

# MASTER TRACKER

Naturalist can tell from tracks whether wolf was looking right or left.

BY ANGUS M. THUERMER JR.



Jim Halfpenny

**N**ot many teachers will stoop as low as Jim Halfpenny.

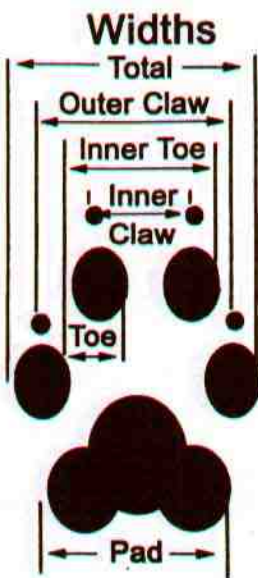
He gets down on all fours and trots across the floor. It's the best way he knows to teach students the many gaits of animals.

An expert tracker, Halfpenny takes track identification one step further than most people. Sure, he knows how to identify an animal by its tracks, but he also knows how to tell whether it was walking, ambling, loping, trotting, or galloping.

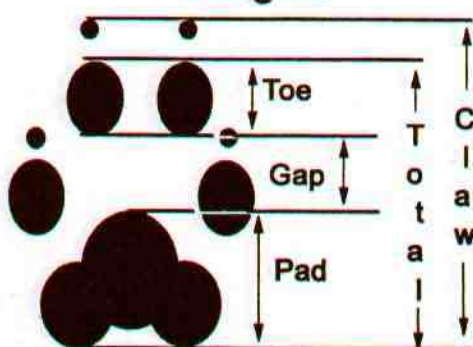
By following tracks and other sign, Halfpenny can tell you whether an animal like a wolf was looking left or right as it went by, whether it was a dominant or subdominant animal, a male or female.

"Think of reading tracks and stories as a detective game," Halfpenny says in his book *A Field Guide to Mammal Tracking in North America*. "Most important in becoming a nature detective is for you to learn to think like an animal, more specifically, like a wild mammal."

In addition to describing how to tell a story from tracks, Halfpenny has developed a scientific approach to identifying wolf tracks. It's the method he used to identify three wolf



## Lengths



tracks he found in Yellowstone National Park May 23.

When comparing dog and wolf prints using only the width and length of the tracks, there's too much overlap between the species. Wolf tracks are generally larger, but not always.

Halfpenny's system involves taking up to 11 measurements of a track. The system also requires trackers to take into account whether tracks are made in soft mud or in fine dust on a hard trail so a uniform "minimum outline" is measured, regardless of the medium in which the track appears.

Halfpenny calculates "shape ratios" by dividing various measurements by one another. For example, the length of the pad is divided by the width to come up with one ratio.

Ratios are then given a coefficient by which they are multiplied. This allows Halfpenny to give more weight to characteristics that distinguish wolves.

Ultimately, a track is reduced to a simple number. It is then compared on a scale of sample wolf measurements and dog measurements. If the number falls to the dog side of the scale, the analysis indicates the print isn't from a wolf. If it falls to the other side of the scale, as in Halfpenny's recent discovery, he can say with confidence the animal that made the print is a wolf.

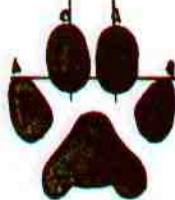
Above: Halfpenny's measurements of a wolf print. Below: key differences in canid tracks.



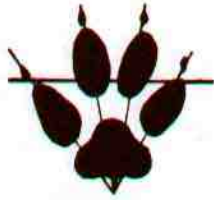
Red Fox Front Print.



Coyote Front Print.



Wolf Front Print.



Dog Front Print.