When the town of Oberlin, Ohio was founded in 1833, agriculture was Ohio’s number one industry and was a major component of Ohio’s economy, and still is today. Ohio's landscape and soil composition are naturally well suited for agriculture. About 50% of the land in Ohio is classified as acceptable farmland and contains between 4 to 12 inches of topsoil. The state of Ohio has about 400 different types of soil, many of which serve as productive landscapes for crops such as corn, soybeans, and grains. Ohio’s climate and average annual rainfall of 36 inches are also ideal for crop growth.

However, between 1833 and the present day, there have been a variety of changes in agricultural practices that have impacted the populations of animal species in Ohio. Through the process of improving agricultural technology and later transitioning to a more industrial and urbanized society, the environment and landscape in Ohio has undergone changes that altered the availability of food and shelter for certain animal species, hence affecting species population sizes.

To understand the changes in population of various animal species between Oberlin’s founding in 1833 to the present, it is best to use three categories to analyze the species that were impacted. First, there are species that were present in Ohio in 1833 but vanished from the state at are no longer present in Ohio today. Some examples include blue pike, eastern timber rattlesnakes, eastern timber wolves, passenger pigeons and trumpeter swans. Second, there are species that were present in Ohio in 1833 and are still present today. These include bald eagles, black bears, eastern cottontail rabbits, eastern gray squirrels, raccoons, red foxes, Virginia opossums, white-tailed deer, wild turkeys and wood ducks. Finally, there are species present in Ohio today that were not present in 1833. Some examples include American beavers, barn owls, Coho salmon, English house sparrows, northern cardinals and ring-necked pheasants. In addition to these specific species, there are many other animal species that fall into these categories. There are various reasons for the population changes in these species, many of which relate to agricultural practices.

Certain animal species experienced population decline over time due to conventional agricultural practices involved in maintaining and harvesting crops. The deforestation that transformed wooded areas into farmland caused the populations of black bears, eastern gray squirrels and wood ducks to decrease. This occurred because the trees that were removed had previously provided shelter and food for these animals. However, the transformation of forest to farmland also caused the introduction of species such as the barn owl, because farmlands provided the ideal habitat for them. In addition, agricultural practices such as pesticide and herbicide use caused a decrease in the population of species such as bald eagles and cottontail rabbits.

Additional changes in the population of animal species in Lorain County occurred as a result of improvements in agricultural technology that occurred throughout the late 1800s
and early 1900s. For example, although the development of farmlands initially increased the population of barn owls, the commercial development of industrial farms caused a significant decrease in their population. These newer farms utilized modern technology, as well as synthetic and natural resources, to efficiently produce large-scale crops that targeted consumer markets. As a result, transitioning to this method of farming utilized more land and created more environmental pollution, which consequently damaged the ecosystems and food sources of certain animal species. In addition, the improvement of farm machinery caused a decline in many species populations, including the cottontail rabbit and the ring-necked pheasant. This machinery was more efficient and allowed farmers to cultivate even more land, which had a negative effect on some animal populations that was similar to the commercial development of farms.

Finally, as Ohio transitioned towards an increase in industry and urbanization in the early 1900s, to supplement its agriculture-driven economy, additional changes in animal populations occurred. Urban development caused a decrease in many species populations, such as the eastern timber rattlesnake and passenger pigeons, by destroying the land that provided their shelter and food. The need for transportation infrastructure, such as paved roads and railroads, arose as people began working at industries located further from their homes and farms. The construction of this infrastructure destroyed many natural habitats. However, some species, such as the common pigeon (rock dove), eastern gray squirrel and raccoon, were able to adapt to an urban lifestyle and their populations increased as they thrived in cities.

In just under two centuries, the populations of various animal species in Ohio have drastically fluctuated due to changes in agriculture and lifestyle. It is likely that species populations will continue to change in the future, possibly due to continued urbanization. However, the changing environmental conditions and climate change that are currently taking place and will continue for years to come, will also play a significant and detrimental role in altering the populations of animal species in Ohio.

Further Reading:
1) Dierkes, Christina. *Investigating the Impacts of Climate Change on Ohio Agriculture and Forests.* Columbus, Ohio: The Ohio State University. 2011.
2) Iler, Amy and Benjamin Zuckerberg. *Climate Change Impacts on Wildlife.* Columbus, Ohio: The Ohio State University. 2014.
5) Townshed, Norton S. *History of Agriculture in Ohio.* Columbus, Ohio: The Ohio State University.

Written November 2015 by Oberlin College Environmental Studies Students
Vincent Butler, Sloane Garelick, Laura McManamy, and Emma Parsons

Oberlin Heritage Center, 73 ½ S. Professor Street, Oberlin, OH 44074
440-774-1700, www.oberlinheritagecenter.org