



Education

When There Are Too Many Deer

This is the first of a four-part series on problems that can result where there are too many deer. The other articles deal with impacts on specific kinds of plants and animals, and methods to control deer numbers.

Michigan's deer population steadily increased after World War II as a result of hunting regulations and changes in habitat. Michigan's vast, old growth forest of pre-settlement times harbored few deer, but the mixture of regenerating woodlands, openings, and farmland now prevalent is prime white-tailed deer cover.

While many Michigan residents are pleased with the viewing and hunting opportunities brought by the expanding deer population, others have voiced concerns about increases in crop damage and car-deer collisions. Occasionally, the popular press also features articles on starvation of deer caused by overpopulation. And overbrowsing of habitat, a problem which has largely been ignored, is now in the news.

The question, "When do we have too many deer?" is indeed important. It needs to be considered not just by the Michigan Department of Natural Resources officials charged with devising annual deer hunting regulations, but by all conservationists. Many problems are related to deer densities in particular areas, not the overall statewide deer population.

This is particularly true in Northern Lower Michigan's "deer country." There, vast private lands owned by individuals or clubs are interspersed with state and federal forests. Deer densities in autumn exceed 50 animals per square mile—a high density—on many of these private lands, and foresters and wildlife biologists are keenly aware that high deer numbers are a major cause of habitat damage.

On numerous "hunt club" lands in Northern Michigan, there is virtually no woody understory vegetation, as shrubs and young trees have been eliminated by persistent browsing by deer. Some shrub species, like the once-common New Jersey tea, are particularly palatable to deer and have been essentially eliminated by browsing. Some plants, like bracken fern, are less palatable and/or more tolerant of browsing, and are provided with a competitive advantage. This, in turn, can lead to undesirable alterations in plant succession patterns. A common feature of deer country landscapes where artificial feeding has occurred in large grassy openings were deer have not allowed woody species to revegetate after cuttings or other disturbances. Over time, such lands become less suitable habitat for deer and other wildlife species such as ruffed grouse, woodcock, and small mammals.

Ironically, until it was made illegal, a typical response by deer country landowners to evidence of over-browsing was to increase feeding in the mistaken belief that when presented with more artificial food, deer would be less apt to feed on natural vegetation. To the contrary, deer will continue to meet their inherent need for diversity in their diets by feeding on the natural vegetation as well. Deer have demonstrated the capacity to eat themselves out of house and home.

White cedar is one of the most important habitat components for the survival of Michigan's deer herd during the winter months. Large thick stands of lowland cedar provide the best type of habitat for deeryards. When deep snow and low temperatures begin to make traveling to and from bedding areas and feeding grounds too difficult and energy consuming, deer will yard-up in the shelter of large stands of cedar. Here, there is less snow and sometimes warmer temperatures because the large dense canopy that cedar creates traps snowfall, breaks the wind, and insulates the forest understory.

Cedar forests are also important sources for winter browse. Deer feed on the buds, leaves, and twigs of white cedar. But cedar can be over-browsed to the point where there are no branches within reach and deer can no longer feed. In the presence of large deer numbers reproduction of white cedar is negligible.

Even in Southern Michigan, the impact of deer on vegetation is often obvious. Some landowners say, "Walk with me through the woods and tell me what's missing" reports Mike Boyce, resident manager at Baker Sanctuary, a nature preserve near Marshall in Calhoun County: "You can see really well through the woods. There's no undergrowth. The deer are demolishing it." It's a phenomenon that is becoming more familiar across Southern Michigan as deer populations reach as high as 110 per square mile.

Huron-Clinton Metro-parks in Southeast Michigan cites as evidence of over-population the fact that 23 species of wildflowers no longer grow at Kensington Metro-park and 19 more species are considered threatened. There is a distinct browse line at six or seven feet, caused by deer standing up on their hind feet to reach edible leaves. At the Chippewa Nature Center in Midland County, Tom Lennon, a naturalist at the center, has seen deer reduce patches of wildflowers such as spring beauties,

trillium, and jack-in-the-pulpit.

Overbrowsing by deer is not a problem everywhere, but it is a concern that many land managers can't ignore. "Letting nature take its course" is not an option where the deer population is not within the natural carrying capacity of the land. The result of negligence will too often be long-term habitat degradation for many other plants and animals as well as the deer.

Another problem when deer numbers are too high is that the threat of diseases spread by deer-to-deer contact. Bovine tuberculosis is transmitted more easily under crowded conditions. Cases of bovine tuberculosis continue to be found in Northern Michigan where artificial feeding was until recently, intense. A multi-agency governmental task force supported by university researchers and private veterinarians conduct tuberculosis surveillance, particularly in Alcona, Alpena, Montmorency, and Oscoda counties. Humans, elk and several species of livestock are tested along with deer because bovine tuberculosis can potentially be transmitted to many species of mammals. Tuberculosis and other diseases in the deer population will be a long-term problem and there is a need to know more about the role of high deer numbers in the spread of disease.

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Note:

Many wildlife biologists strongly advise against maintaining high deer numbers. They are concerned that this may:

- Lead to overbrowsing of the natural habitat
- Change natural plant succession patterns
- Increase the incidence of disease by concentrating deer, especially at feeding stations
- Contribute to crop damage on adjacent lands
- Contribute to increased incidence of illegal deer kills
- Negatively affect deer nutrition
- Increase winter starvation losses
- Increase car/deer collisions

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