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The Growth of the Deer Population in Rusk County, Wisconsin

Approximately 60 miles north of Eau Claire, nestled outside the small town of Bruce, Wisconsin, lies my grandparents' dairy farm. For as long as I can remember, a weekend or holiday sojourn to "the farm" was a fresh escape from the rituals of everyday existence. A four-hour car trip always seemed to be justified by the many hours of fun I would have walking my grandfather's fields, exploring nearby woodlands, or fishing and canoeing in the surrounding countryside's many lakes and rivers. However, the yearly deer hunt at the farm was *always* the event that caused the most excitement throughout my family. My father's process of preparation (target practicing at the rifle range, preliminarily scouting the land to determine deer movements, and making multiple trips to Fleet Farm) at the beginning of November singled to me that the furor of the hunt was about to begin. Fact and fiction have blended in my mind to create an elaborate string of romantic images from my childhood recollections of "deer season," from the sight of a victorious hunter driving the farm truck into the yard with a deer carcass amply displayed across the back, to the visions of the late-night card games and beer-guzzling sessions that the adults seemed to enjoy. Every year, people who hunted the farm would bring home happy memories and, quite frequently, lots of venison; there was always enough deer in the area to supply everyone who hunted with numerous shot opportunities. It was not until a recent trip to the farm that I realized the history of human development in the region helps to explain why the deer populations flourish so abundantly; human fragmentation and alteration of the region's

forests, elimination of predators, and the implementation of a larger food base have allowed the deer population near my grandparents' farm to prosper.

To understand the reasons for deer abundance in the region, it is necessary to understand the area's geography. Rusk County, where the farm is located, contains a unique set of natural features that profoundly influenced the region's history.

The majority of the rivulets and streams in Rusk County flow into one of two large rivers: the Flambeau to the east, the Chippewa to the west. The rivers flow through the northern boundary of the county, approximately 18 miles apart, and continue to run southwards until the Flambeau converges with the Chippewa at the county's southernmost edge. These large waterways are important to the region, serving as both a water source and a drainage basin for local farmers. In the northwest part of the county lies the Blue Hills, a series of ridges that glaciers sheared out of the landscape thousands of years ago. In contrast, the southern and eastern sections of the county are relatively flat, and the area's fertile soil (a mixture of sand and clay) makes the region particularly attractive for farming.

Before farming, however, came the logging. Historical records show that most of northern Wisconsin was forested before American settlement. The native people of the Rusk County area, the Ojibwas, certainly did not partake in large-scale logging, and because they were a hunting-and-gathering group, only altered the environment in relatively minimal ways. Logging companies that opened operations in Wisconsin in the late nineteenth and early twentieth centuries, however, often cleared entire forests, and landscapes that once contained miles of old growth stands soon contained miles of cutover.

After areas of the countryside were deforested, 40-acre sections of land were distributed, via a homestead law, to individuals who agreed to farm or "improve" it. My grandparents' farm

thus exists as the result of this historical land policy, covering property that was once logged and given away in such a manner. Previous owners had purchased various sections from other surrounding homesteads over the years to increase the farm property to approximately 500 acres by the time my grandparents acquired it in 1969. Approximately half of this land is currently grazed or planted, while the other half remains as either swamp or pockets of forest cover. How could this historical process of logging and forest fragmentation, a procedure that actually removed certain species of animals from Wisconsin, ultimately *assist* the deer population?

