

Animals for Profit: The Ecological and Economic Causes of the War on Coyotes in Kansas from 1890 to 1899

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Spring, 2017



This study examines how humans, coyotes, and black-tailed jackrabbits interacted under drought conditions in Kansas during the 1890s. Using newspapers, scientific studies, and commissioner's records from Clay and Riley counties, the study tells the story of desperate people turning to coyote pelts as a source of income. Research from the 1930s and 1950s droughts was used as little research was done during the 1890s. The conditions facilitated an increase of jackrabbits, coyotes, and ultimately, a story of human survival.

To an outsider, Grant County seemed like any other small peaceful farm community in far southwest Kansas. That perception was destroyed in April of 1890 when the district judge, Theodore Botkin, was the target of an assassination plot. The guilty party? A group of Grant County commissioners whom he had ruled against.¹ Their crime was not an ordinary one, however; they had been caught stealing as much as \$16,000 from the county through the bounty system.² Their method was, frankly, ingenious and the theft is useful to understand wide spread abuse of that system. Like many more Kansans and Midwesterners during the 1890s, the Grant County commissioners misused the bounty system to turn a profit.

In the case above, commissioners had repeatedly turned in the same coyote scalps.³ For others, it was taking only male coyote scalps and leaving the females alive so they could reproduce; rural people even raised the predators like farm animals. In all three cases, the payments were due to an 1877 Kansas law that authorized a one dollar bounty on coyote scalps.⁴ The reason for the unusual source of income was simple: desperation. The Dirty Thirties may be more famous, but the drought of the 1890s was just as harsh to Kansas farmers. For example, the photograph in Figure 1 shows the immense damage to a corn field in the 1930s. The same scene was repeated throughout Kansas during both decades.

¹ Reported in the *Salina Daily Republican* on April 25, 1890.

² Reported in *The Topeka Daily Capital* on April 24, 1890.

³ *Salina Daily Republican*, April 25, 1890.

⁴ The original text of the law was published in the *Walnut Valley Times* on May 18, 1877. It is also possible to find the text fully cited as a Kansas statute. See Kansas State Board of Agriculture. *Biennial Report – Kansas State Board of Agriculture*, Volume 1, 584.



Figure 1: Damage to a cornfield caused by drought. SOURCE: Kansasmemory.org.

It was a dreary time for Kansans and many turned to one of the few natural resources unfazed by the drought, coyotes.

The story seems simple until the presence of *Lepus californicus*, commonly referred to as the black-tailed jackrabbit, is factored in. The relationships among humans, jackrabbits, and coyotes along with their environment needs to be examined when asking why people turned to the bounty as a source of income during the 1890s. Throughout this project, research conducted on the 1930s and 1950s droughts will be used in the examination of the 1890s drought. This is necessary because minimal collection of environmental data occurred during that decade. Also, the term wolf and coyote were often used interchangeably. Dan Flores, author of *Coyote America*, linked the confusion over wolves and coyotes to earlier European reports calling coyotes, “prairie wolfs”.⁵

⁵ Dan Flores. *Coyote America: A Natural and Supernatural History*. (New York: Basic Books, 2016), 4.

Drought Ecology in Kansas

In its history, Kansas has endured three major documented drought periods. They were the 1890s, 1930s, and the 1950s. In all three decades, jackrabbit populations played a major role in shaping the ecology of Kansas. The best data for the 1890s is found in Floyd L. Carter's 1939 graduate thesis at Fort Hays State University. It offers historians a comprehensive source of animal populations in the western half of Kansas. However, populations in eastern Kansas would have been comparable due to similar drought conditions. According to Carter's data, the coyote was either abundant or common throughout western Kansas.⁶ In addition, the estimated population of black-tailed jackrabbits increased dramatically throughout western Kansas in the years between 1890 and 1899. His data shows that rabbits were either abundant or common in all but two of the 54 western counties.⁷ There was such an abundance of rabbits that so called rabbit drives were common. The story of one drive in Logan County even made its way into the European papers in 1896.⁸ Figure 2 below, taken during the 1930s drought, provides a breathtaking visual reference for the rabbit drives. The photograph shows countless jackrabbits in a small section of land near Liberal, Kansas. Similar numbers across Kansas justify the term "plague" being used.

