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Eye on the Environment - How wildlife outsmart people

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“A pine needle dropped in the forest. The deer heard it. The eagle saw it. The bear smelled it.” This familiar saying, usually attributed to American Indian lore, illustrates the amazing advantages most wildlife have over humans when we are in their domain.

During hunting season we see and hear plenty of reminders to be aware in bear country and we are wise to heed the warnings. Bears can sniff a gut pile from three miles away. They can detect the passage of a hunter more than 14 hours after he has walked along a trail. A grizzly can determine your brand of toothpaste long before reaching your tent and tell whether the beans in your un-opened can are plain or con carne.

White-tailed deer are crafty sneaks. This fall I saw a doe bust out in front, spooked by me or something else nearby. I waited a few moments until a line of creamy antler tips pursued the doe just above the brush line.

A large buck, most likely sensing my presence, hunkered down with his head and body completely concealed behind low shrubs and saplings as he chased after the female. His antlers looked like candles on a cake being hurried to the table.

After being outsmarted by white-tailed deer and elk for most of the hunting season and wondering why we have so few unfortunate encounters with bears and other predators when so many hunters are out in the woods, I decided to track down some facts on the Internet and in books about our wildlife's amazing sensory abilities.

For the most part, we dull two-leggeds are lucky that grizzlies can detect us from so far away. Their keen sense of smell helps them avoid encounters with us, their most dangerous adversaries. But in late fall, when we are sneaking around alone in the dark and bears are experiencing hyperphagia (a seasonal condition that forces them to gorge on food before entering their winter dens), accidents can surely happen.

According to what I found on the Internet, a bear's sense of smell is seven times greater than a bloodhound's, which makes bruins 2,100 times better than we are at sniffing out dinner. The olfactory bulb in a bear's brain is five times larger than in a human brain, even though a bear's brain is one-third the size of ours. Their noses are longer by at least seven inches, and the inside surfaces of their nostrils are enlarged with folds that make room for many hundreds more receptors than ours.

Compared to their sense of smell, bears have poor eyesight. They can see about as well as we can—but bears tend to be nearsighted. It is said that a male bear can tell which direction a breeding female bear is traveling just by sniffing her tracks. I wonder, though, if he can also distinguish the shape of her prints by sight and know that her toes point in the direction of travel. We tend to give animals so little credit.

Bald eagles can spot a rabbit from a mile away—or 5,280-feet up. Their eyes are about the same size as ours but are at least four times sharper than a human's eye with perfect vision. Eagles can see fish in the water from several hundred feet above, despite the dark coloration on fishes' backs, which makes it very difficult for human fishermen to spot them from straight above.

The eagles' eyes have two centers of focus; they can see forward and sideways at the same time. They have two eyelids. The inner lid is clear. It blinks from front to back every 3-4 seconds to keep the eye free of dust and debris. The eagle can see even with the inner lid shut because the membrane is transparent. They use their outer lids like we do, closing them in sleep.

All good hunters know to stay downwind of white-tailed deer. Despite their exceptional hearing, eyesight and stealth in the woods, deer rely mostly on their sense of smell for avoiding danger and communicating with one another.

When alarmed, deer emit a scent from the interdigital glands between their toes alerting other deer to danger. Deer can smell human breath from a great distance. Hunting books recommend brushing with baking soda or freshening our breaths with an apple to reduce the offensive and revealing halitosis.

Bucks leave their scent by marking “scrapes” on the ground with their hooves and then urinating on the glands located on the insides of their hocks. This way they communicate their presence and dominance in an area.

During mating season, does lure bucks with pheromone scents in their urine. Deer can sharpen their sense of smell by licking their noses with their tongues—something that’s not so easy for humans to imitate.

White-tailed deer are known for their keen sense of hearing and indeed they communicate with several vocalizations. It’s no news to most valley residents that when deer are alarmed they stamp their feet and blow a sharp snort through their nasal passages that sounds like a blast from an airy trumpet. The exhalations of rutting bucks rattle like snoring grandfathers. The fawns utter tiny, soft mews, something like a lamb, to communicate with their mothers and siblings. But when fawns are being mauled by coyotes, their mews become high pitched blaats, loud and urgent. Hearing this cry, a mother deer may charge in and strike the aggressor with her dagger-sharp hooves. Pet dogs have been injured and even killed this way.

A white-tailed deer’s eyesight is excellent. With large eyes set on the sides of their heads, they have wide peripheral vision. This helps protect them from predators or hunters trying to sneak up from behind. But it may also hinder a deer trying to judge the distance and speed of cars approaching on the highway. Lacking eyes set in

front of the face, deer may be less able to focus for depth-of-field.

When we put wildlife in our realm, they lose some of their sensory advantages, causing people to think deer are dumb. But in the forest, it has been my experience the four-leggeds are a lot smarter than we are. It’s amazing people are able to catch them at all.