

KNOWLEDGE BASE

Revolutionizing the Field of Wildlife Management



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Recently I joined roughly 1,500 other wildlife professionals who attended The Wildlife Society Annual Conference in Anchorage, Alaska. The experience was both enlightening and sobering. Enlightenment was obtained through a wealth of symposia, scientific papers, posters, and workshops on topics ranging from climate change to hunter satisfaction to prairie grouse conservation. The sobering aspect was in realizing how complex and far-reaching the methods and issues of wildlife management have grown since I entered the profession thirty-some years ago. Let me share some examples of how far we have come.

At the time of my first wildlife research project in the early 1970s, radio-telemetry was starting to expand the ability of wildlifers to study the movements, home ranges, and habitat use patterns of their subjects. This innovation was a huge improvement over the previous state-of-the-science in which researchers affixed colored streamers or blinking lights onto animals in order to follow their movements. I recall one wildlife professor describing his innovative use of a squirt gun loaded with fluorescent paint to mark deer for identification and tracking—a case of paint-ball technology ahead of its time! The advent of radio telemetry, more recently coupled with GPS, was a huge step over what had gone

before. What could top that?

DNA, for one thing. In a symposium titled “Applications of Landscape Genetics to Wildlife Management,” I learned how DNA technologies, such as those seen in “CSI” and courtroom dramas, are revolutionizing the field of wildlife management. Determining the genetic fingerprint of individual animals opens a whole new world of wildlife investigation. As never before, researchers can address key problems in the conservation and management of wildlife. Examples include: defining populations and their geographic boundaries; tracing patterns of animal migration and re-colonization; determining population size and genetic relatedness between populations; finding travel and gene-flow corridors; identifying natural and man-made barriers to movement; understanding the spread of chronic

The conference also caused me to reflect on the broadening of wildlife categories, disciplines, and topics that has occurred in the profession. Papers dealt with the biology and management of bees, bats, mice, sea lions, frogs, gulls, elephants, and nearly every big-game and furbearer species in North America. The mix of expertise included biologists, policy analysts, educators, social scientists, statisticians, energy specialists, and much more.

This diversity is both appropriate and necessary. In wildlife management, many of the problems we set out to solve are but symptoms of a much larger, complex, and convoluted state of affairs that must be addressed from a holistic perspective. Part of the challenge derives from the inherent complexity of the ecological systems to which wildlife and humans belong. As Aldo Leopold noted in *Round River*:

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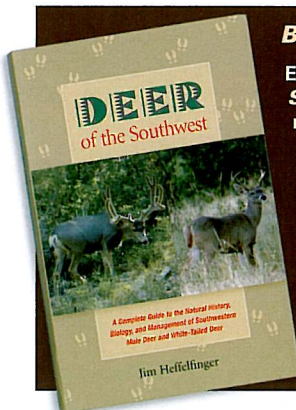
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Add to this the complexity of the social, economic, legal, and political systems that shape wildlife's future, and the need for diversity in disciplines, perspectives, and approaches is clear.

Our feature article offers an example of a multi-faceted approach that is required to address current issues in wildlife conservation.

wasting disease; and so on. The possibilities seem endless! And because the samples can be obtained passively (for example, from hair or droppings), both researchers and their subjects can avoid the stresses and hazards of live-trapping and handling.

Brendan Moynahan shares insights gained through his doctoral studies on sage grouse in Montana, including his unique perspectives as a Boone and Crockett Research Fellow. Dr. Moynahan is also a Professional Member of the Boone and Crockett Club. ■



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