⁶ Floyd L. Carter, "A History of the Changes in Population of Certain Mammals in Western Kansas" (Master's Thesis, Fort Hays State University, 1939), 27.

⁷ Carter, 59.

⁸ Reported in *The Dighton Herald*, July 23, 1896.

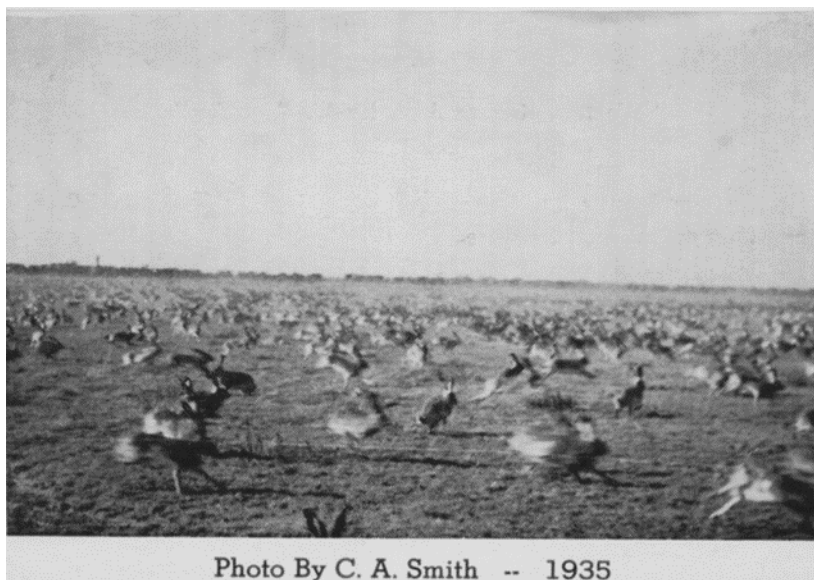


Figure 2: The original caption on the back of the photo states that “This scene was taken about one-half mile from ‘catching pen’ and shows only a small area of the drive. It also shows how easy it was to kill so many before they reached the pen. Driving line of men can be seen on horizon in background. Compliments of Lee Larrabee Liberal, Kansas.” SOURCE: Kansasmemory.org.

With a correlation between rising rabbit populations and drought strongly suggested, it is time to examine the reason behind the pattern.

One explanation for rabbit increase is found in the work of biologists Franklin Bronson and Otto Tiemeier from the 1950s. They were studying the link between precipitation and black-tailed jackrabbits and confirmed that rabbit populations were highest during dry spells. They studied printed material and concluded that, “From the evidence available in publications these animals are not cyclic in Kansas but rather increase markedly only during dry periods.”⁹ Their research, along with Carter’s data, makes it logical to assume that a similar pattern would

⁹ Franklin H Bronson and Otto W. Tiemeier, "The Relationship of Precipitation and Black-Tailed Jack Rabbit Populations in Kansas." *Ecology* 40, no. 2 (1959), 197.

have been seen during the 1890s. Yet more details are needed to explain why this phenomenon occurred.

One possibility is that the drought did not increase the population; it concentrated it. Bronson and Tiemeier theorized that population increases during dry spells were “as much, or more, a function of concentration and dispersion movements as of an actual increase or decrease in numbers.” It seems likely that the rabbits were more visible because of their close proximity to cropland. According to the study, that concentration effect explained the “locally heavy crop damage and reports of ‘hundreds of jack rabbits per square mile’ reported in Kansas during the recent drought.”¹⁰ It is the opinion of Dr. Andrew Ricketts, a biology professor at Kansas State University, that the concentration effect would have caused the coyotes to follow the prey source into the same areas. Rabbits would gather where their food supply was least affected by the drought -- the edges of farmland -- and the coyotes would have followed.¹¹ The photograph in Figure 3, taken in 1917, shows the results of rabbits and coyotes occupying similar habitat. The pile of rabbits along with four coyotes provides evidence for the predators following their prey.

