

The Elephant in the Room is The Deer in the Woods

Preface

The “elephant in the room” analogy is often used to describe an obvious and critical issue that is ignored because the solutions are difficult or highly controversial. The analogy certainly applies to the many problems associated with excessive deer populations, including their devastating impact on the forest ecosystem, agriculture, the economy and public health.

An Early Warning

In 1949, the pioneering environmentalist Aldo Leopold first pointed out the impact of excessive deer populations on the ecosystem in his book, “A Sand County Almanac”. More recently, 2010 studies by Cornell University and The Nature Conservancy concluded that approximately 70% of New York State forestlands were not able to regenerate desirable hardwood tree species, largely due to selective browsing by white-tailed deer. Extensive research on the issue has been published in recent years by the US Forest Service and many academic institutions.

The Problem – Summarized

There are numerous challenges to successful forest regeneration, including passive management, unwise harvesting decisions and invasive vegetation. However, the deer issue is foundational and, because deer are mobile, is the least manageable aspect of the problem for individual forest managers.

Deer prefer to eat the seedlings of Maples, Oaks and other tree species that humans most value for such economic benefits as timber, maple syrup, tourism, etc., and for eco-system services such as water and air purification, and carbon sequestration. Many wildlife species also require these canopy-level tree species for habitat and food. In the absence of their natural predators, underregulated deer populations exploded during the last half of the 20th Century and essentially removed seedlings of desirable hardwood forest tree species from most of the northeastern forest. Furthermore, the natural forest understory has often been replaced by invasive and interfering plants that the deer will not eat unless starving. This has created a “legacy effect” which can prevent regeneration of the forest for decades after deer populations are brought under control.

Successful Forest Regeneration Defined

The U S Forest Service developed the forest management tool SILVAH (Silviculture for Allegany Hardwoods). According to SILVAH, adequate stocking for regeneration is 550 or more saplings of desirable tree species at least five feet in height per acre. These criteria apply after a final harvest when the new saplings will not be damaged by further tree felling or equipment. If the regeneration is not out of the reach of deer, up to 9,000 seedlings/saplings would be required per acre.

Is Success a Realistic Expectation?

There are very few woodlots south of the NY Thruway where the SILVAH level of advance regeneration has been achieved unless deer were excluded with fencing or natural barriers, or where there had been clearcutting or other disturbance of sufficient acreage to overwhelm the local deer population with browse.

However, these practices are not scalable to the state's 14 million acres of forestland owned by 687,000 private woodlot owners for several reasons:

- * Exclosure fencing is too expensive for most woodlot owners to consider.
- * Because deer are highly mobile, population management is ineffective on the average privately-owned woodlot of 20 acres.
- * Control via recreational hunting) is frustrated by deer "sanctuaries" in posted properties and suburban environments where hunting is not possible.
- * For a variety of reasons many, and perhaps most, woodlots are passively managed, with little or no focus on forest regeneration. Nevertheless, these woodlots provide critical ecosystem services to the public and to wildlife, and therefor represent an important aspect of the problem.

Other Barriers to Effective Deer Management

- * Public affection for deer, influenced by Walt Disney's "Bambi" in 1942.
- * Political and economic influence of deer hunting enthusiasts and commercial interests related to the sport.

The Conclusion Seems Obvious

As can be seen on their website, <http://www.dec.ny.gov/animals/104911.html>), the DEC is fully aware of these issues and is now giving more weight to forest health in their deer management decisions. However, evidence on the ground demonstrates that even an incidental deer population can frustrate efforts to establish regeneration of desirable tree species. Regeneration failure is common in management units where the deer population is considered to be low, and few if any antlerless deer harvest permits are made available.

In a natural, balanced ecosystem, the fox helps control the rabbit population and wolves and cougars would help control the deer population. But humankind has unbalanced the ecosystem. Both deer and the larger predators were removed from the natural environment during the last half of the 19th Century and first quarter of the 20th. As late as the 1940's, if you wanted to see a deer, wolf or cougar in the southern half of New York State or most of Pennsylvania, you had to visit a zoo. For obvious reasons, you still have to visit a zoo to see a wolf or a cougar, but there are now almost a million deer in New York State, preventing the sustainable management of our forestlands, destroying habitat required by many birds and other wildlife species, broadly distributing ticks that carry Lyme and other disease bacteria, increasing automobile collision insurance premiums, and increasing the cost of agriculture.

Our Plan

We have joined in a partnership with a dozen other forest, wildlife and environmental stakeholder organizations to work with the DEC and the state legislature on solutions to this ecosystem crisis. Our partnership has offered several suggestions to the DEC, falling under these general categories:

- . Accelerate the existing plan to prioritize forest health in deer management decisions.
- . Selectively accelerate deer herd reduction in Wildlife Management Units where it is known to be excessive through adjustments to open seasons, the issuance of either-sex tags, and other means.

- . Provide more direct control over local deer impacts for woodlot managers and owners by reducing minimum acreages for antlerless permits under DMP and DMAP programs.
- . Streamline the permitting process for culling extremely excessive deer populations in some suburban and other areas where recreational hunting is not possible.
- . Our partnership is also working to define aspects of this issue where additional research is needed, and is exploring various programs that could increase hunting access to private property such as the organization of hunting cooperatives.

The Consequences of Inaction

The northeastern second-growth hardwood forest is, on average, about 100 years old. It is in the final third of its natural life cycle and, if regeneration cannot be accomplished before the seed trees are gone, there will be no third-growth forest as we know it for the benefit of future generations. Mother Nature will keep it green in the summer, but it will consist primarily of plants that deer will not eat. These will include some short-lived and smaller pioneer tree species, invasive shrubs, ferns and brush. This “forest” will not produce as much oxygen, sequester as much carbon, or harbor a diverse wildlife population. It will not be as appealing for recreation or as colorful in the fall for tourists, and it will not produce maple syrup for our pancakes. It will not provide the 60,000 jobs or the \$14 billion in annual economic benefits from the forest products and related industries that New York State enjoys today.

A Final Note on Hunting

Many of us who value the forest ecosystem also enjoy hunting deer and are torn by the conflict between sustainability and being able to pursue our sport and put some venison on the table. For that reason, our Partnership is committed, for now, to resolving this environmental crisis through a more robust reduction of excessive deer populations with recreational hunting and the judicious use of culling.

We realize however, that if these measures are inadequate, society will need to make a choice between much more drastic solutions, or losing the forested landscape on which we and countless other species depend.

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