One result of deforestation was that it quickly aided in the removal of the wolf from Rusk County, the deer's primary natural predator in Wisconsin. While species of animals in northern Wisconsin such as bears, wolves, and moose needed large amounts of territory to fit their feeding and territorial patterns, deer were better able to adjust to smaller pockets of wilderness. While a pack of wolves needed territory that extended across entire forests to sustain itself, deer could easily forage for food in the small, thick swamps of the area or small stands of trees that logging companies thought of as useless or economically unprofitable to exploit. Thus, deer populations could coexist with human activity in a region where its primary natural predator, the wolf, could not. Dominant American ideology of the time also considered wolves dangerous and harmful; communities sometimes enacted bounties that rewarded hunters and trappers for wolf pelts. The resentment of wolves is a feeling which persists among many Rusk County farmers today; my grandfather, among others, is quick to voice his resentment over the state's latest attempts to reintroduce wolves to the area (recent reports have the area wolf count at only 20, a number too small to have any great significance on the regional deer population). Therefore, the two-fisted attack of direct elimination and habitat destruction removed the wolf from the surrounding landscape. Today, deer are relatively free to roam the surrounding farmland with virtually little

competition--until hunting season, of course.

Secondly, not only does the *amount* of forest cover near the farm benefit the deer population, but the *type* of forest, as well. The old growth forests that once covered the county were mostly jack and white pines¹. While these forests surely contained some deer, the buds of these softwood trees often did not contain the nutritional values to sustain large deer populations. After the land was cleared of these old growth stands, however, land that was not cultivated grew slowly into new forest stands, this time containing shade intolerant trees such as aspen and poplar. These forests, like the stands that now surround the farm, are denser, containing more underbrush for deer to hide and seek shelter. The buds from the surrounding poplar trees have a significantly higher nutritional value than those in the previously existing forest. This factor possibly explains why deer populations in the county are relatively lower in areas of the nearby Blue Hills, which still contain many old growth hardwoods. The predominance of the new growth stands that lie on the farm's property clearly benefits the deer herds.

When the deer traverse from the forest, the farm itself provides them with numerous nourishment opportunities. Deer constantly journey into the cornfields to nibble on the corn they find there. Surrounding fields containing alfalfa and clover buds combine with the natural forest vegetation to give the deer a cornucopia of food options. With little threat of attack from natural predators and an extreme surplus of food, it is no wonder that deer are so numerous on the farm.

From my deer stand, a mere 10-minute walk from the doorstep of my grandparents' farmhouse, I can see directly how the effects of land transformation have aided in the creation of an ecosystem where deer can flourish. Along the tree line to my right, a thick stand of poplar trees, evidently the outgrowth from a previous logging operation that took place 80 or more years

¹ Land survey map at the website of the Wisconsin Department of Natural Resources [online] <http://www.dnr.state.wi.us/org/at/et/geo/map-gal/landcov/orgve.htm>. Accessed Feb. 19, 2000.

ago, provides the deer with a haven from the rare wolf or coyote packs that may roam the area. The stand eventually recedes into a swamp, bordered by the tiny Thornapple River, one quarter-mile behind me. Although it is quiet now, the field on my left is a popular wintertime food source for the deer that wander out of the woods to feast on the nutrients in the corn stalks. Conditions for these deer surely would be different if the entire landscape of the farm was instead a large pine forest, as it was prior to the 1880s.

The construction of the farm and fields undoubtedly carries with it more ecological consequences than the addition of a greater deer population. Factors that Professor Cronon articulates in his book *Changes in the Land*, which pertains to the implementation of large-scale agriculture in New England, also hold true at my grandparents' farm. The removal of trees to make fields has assuredly increased the rate of surface runoff, as well as increased the extremes of seasonal temperature fluctuations in the soil, furthering the process of erosion. The dairy cows that roam the pastures behind the barn also change the soil composition with the heavy addition of their fecal material; their movement across the land also promotes greater soil compaction. Root systems of the new, planted crops have altered the soil chemistry of the region. All of these factors have surely resulted from the construction of the farm and alteration of the surrounding landscape and are factors that have environmental consequences as important as the abundance of deer population in the area. However, while these effects are very important to how we understand the landscape, the farmland's ability to support large amounts of deer is an interesting case study of how one species has *benefited*, rather than suffered from human settlement and development. Humans, by constructing farms like my grandparents', have created an environment that seems to benefit both parties: the deer population on the farm is flourishing, and hunters who leave there do so, more often than not, with a content expression.