¹⁰ Bronson and Tiemeier, 197.

¹¹ Dr. Andrew Ricketts, Dept. of Biology, discussion with the author, Kansas State University, Manhattan, November 4, 2016.



Figure 3: The result of a duel coyote and rabbit hunt near Lamar, Kansas. SOURCE: Kansasmemory.org.

Clearly, based on later scientific research, the increase in jack-rabbits can be connected to the drought, yet the question still remains what effects it would have had on coyotes.

When there is a dominant prey source in an environment, the predators respond accordingly. That is certainly true in the case of coyotes. Several studies have found that they shift their feeding habits in response to rabbit populations. It has been shown that in areas where jackrabbits are abundant, coyotes become selective predators as opposed to opportunistic. One study in Idaho found that when the black-tailed jackrabbit's population was at a peak, the coyote's diet was almost 50 percent jackrabbit. The same study found that when jackrabbits were less available, the diet switched to almost 50 percent cotton tails.¹² Another study on the Idaho National Engineering Laboratory reported the results of their work suggested that "the coyote is highly selective rather than opportunistic."¹³ Clearly, the

¹² James G. MacCracken and Richard M. Hansen, "Coyote Feeding Strategies in Southeastern Idaho: Optimal Foraging by an Opportunistic Predator?" *The Journal of Wildlife Management* 51, no. 2 (1987), 281-282.

¹³ Mark K Johnson and Richard M. Hansen, "Coyote Food Habits on the Idaho National Engineering Laboratory." *The Journal of Wildlife Management* 43, no. 4 (1979), 955.

jackrabbit would have been a staple food source for coyotes during the 1890s. Their numbers would have had a major impact on the coyote population during the period.

Generally, when a prey population is at a high point, the predator population increases. That holds true for the coyote and jackrabbit. In Utah, a study on jackrabbit density found that there was a positive correlation between high prey availability and coyote population change. The reason for the increase was twofold. It appears that a glut of rabbits has a positive impact on the reproductive rate (number of pups born in a year) and on the number of female coyotes that breed in a given year.¹⁴ In good environments, the study suggests that more coyotes would be present in an area. However, in drought conditions, the increase would likely be mitigated due to other environmental factors. At best it would have resulted in a short-term population bump.

The Drought and Humans

What is commonly referred to as “the drought of the 1890s” was really a series of smaller droughts within the same decade. The worst periods came during the years 1889 and 1890 then again from 1893 to 1896.¹⁵ In each of those years, the farmers suffered due to poor growing conditions even before the jackrabbits were added to the mix. From 1892 to 1893 the wheat, corn, and oat production dropped as much as 50 percent.¹⁶ Those numbers provide

¹⁴ Frank W Clark, "Influence of Jackrabbit Density on Coyote Population Change." *The Journal of Wildlife Management* 36, no. 2 (1972), 354.

¹⁵ Robert G Dunbar, "Agricultural Adjustments in Eastern Colorado in the Eighteen-Nineties." *Agricultural History* 18, no. 1 (1944), 47-49.

¹⁶ Brandon Dupont, "Panic in the Plains: Agricultural Markets and the Panic of 1893," *Cliometrica* (January 2009), 20-22.

good data points but they only tell half of the story. The other half comes from the historical record.

One summary of the dismal economic conditions was published in *The Belleville Telescope* in September of 1893. It was written that “1893 is a momentous year for Kansas – a mixture of drought, crop failures, bank failures, mercantile failures, disjuncting of domestic circles, [and] train robbers.”¹⁷ The *Western Kansas World* reported in December that many people in western counties were suffering and crop failure was “the principal cause.” The conditions were harder on those farmers who used their wheat crop to pay the debts. That left no money and no wheat to seed the crop for 1894.¹⁸ Of course, some residents of the state were unsympathetic to the western farmer’s plight. One writer in *The Kansas City Gazette* complained in June, 1893 that “we think it is high time the people were adjusting themselves to natural conditions.”¹⁹ Unfortunately, the conditions did not improve; many rural people were unable to adapt as the Gazette writer wished.

