Echinacea and deer whistles: science and trust in the wildlife arena

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"We must educate the public." Few mantras have been used as often in the wildlife management profession, particularly in the arena of human–wildlife conflicts. In a modern era where people increasingly are separated from the natural world, wildlife professionals frequently note a lack of basic understanding about ecological systems among our stakeholders and cooperators. In response, we have created a plethora of educational programs and yet continue to call for more.

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Amid the calls for education are regular trips to the altar of science. The wildlife profession is full of people who understand science, and we believe everyone else should be as committed to the scientific process as we are. If people would only listen to wildlife professionals, who are completely objective and make decisions based only on science, all would be right with the world.

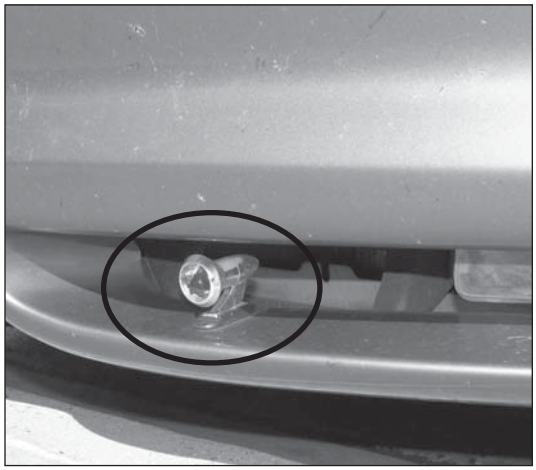
The truth of the matter, though, is that a person's cognitive functioning is influenced by a multitude of factors, only a portion of which involve "facts" garnered from science. In reality, our thinking is shaped by things like prior experience, social pressure, intuition, genetics, and expediency, just to name a few. Cialdini (1993), for example, provides an excellent introduction to the idea that our decision-making is influenced by many factors other than simple facts and figures.

People formally trained as scientists are not immune to this phenomenon. A few years ago I was working in my office when a colleague dropped by to chat. During our conversation, he noticed that I was sniffling and obviously had a head cold. "Stop by the pharmacy on the way home and get some echinacea," he suggested, "it always works for me." This colleague—who, by the way, is an accomplished and capable scientist—has been trustworthy in the past, so, I stopped by the local pharmacy on the way home that afternoon and picked up a good-sized bottle of echinacea, an herbal remedy purported to be a cure for upper respiratory infections.

For several days I religiously swallowed the recommended dosage. On about the fifth day, I didn't feel any better; in fact, I felt worse than ever. As I struggled to concentrate and be productive at work, I decided to Google echinacea and see if I could find any reports of its effectiveness. Sure enough, I discovered that echinacea has been studied many times by medical researchers, and their conclusions have been remarkably consistent: echinacea does little to cure upper respiratory infections!

Of course, I had to challenge my colleague with this information. So, at the next opportunity, I laid out for him all the studies I found that reported no medical effect of echinacea. Upon hearing my summary, he shrugged and said, "My grandma swore by it, so I have always figured that it can't hurt." Most surprisingly, he indicated he'll probably continue to use echinacea to treat his colds, just for the sake of tradition, if nothing else.

In the wildlife arena, one only needs to look to the prevalent use of deer whistles to confirm that there is a tendency in human nature to make decisions counter to reliable information. If a graduate student somewhere ever wishes to write a thesis about strategies to market products with absolutely no substantive value, deer whistles would make an excellent case study. Deer whistles—the little plastic devices that, when mounted to the front of an automobile, supposedly emit a high-pitched whistle and frighten deer away from oncoming traffic—shouldn't work from a common sense perspective, and science backs up that prediction. No published reliable study has indicated



Deer whistle mounted on car bumper.

that deer whistles reduce the likelihood of deer–vehicle collisions, and some have reported directly that they likely are ineffective (e.g., Romin and Dalton 1992, Scheifele et al. 2003, Mastro et al. 2008).

Despite this knowledge, I commonly see automobiles with deer whistles installed. What's more, some insurance companies, police departments, and rental car companies promote their use. I once visited with an insurance agent who had deer whistles installed on his car. When I asked why he used them, despite the evidence that they don't work, he shrugged. Much like my echinacea-hooked colleague and responded, "They only cost $19.95, and my truck was $30,000. I figured it was a good investment and, heck, they can't hurt."

If the public doesn't listen to or believe us when we talk about the efficacy of deer whistles, how can we expect them to listen to us about bigger, more significant issues, such as wolf depredation on livestock, avian influenza, or beaver management? Public relations and education will continue to become a more important part of our task in the arena of human–wildlife conflicts, and we need to understand the difficulties we will encounter.

There is no easy solution to this problem. As wildlife professionals, our first and perhaps most difficult task to accept is that the public, by and large, will not *a priori* accept our expertise. We must understand that their opinions and behaviors will be influenced by many factors, not only facts. To manage this reality, we must begin engaging our publics in ways that create long-term relationships based on trust, acceptance, and collaboration. We cannot *not* begin this process, because as human–wildlife conflicts become more complex, we will need better and better lines of communication with the public. Plastic whistles bolted to your local sheriff's cars to serve as a first line of defense may only be silly and a bit amusing, but future problems are likely to be far more serious. When those serious issues arise, a trusting relationship with our publics will be essential to our success. ✷

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