

Aldo Leopold's Five Tools of Land Management

Aldo Leopold was trained as a forester in the early years of the twentieth century and became one of America's foremost conservationists. He was a naturalist, an expert in wildlife management, a hunter, a scientist, a teacher and a very prolific writer. He wrote two books and hundreds of articles and essays. He is most famous for his last book, "A Sand County Almanac", accepted for publication just before his death in 1948.

But his most famous quotation, frequently quoted in land management circles and a major theme at the Kerr Wildlife Management Area, was from his first book, "Game Management", published in 1933. He said:

"The central thesis of game management is this: game can be restored by the *creative use* of the same tools which have heretofore destroyed it—axe, plow, cow, fire and gun...The conservation movement has sought to restore wild life by the control of guns alone, with little visible success. Management seeks the same end, but by more versatile means."

Leopold was most interested at that time in managing deer and game birds to provide hunters with plenty of healthy native game animals. But his approach was different from others at that time in that he believed the way to have sustainable populations of all native animals was to provide them with healthy sustainable native habitat. And, he believed strongly that the way to manage the habitat was to use the above five tools in a creative, beneficial way.

In Leopold's time, use of the axe was for clearing brush from areas where it had become too dense or to remove understory shrubs from forests to minimize the intensity of wildfires. The plow was used to grow crops that provided food for wildlife. The cow was used to mimic the effects of buffalo grazing the prairies to reduce the height of the grasses and allow forbs to grow which provided better food for quail, pheasants, grouse and turkeys.

Leopold advocated the judicious use of fire to clear undergrowth in forests, but to also burn grasslands to kill woody plants and encourage the growth of forbs. In Leopold's time the use of the gun was to either control predator numbers or to manage the game population. His reference to "control of guns" above was to limit the numbers of game animals hunters could take to prevent them from overharvesting the game and depleting the population.

Today's most knowledgeable land managers agree completely with Leopold and advocate the modern-day use of the same tools to achieve healthy, sustainable native habitats.

Today we use chainsaws or Bobcat tractors to manage brush to maintain the optimum density for a healthy habitat. In the Hill Country the use of the plow is fairly limited as most of our land is not suitable for plowing, but some folks do have small areas they use to plant food plots for deer, turkeys and quail.

Cattle, when used intelligently, can manage the grass density and height, both to optimize the habitat for all native species, but to also maintain a healthy, productive grassland. At the same time the cattle provide income to the landowner to allow him/her to best manage the land.

Today prescribed burning is becoming more common as a tool to both control the encroachment of cedar onto grasslands and to also encourage some species of plants that do well after fire such as flame-leaf sumac and redbud which are good deer browse foods.

Finally, the use of guns to control predators is not as important as it was believed to be in Leopold's time, although some trapping does take place around sheep and goat ranches. But the main use of guns and the regulation associated with them is to control the population of game animals—to prevent the overharvesting of the game animal or, more commonly in our area, to help reduce the overpopulation of deer which are damaging the habitat by overbrowsing.

It is interesting to see modern land management experts applying the same ideas of how to maintain a healthy native habitat that Leopold advocated 60 to 80 years ago, which is one reason he is called the father of game management.

Whenever we feel we are smarter than our fathers or our ancestors, it is always good to look back and marvel at what they knew back then. It keeps us humble.

Happy New Year!

Until next time...

Jim Stanley is a Texas Master Naturalist and the author of the books "Hill Country Landowner's Guide" and "A Beginner's Handbook for Rural Texas Landowners: How to Live in the Country Without Spiling It". He can be reached at jstmn@kctc.com. Previous columns can be seen at www.hillcountrynaturalist.org.