

# Our Deer

Southern Michigan's deer herd has grown five-fold in the past twenty years. That's bad news for gardeners, motorists, and the environment.



by Margaret A. Leary

Seeing more deer lately?

My Newport Road place has a doe and two fawns, who ate all my hostas, roses, and lilies; the Arboretum houses a herd of six to ten, foraging away trilliums and rubbing the bark off trees; fifteen marched regally across a frozen Barton Pond a while ago; and up to three dozen gather at the top of the Broadway hill, where they've eaten yews and even ivy down to nubbins.

City council member Sabra Briere lives on Broadway. She took the photos above. "I love living near the deer but am not so enthusiastic that I don't see a problem," she says. "There are accidents involving deer and cars; I see broken deer regularly, and many of my neighbors speak softly about venison. I've found DeerOff works well for my tulips. As you can tell, nothing works for pumpkins."

What's going on?

A century ago, deer were hunted almost to extinction in Michigan—in 1914, the state game commissioner estimated that just 45,000 survived in the state, all of them in the Upper Peninsula and the northern Lower Peninsula. But they are extraordinarily fertile creatures, and once the state limited deer hunting their numbers rebounded with astonishing speed: within twenty years, there were more than a million. Through the middle of the twentieth century, the population varied between half a million and a million, depending mainly on habitat, hunting rules, and the harshness of the winters.

By 1980, the statewide count hit 1.2 million. By 1990, it was 1.6 million, and by 2000, 1.9 million—a figure that has held, with occasional downward fluctuations, ever since. And every bit of that increase has come in the southern Lower Pen-

insula. In the past thirty years, the number of deer living in the northern Lower Peninsula and the Upper Peninsula has actually declined, as forests reclaim the semi-open landscapes they prefer. But farther south, the population exploded, from 200,000 to a million deer. That's an increase of 500 percent. By comparison, in that same time period the human population of Washtenaw County grew just 31 percent.

Adele Laporte lives in Barton Hills, just north of Ann Arbor. She shows me the impact of deer browsing on her sixty-five-year-old hemlocks: there are no branches for seven or eight feet from the ground. I see chewed-down spruces as she describes long-gone hostas and yews and notes the dearth of seedlings in her oak-hickory forest, all become deer chow.

Laporte clearly remembers the first time she saw a deer in the village: it was in 1982.

But all you need to know about the rate at which deer can multiply is in the title of a study done in 1937 at the U-M's E.S. George Preserve near Pinckney: *Six Deer Produce 160 in Six Seasons*. By 2000, the DNR estimated that Barton Hills was home to 600 deer, and the village council hired a sharpshooter to thin their numbers.

Village clerk Jan Esch says that worked for a while, "because the farmers in the surrounding area also got culling permits, so it wasn't just us." A quick check of the online village council minutes shows that as recently as March 2009 the council wanted to "restart deer thinning as soon as possible." Laporte, who led the council during one phase of the "deer wars," says nothing was done, however. Opposition came from

Browsing on Broadway.

"residents who remembered the earlier, badly managed" program, during which several deer were shot on nearby farms without advance notice, terrifying unsuspecting residents.

