



Education

Controlling Deer a Tricky Business

This is the last of a four-part series on problems that can result where there are too many deer.

Volumes have been written on the dynamics of deer populations, but very little of it is helpful to managers of small private land holdings where there is need to control deer damage to vegetation. In recent years, the DNR has implemented a complicated and highly controversial program to reduce crop damage by, providing landowners with special permits to shoot deer (especially does), even outside the traditional hunting season. Where the need to reduce deer numbers is less severe, landowners can develop their own effective strategies if they understand some basic principles.

Studies in confined areas like the University of Michigan's fenced-in George Preserve in Livingston County and various islands have proven that deer can quickly overpopulate and cause overbrowsing. We know that vegetation can be severely impacted whenever deer numbers exceed about 35 animals per square mile. Deer-car collisions can kill up to 15% of the deer in a high traffic area each year. Diseases, accidents and predation also take a toll on deer. State Farm Insurance estimates that 1.5 million vehicles collide with deer every year in the United States, causing 150 motorist deaths and \$1.1 billion in vehicle damage. Nationally, it is estimated that five percent of all deer are killed by cars.

Coyotes, bobcats, wolves, bear, cougars, and dogs kill both fawns and adult deer but may not keep deer numbers low enough to protect vegetation. Despite anecdotal arguments by some that coyotes are wiping out the fawn crop in the northern part of the state, deer actually thrive where there are lots of coyotes. The Bengel Wildlife Center, managed by the Michigan Wildlife Conservancy, has 4 to 12 coyotes on the 259-acre property at any given time. Yet, there is high deer reproduction. Eventually, landowners must look at controlled hunting as an important part of the management puzzle.

All studies indicate it is better to overharvest rather than underharvest deer. That's because deer populations have an innate ability to bounce back quickly after reductions. Bucks-only hunting skews the sex ratio and the higher percentage of females increases reproduction, usually within a year. Conversely, a program to shoot more does than bucks reduces the reproductive rate. About 40% of the deer on a property need to be harvested each year to have much hope of meaningful population control. That's almost impossible to achieve without shooting a considerable number of does.

Since most properties are not ringed by deer-proof fencing, movements of deer in and out of the management area can thwart the best of control plans. Using too many hunters can drive deer out of an area; too few can encourage deer to use the property as a "refuge." It does little good to shoot a half dozen or so does each year if your neighbors are intensively hunting bucks only and "pushing" deer onto your land.

Landowners and wildlife managers are often concerned with knowing exactly how many deer are on a property, how many are being killed by predators, and how many are being produced. Studies at the George Reserve suggest that such information is not necessary for sound management, and probably could never be obtained anyway. What's important to understand is how changes in hunting pressure and harvest influence deer numbers. That can only be discovered by trying different strategies.

An increasing number of parks and nature centers are now attempting to control deer through sport hunting and/or using designated "sharpshooters." In nearly every case, land managers have found that using low numbers of skilled and experienced hunters (usually the same ones each year) is the best way to reach harvest objectives. Deer respond to high densities of hunters (more than one per 40 acres) by retreating to swampy, dense cover and restricting movements to night hours. As a result, the number of deer taken often drops.

That's been the experience in the Chippewa Nature Center in Midland County and at the Huron-Clinton Metro Parks in southeastern Michigan. Tom Lenon, Director of Land and Facilities at CNC, says archery deer hunting over the past 12 years has reduced deer numbers from 100 to 110 per square mile to about 40 per square mile in the 1,200-acre nature center. About one-third of CNC is within the limits of the City of Midland, which started controlled hunting three years ago.

"We're also helped by hunting that occurs on Dow Chemical Company lands nearby," says Lenon. "We have seen a big improvement in plant species diversity and regeneration, especially in our beech-maple woods. Hunting has really had a positive impact."

When CNC first allowed hunting 12 years ago, they let in about 20 archers. Now, only 8 or so are allowed to hunt and they are assigned to zones for the hunting season, which runs from October 1 through January. With permits from the DNR, each hunter is allowed to take many deer. Hunters took around 75 deer the first year, and about 60 a year for several years. Last

year's harvest was much lower with just 30 deer taken. "That reflects our reduced deer numbers," noted Lenon. "We still get an influx of deer from outside after the hunting season based on the frequency of photos from trail cameras we have set up at the nature center. But there are less deer coming in since the City also started allowing archery hunting."

Paul Meulle, Chief of Natural Resources at Huron-Clinton Metroparks, echoes Lenon's comments. "Hunting in the Metroparks began in 1999 and has reduced deer numbers and related damage significantly at several of our parks. Certain wildflowers never before noticed are now being reported by our naturalists," said Muelle.

Hunters in the Metroparks can take antlerless deer only, but sharpshooters kill both sexes. In contrast to the whole-season effort at Chippewa Nature Center, Metroparks allows hunting with bow or gun (depending on the time of year), but only for short periods of two to four days.

Last season at the 6.2 square-mile Stony Creek Park (part of the Metropark system), 10-12 hunters killed 82 deer and sharpshooters killed another 46. Sharpshooting is the only method used to reduce deer numbers at the 5.1 square mile Kensington Park, where about 500 deer were killed the first year, but only 44 were taken last year.

"In addition to the benefits to park vegetation, we've also seen a tremendous improvement in the health of the deer as numbers were reduced," noted Muelle. "Individual deer are larger and in better overall condition, and fawn production is higher."

The Michigan Wildlife Conservancy allows controlled hunting at its 259-acre Bengel Wildlife Center, employing the same principles of low hunter density and an emphasis on harvesting antlerless deer. About one hunter per 40 acres over the course of Michigan's three-month deer season results in 6 to 13 deer taken each year. While the benefits to vegetation haven't been as dramatic as witnessed at Chippewa Nature Center or at the Huron-Clinton Metroparks, hunting at the Bengel Wildlife Center is an integral part of land management there.

The white-tailed deer is the Michigan wild animal with the greatest capacity to destroy the productivity of the landscape for all other life forms. There are times when no feasible alternative to direct control of deer numbers exists. Managers of parks, sanctuaries, nature centers and preserves will increasingly have to choose between large numbers of deer and a natural landscape.

In March of 2002, Audubon Magazine, took the unprecedented step of calling for more deer hunting in more places, for longer periods of time. The very controversial position was taken in an editorial by David Seideman, the magazine's editor, and feature writer Ted Williams. The two men documented the need to kill more deer in the East and Midwest, or face devastation of natural areas, sanctuaries and parks. In the editorial Seideman, a non-hunting vegetarian, concludes: "What's sadder than an innocent animal taking a bullet for the conservation cause? Extinction that causes forests in spring to turn silent and barren for want of songbirds and wildflowers."

There is ample evidence that deer hunting and nature conservation are not only compatible, but that hunting is essential to good stewardship of many of Michigan's most important lands. That message needs to be spread as natural areas shrink and become more fragmented. The tendency of many nature lovers to seek to "protect" lands by limiting all human uses and intrusions is misguided. One hundred years of experience with deer and vegetation proves that.

This series of articles about the damage deer can do to other species and their habitat was prompted by a growing conviction that Michigan's wild and ecologically important places are being destroyed by too many deer.

Note:

Don't Waste Your Time

Research and field experience have shown that the following techniques do not control deer damage to vegetation cost-effectively:

- Scarecrows
- Chemical Repellents
- Trapping and Transferring Deer
- Sterilization of Deer
- Stocking Predators
- Feeding Deer
- Chasing Deer

Deer numbers are controlled by:

- Disease
- Starvation
- Predation

Accidents
Hunting

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