

# OUTDOOR SKILLS

T E D K E R A S O T E

## THE FORMULA FOR MODERN TRACKING

The old tracker kneels above the spoor, runs his hand over some faded prints, and says, "This is a 102-pound doe deer, four years old, in heat, loping, and looking over her right shoulder." Well, how much of this is myth, and how much can a skilled person really read from tracks?

If the proper signs have been left, quite a lot can be gleaned—for instance, gait, sex, breeding condition, and what the animal was doing. Lacking a scale, and the teeth of an animal, no one can decipher the creature's age or say *exactly* how much it weighs.

To become skilled at reading these signs, new trackers must look beyond the tracks themselves, becoming nature detectives who "see" in the broadest sense of the word. The surrounding habitat, and dropped scat and hair, are several other clues skilled trackers can use to determine which animal made a trail. When looking at the prints themselves, they also utilize a "diagnostic suite" of characteristics, which each animal order, family, genus, and species leaves

behind.

Dr. James Halfpenny, one of North America's great modern trackers, has categorized these characteristics into a shorthand nomenclature called "track formulas." They indicate the num-

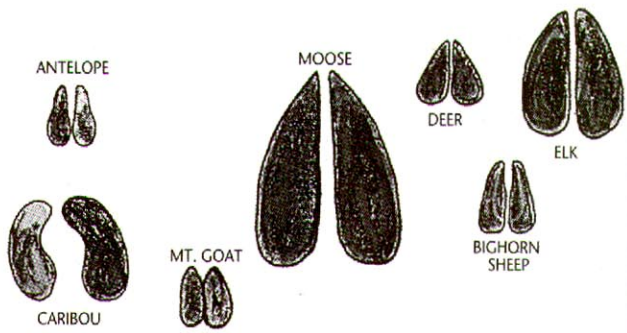
ber of toes on the front and hind feet, which foot is the larger, and whether claws show. Thus the dog family, including domestic pets, foxes, coyotes, and wolves, is written **F4 h4 C**, meaning that the

front foot is larger than the hind, each print shows four toes, and

claw marks are usually evident. Generally, canid prints are longer than they are wide, and individual species can be told by comparing size: Foxes are dainty, coyotes larger; wolves robust. Dogs tend to splay their toes and walk sloppily, their hind prints to the side of their foreprints, whereas wild canids walk stealthily, indicated by

their hind prints registering directly over their foreprints.

**CATS**—domestic ones, bobcat, lynx, and mountain lion—also leave four-toed prints, **F4**



Shapes, sizes of ungulate tracks vary greatly.

**h4**, with the front print larger, and don't show claws. The prints are wider than they are

long, and can be distinguished from canid prints by their roundness.

Note, too, the two lobes on the front of the plantar pad.

**BEARS**—Black, grizzly, and polar bear prints display five but sometimes only four toes, their hind feet are larger than their forefeet, and appear humanlike: **f5(4) H5(4) co**. The "co" means claws often show. It's important to note that the smallest toe is on the *inside* of the foot, not on the outside, as in humans.

Where both grizzlies and black bears inhabit the same country, neither the lack nor presence of claws, nor the size of the print, is a good way to distinguish between the two species. Claws can be present or absent in either animal, and an adult black bear and a female grizzly can leave similar-size prints. A better indication is the greater arc of the toes in the black bear and the joining of the toes in the grizzly.

**MUSTELIDS**—weasels, martens, fishers, wolverines, minks, otters, ferrets, badgers, and skunks—have a similar print pattern to bears, **f5(4)**

**H5(4) co**, though smaller. Their toes are grouped 1-3-1.

**EVEN-TOED UNGULATES**—the cervids (deer, elk, moose, and caribou), the bovids (bighorn sheep, mountain goat, and bison), and the antelope—leave prints with cloven hooves, the front larger and more splayed than the rear, sometimes with dew claws showing: **F2(4) h2(4)**. Size and shape are the keys to differentiating among the species. Note in particular the concavities on each side of the antelope's print, the heart shape of the deer, the blockiness of the goat and sheep, and the roundness of the bison, also seen in domestic cattle. Moose prints can often be separated from those of elk by their shape (they are longer and more delicate) as well as the length of the pad at the bottom of the hoof. In moose the pad takes up about two-thirds of the hoof; in elk, about one-third.

Telling the speed at which an animal is moving is not that difficult. Measure from the rear of one print to the next place that same print is placed on the trail. This is called "stride." When an animal is walking, stride length approximates the distance from the animal's hip to shoulder joints. On the average, this distance is about 30 inches in deer, 36 inches in elk, and 26 inches in black bears. If you measure a stride on a deer that is 120 inches, that deer is moving about four times faster than its walking pace. **SA**



**BEYOND THE BASICS**

How can you tell an animal's gender, which way it was facing, and whether it might be a female in heat, from its tracks? Dr. Halfpenny's book, *A Field Guide To Mammal Tracking In North America* (\$13.95; available at bookstores or from *A Naturalist's World*, Dept. SA, Box 8005, Suite 357, Boulder, CO 80306; 303/440-0902) explains these fine points. Or, take Halfpenny's four-day tracking seminar, offered twice a year through The Yellowstone Institute, Dept. SA, Box 117, Yellowstone N. P., WY 82190, 307/344-7381, ext. 2349.

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