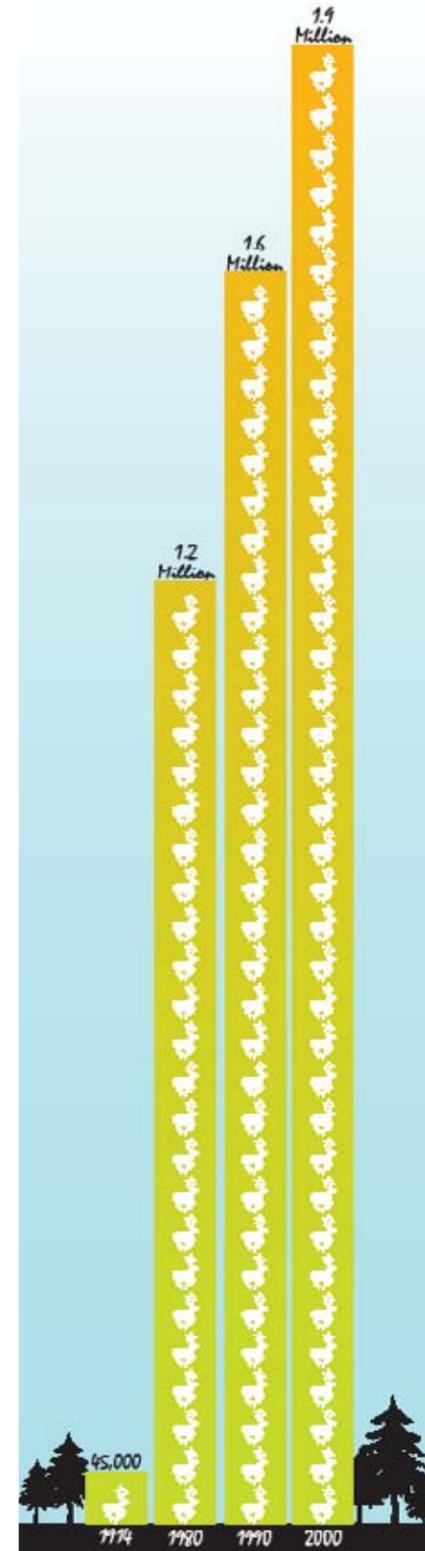
Other towns have had similar experiences. Both Grand Haven and Rochester Hills also tried sharpshooters and also gave it up: the political pushback from animal rights advocates wasn't worth the short-term benefits, as new deer quickly replaced those killed.

Barton Hills has left its deer alone for several years now, and Esch believes their numbers are again on the rise. Nonetheless, she doesn't expect any further attempt to thin the herd "unless we hear a public expression of desire to do that. Most recently, we heard only objections to culling."

Deer are undeniably beautiful. But it's also undeniable that southern Michigan has too many of them. State law directs the Department of

Natural Resources to use "scientific management" techniques "to develop and conserve a healthy deer herd in balance with abundant and well-managed habitat ... to chart a course for hunting, and the management of young forest habitats on which deer and other species of wildlife depend." This quote is from the DNR's 2010 *Deer Management Plan*, which the agency is in the process of implementing.

Yet the 2010 plan doesn't say how many deer is enough. That doesn't sound like "scientific management," and it isn't; the reality is that Michigan's deer population is a political issue. And there is too much conflict between hunters—who want more deer—and farmers, gardeners, forest managers, and motorists—who want



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fewer—to reach agreement on a number. The last time the DNRE set numeric goals was in 1996.

In Washtenaw County the 1996 goal was twenty-three deer per square mile. In 2008, the most recent year for which figures are available, the DNR estimated the actual population at about thirty-five deer per square mile—55 percent more than the goal. The DNR calls the county a “deer magnet.” It has abundant cropland, where deer love to graze, and forests, where they like to hide out and browse. And only 4 percent of the land is public and thus open to hunters.

There is now one deer for every fourteen humans in Washtenaw County. Each eats about 2,000 pounds of food a year. One might ask: 2,000 pounds of what? Landscaping, we know. Crops, too. Back in 2000, a local farmer told the Observer that on fields where he was allowed to hunt deer, he was harvesting fifty-five bushels of soybeans per acre. On fields where he couldn't hunt, his yield fell to thirty-five bushels. That fits with research at Michigan State University, which found that deer caused a 24 to 43 percent crop loss in dry beans, and 19 percent in alfalfa.

When deer are so numerous, crop loss and landscape damage are only the beginning of the problems they can create. Deer also damage the habitat of many other creatures, directly and indirectly; they destroy the forest understory and native wildflowers such as trillium; they leap into the paths of moving vehicles; and they carry diseases that can pass to humans or domestic animals.

At the U-M's Matthaei Botanical Gardens on Dixboro Road, natural areas manager Jeff Plakke tells me, ten-foot-high fencing now protects the formal garden beds from being eaten by deer. It's an expensive solution that involved clearing for and installing the fences, which will require continuous monitoring and repair. But before the fences went up in 2006, horticulture manager Mike Palmer says, the deer devoured yews, perennials, and even whole plants in the rock garden. They also walked up the steps to



The county had 1,174 car deer collisions in 2010; a crash last year on I-94 cost the owners of this SUV \$6,200. Ann Arbor's fifty-four crashes included four that caused personal injuries.

the concrete porch to sneak into the perennial garden until gates were installed to stop them.

