



McGraw's Stan Gehrt: **A CSI (Coyote Scene Investigator) Expert**

Forensic investigations offer a more accurate look at wildlife behavior

By Jim Dudas

Since becoming director of the [Cook County Urban Coyote Program](#) in 2000, Stan Gehrt, chair of McGraw's Center for Wildlife Research, and his staff have conducted many field and laboratory experiments, recorded reams of data and published and presented their findings to numerous professional journals and wildlife conservation societies.

Some of their most important findings emerged recently from the thinnest of resources:

Whiskers. Specifically, coyote whiskers.

“Animal behavior is often driven by diet, and until recently, the only clues we had to go on were from scat,” said Gehrt, who also is associate professor and wildlife extension specialist at The Ohio State University’s School of Environment and Natural Resources.

“Though helpful generally, it didn’t provide specificity to any particular animal. It was just an overview of a one or multiple coyotes.”

Enter the world of forensic evidence.

In 2010, Seth Newsome, an assistant biology professor at the University of New Mexico, joined Gehrt’s team, bringing an expertise in using stable isotopes in identifying diet through, in the case of coyotes, whiskers.

“Stable isotopes enable us to take a single whisker from a dead or captured and sedated animal and determine what the animal had eaten over the previous five or six months,” Gehrt said.

With that knowledge, Gehrt and his team of researchers were able to upend a theory of coyote behavior. The theory posited that the more coyotes grew accustomed to eating human food, the more used they would be to humans. Therefore, they would be less afraid of humans and more of a threat to them.

The Cook County researchers found that the coyotes in the study area only ate a small amount of human food, preferring a diet of mammals, waterfowl eggs, the occasional wild or domestic cat and only rarely, a stray or domestic dog.

The work of Gehrt’s team became well known across the wildlife research community and, so, after a group of coyotes attacked and killed a lone hiker in Cape Breton Highlands in Nova Scotia in 2009, Gehrt was asked by Erich Muntz of Parks Canada, the lead investigating agency on the coyote attack, to bring his expertise north.

The team had expected to find that coyotes on Cape Breton Island were dependent on human food because the populations of their favorite prey – snowshoe hares, mice and voles – had plummeted. Deer fawns, another of the coyote’s favored prey, were also rare on the island, which has a low deer population.

But the stable isotopes proved the theory was wrong. The coyotes that had attacked and killed the hiker were killed, and a study of their whiskers showed that they mostly ate

moose meat, and almost no human food. Other island coyotes that were captured, tagged and isotope-studied also showed low levels of human foods in their systems.

“It means that something else is driving coyotes on Cape Breton to aggressive and attack behavior and seeing humans as potential prey,” Gehrt said. The ‘something else’ may be a combination of scarce food with a lack of hunting cause coyotes to potentially test humans as alternative food.

The findings have been enough for The Wildlife Society to invite Gehrt to discuss them at its most recent annual conference. A story on his presentation can be found here: [Read more](#)

So what is driving the coyote aggression?

For now, Gehrt says only that extreme conditions (such as the lack of food on the island) create extreme behavior. He and park officials believe that increased hunting and trapping along the periphery of the park, in addition to removal of bold animals within the park, may well re-instill their fear of humans.

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