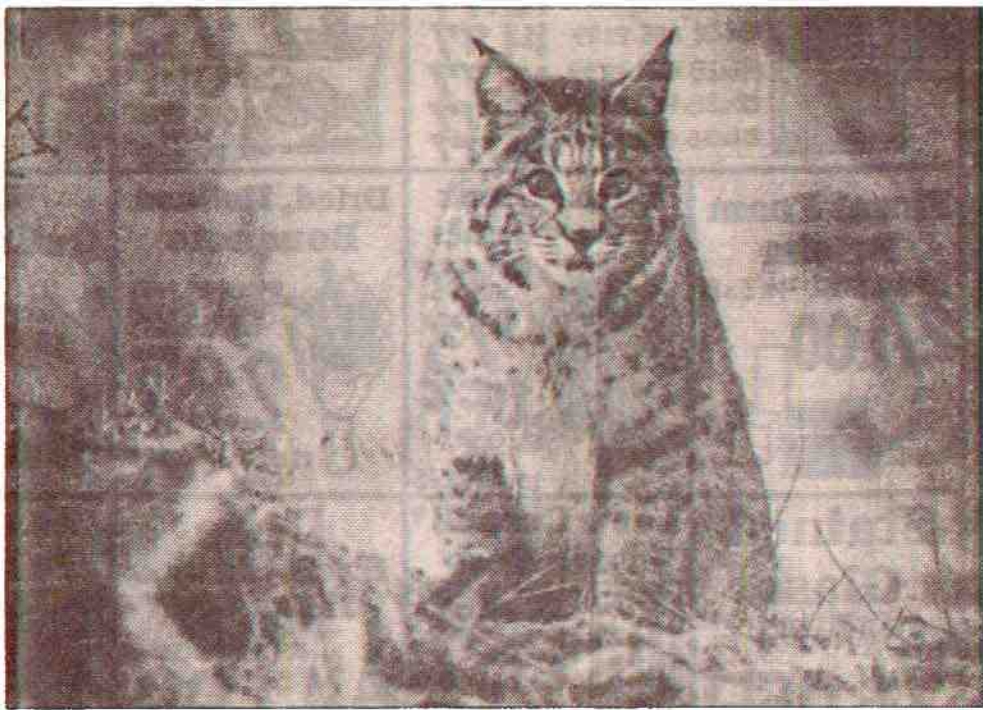
"I came across the tracks above our camp," he said. "The lions had followed our tracks toward the camp, and I saw where they went to the ridge above us and sat on their haunches watching the camp during the night."

In 1978, the Colorado Division of Wildlife hired Halfpenny to search for evidence of wolverine and lynx in the state.

He found lynx on Mount Evans, the Fryngpan River, Guanella Pass, and later near the Vail ski area.

But the only evidence of wolverine was one killed on the Colorado-Utah border, and the skull of another, dead less than 10 years, with a .22-caliber bullet hole in it. The skull was recovered from the San Juan Mountains and suggested a trapper had captured it in a

TRACKING TIPS



Jim Halfpenny/Special to the Rocky Mountain News

Wildlife tracker Jim Halfpenny spotted this bobcat recently.

While tracking wildlife is a complex science, there are certain fundamental steps Jim Halfpenny teaches that anyone can use. When you come across an animal's tracks:

■ **Back off** and look at the big picture — the animal may be standing a short distance away at the end of the tracks.

■ **Check the setting.** Look at the habitat. The geography of the area.

■ **Note the time of day and year.** Animals behave differently from dusk to dawn than during the hot part of the day; in winter they act differently than during the spring breeding season. Know the animal's behavior to interpret what you see.

■ **Feel the surface of the track.** Is it in frozen snow or hard dirt, or is the surface still flaky? That will determine how long ago the track was made.

■ **Identify the front from hind feet, left from right.**

■ **Identify patterns.** Track patterns that repeat help identify the animal's gait.

■ **In general,** animals use the most energy-conserving gait possible, usually a walk. But some animals, such as wolves and coyotes, use the lope efficiently. If a loping coyote track changes to a gallop, you know something is up. Lions walk and use short, quick sprints to attack prey. To determine how fast an animal was moving, remember:

■ **The faster** an animal is running, the farther forward the front foot is compared to the hind foot.

■ **The faster** it goes, the longer the stride.

■ **The faster** it goes, the narrower the straddle (width).

In general, if an animal moves away from its energy-efficient gait, ask yourself why.

Source: "A Field Guide to Mammal Tracking in North America," by Jim Halfpenny.