Out in the gardens' natural areas, all newly planted and even volunteer trees and most shrubs get a protective wrap of six-foot-high wire. Plakke shows me two pairs of ten-foot-by-ten-foot plots that were set up in 2006. In each pair, one area had been fenced to exclude deer and the other left open. The enclosures, even on a late October afternoon, were noticeably healthier, with taller oak seedlings and more and healthier native plants, including Culver's root, little bluestem grass, and goldenrod.

Randy Baker, a Columbiaville, Michigan, naturalist who spoke about white-tailed deer at the Botanical Gardens in October, explained the implications of this change in plant growth. Particular plants provide seed food and cover for particular species of birds; each species has its preference. When a plant variety disappears, so may the birds that depend on it for food or cover. Baker himself hunts pheasants, and he has noticed a drop in their population, which he suspects is caused by increased deer grazing.

Three hundred years ago, Plakke notes, wolves, mountain lions, bears, coyotes, and humans all hunted deer in what is now Washtenaw County. Now, all but the coyotes and the human predators are gone. The state limits hunting by humans, and coyotes kill only fawns. (But they do relish them: my research found that in Cook County, Illinois, the contents of coyotes' stomachs are 42 percent small rodents; 23 percent fruit; 22 percent fawns, 18 percent rabbits, and only 1 percent domestic cats, thank goodness.)

Deer are bad for birds in more ways: from my dining room window I watched a deer suck sunflower seeds from my pole-mounted bird feeder. A Google search quickly found a photo of a white-tailed deer lunging on nestlings from a savannah sparrow nest and another of a deer eating songbird eggs, plus a magazine article about deer “opportunistically feeding” on songbirds caught in nets.

The white-tailed deer are mobile as well as noble: they can traverse a frozen river, use a weir, or simply swim. They cross M-14 using the same bridges we do. They'll race through multiple lanes of high-speed traffic, including juggernaut trucks. When they don't make it, there are crashes—horrendous encounters that leave bloodcurdling smears of guts and fur across the road, foretold by the swerving black of braking tires, and climaxed by a recognizable body part such as a cloven-hoofed foreleg.

Michigan had 55,867 reported motor vehicle-deer crashes in 2010, in which 1,433 people were injured and eleven killed. Such crashes occur most often in the most heavily populated counties, Kent (1,976) and Oakland (1,836). Washt-



Two deer sun themselves at Forest Hill Cemetery in December. A herd of six to ten live in the U-M Arboretum.

enaw County had 1,174 car-deer crashes, and the city of Ann Arbor was the scene of fifty-four, including four that caused personal injuries. Scott Purr, whose Critter Control franchise contracts with the city to haul away road-killed animals, says he finds them frequently along Huron Parkway where it crosses the river.

Ken Wisniewski at Ross-Beakes Collision Services has a terrifying story about a car he had repaired a decade ago. The new Acura hit a big buck with a full rack. The buck catapulted onto the top of the car antlers first, piercing the roof on the passenger side. Luckily, the passenger had moved to the back seat for a nap. Wisniewski says the repairs cost \$10,000.

Collisions aren't the only way that deer can imperil humans. There is scary potential for deer-borne disease to migrate to domestic animals and even to people. Lyme disease—named for the Connecticut town where it was first observed in 1975—is now classified as an “emerging disease” in Michigan. It is spread by deer ticks, and left untreated it can cause crippling heart and neurological damage. Naturalist Randy Baker told me that a man in Macomb County is on a ventilator with the disease and that there is a similar case on the other side of the state.

So far, the hundred or so annual cases of Lyme disease in Michigan are mostly in the Upper Peninsula and the west side of the Lower Peninsula. Were the disease to become prevalent in our local deer population, landscape architect Chris Graham predicts, a simple walk in the woods would be dangerous.

Other deer-borne diseases the DNR identifies as of concern because they can be transmitted to domestic animals and humans include epizootic hemorrhagic disease, eastern equine encephalitis, bovine tuberculosis (found in Michigan since 1975), and chronic wasting disease (CWD, found in Kent County in 2008). The DNR says that once CWD is established, it can build to high prevalence—and containment, let alone eradication, is not likely. CWD is closely related to Creutzfeldt-Jakob (mad cow) disease, which infected hundreds of thousands of cattle in Britain in the 1980s and has since killed several hundred people who ate meat from infected animals.

Baiting—leaving piles of corn, carrots, or apples near a hunting blind to draw deer—is known, Baker said, to speed the spread CWD. The bait brings together more deer than normal, and they breathe,

sneeze, and drool on the food. But hunters press the DNR to allow baiting, and the agency permitted it during last fall's hunting season.

Baker also reveals another way disease could spread quickly through the state herd. Photographic evidence proves, he says, that deer eat the guts of harvested deer, left by hunters on the forest floor.

Chris Graham, the landscape architect, says the deer are great for his business: he's asked to replant ravaged landscapes with deer-resistant varieties, to install fences and netting, and to return to repeat it all in a few years. Bud Graham, who also chairs the city's environmental commission, recognizes the downside of overpopulation; his Ann Arbor Hills neighborhood is overrun with them and he sees those problems only getting worse.

The DNR calls Washtenaw County a “deer magnet.” They're attracted by our subdivisions, farm fields, and super-nourishing, nurse-ry-raised plants.

He doesn't think Washtenaw County is anywhere near its biological carrying capacity for deer. That is, our deer are not even close to running out of food, because county residents, he says, continue to improve the deer habitat by creating forest edges as we carve out subdivisions, plant more crops, and provide super-nourishing nursery-raised plants.

Graham told me that in addition to biological carrying capacity, wildlife managers consider the social carrying capacity for a particular animal: how much aggravation will people put up with? He gave Barton Hills, where fed-up residents hired sharpshooters, as an example of exceeding the social carrying capacity.

But as Barton Hills and other communities found, shooting an urban deer herd is controversial, impractical, and ineffective. So given the known and potential harm of too many deer, what might be done? Hunting is the primary means though which

the DNR attempts to regulate the size of the herd. But neither the DNR nor Randy Baker believe that hunting can bring the number down much below the present overpopulation. This is because hunting licenses are the only element the agency can control. Other factors affecting the deer harvest include weather (deer hunker down in wind, and absent snow they are harder to track), the economy, where hunters choose to hunt, and how serious they are about getting a deer. And the number of hunters in Michigan is falling, from 800,000 in 1998 to 683,000 in 2007. In the same period, the number of deer harvested fell from 580,000 to 484,000.

The DNR has researched contraception and concluded that dosing animals individually is too expensive, while less-targeted tactics, like lacing salt licks with birth control drugs, are too dangerous to other animals. Fences and netting work, but they are expensive and not practical on a large scale. Dogs help in small areas, but both fences and dogs just drive the deer elsewhere. Farmers with sufficiently damaged crops can get a permit to shoot the offending deer, but this is not large enough in scale. Reintroducing the natural predators—wolves, mountain lions, and bears—would be impossible. Anyway, chuckles Baker, “wolves are too smart to live with so many humans.”

Baker suggests a “politically impossible” solution: reinstate commercial hunting, which has been illegal in Michigan for well over a century. “Commercial hunting,” he says, would allow licensed individuals to sell the deer they harvest, a complex undertaking given existing state and federal laws. It would require licensing, inspection, reporting, and taxing mechanisms. Sport hunters would object strenuously, Baker predicts, as would animal rights advocates and perhaps even the existing purveyors of other kinds of meat. And imagine the public health disaster were chronic wasting disease to cross over to humans.

Even if the DNR could balance the competing interests of hunters, farmers, gardeners, forest managers, and animal lovers well enough to set a goal for the deer population of Washtenaw County, there seems little hope that could they could achieve it. Perhaps only a paradigm-shifting event like a serious outbreak of disease can create pressure to find a way to reduce the deer population. Meanwhile, home gardener, there is always a dog, a fence, stinky spray, or perhaps your own