In fact, the conditions only got worse. The *Arkansas City Daily Traveler* noted in 1896 that much of Kansas had suffered during the drought years. It was written that “Crop failure has succeeded crop failure” and that “the panic has left a path behind it, strewn with the wrecks of firms and fortunes, of lives and hopes.”²⁰ The path of despair was not limited to western Kansas as noted by *The Kansas Farmer*.²¹ Interesting evidence comes from an article about the effect on local entertainment. In those years, the traveling circus became a mainstay of

¹⁷ *The Belleville Telescope*, September 29, 1893.

¹⁸ Reported by the *Western Kansas World* on December 02, 1893.

¹⁹ Reported in *The Kansas City Gazette* on June 29, 1893.

²⁰ *Arkansas City Daily Traveler*, February 04, 1896.

²¹ *Kansas Farmer*, December 10, 1896.

entertainment. Due to the crop failure and resulting economic hardship, the circus apparently skipped many communities in Kansas. In doing so, the circus took with it an important way for people to forget their struggles. The *Concordia Blade* went so far as to describe the circus leaving as “one of the saddest features of a crop failure” and a resident said, “we can stand crop failures cheerfully, but when the years roll by, bringing us no circus, then life loses its charm and we are prone to complain.”²² Along with the misery of drought and losing the circus, residents also had to contend with the rabbit plagues.

One such incident was reported in 1891 from Belle Plaine in Sumner County. The local paper said that the rabbits “destroyed patches [of crops] from a quarter to a half acre.” A local farmer answered a question about shooting them with the comment, “It would take a barrel of ammunition to make even a start.”²³ Earlier that year it was reported in Lane County that the “fruit and forest trees suffered badly from jackrabbits which are very numerous.”²⁴ One writer described in detail the damage jack rabbits could do: “The jack-rabbits appear in large numbers and begin to nibble on the bark of the young fruit trees and the vines. Whole orchards are destroyed by them.”²⁵ Figure 4 provides evidence for the effort people spent to protect the vegetation from rabbits. It shows a long line of people driving rabbits towards their death during the 1930s. The effort and methods were likely similar during the 1890s.

²² *The Concordia Blade*, April 10, 1896.

²³ Reported in the *Belle Plaine News*, June 5, 1891.

²⁴ Reported in the *Kansas Farmer*, April 8, 1891.

²⁵ *The Kansas City Gazette*, March 04, 1895.



Figure 4: A long line of people driving many rabbits into a specific point. SOURCE: Kansasmemory.org.

There are many more accounts of the damage the rabbits caused. Most of it appeared to have hurt the crops and trees. A notable exception, however, comes from the Dust Bowl years, the so-called Dirty Thirties. This report suggests the activity of jack rabbits in past drought decades.

In 1933, it was reported in the *New York Times* that so-called “war horse” jack rabbits were an epidemic in western Kansas. These rabbits were described as being “the size of small dogs” and they apparently had the ability to tackle coyotes. Farmers in Dodge City observed that the rabbits “developed... a taste for automobile tires and fresh paint” as a reliable source of food.²⁶ Even though the article is focused on cars, which obviously were not around in the 1890s, it makes the effects of a large population of rabbits starved of their natural foods easier to understand.

²⁶ Special Correspondent, the *New York Times*: “War horse jack rabbits eat Kansas auto tires,” *New York Times*, June 25, 1933.

The economic impact of the drought and jackrabbits gave rise to some entrepreneurs using the coyote bounty as a source of income. One sad example occurred in Platte County, Nebraska in 1899. In March of that year, J. N. Jenkins had a pet coyote disappear. He had raised it from birth and kept it chained in his front yard. The night it disappeared someone had dragged the coyote across county lines to Kearney County. The next morning, Jenkins found his pet decapitated. The animal had been stolen and killed for the three dollar bounty in the next county.²⁷ This horrific story illustrates how far some people were willing to go for the quick buck the bounty system represented. Another notable incident occurred near Lawrence, Kansas.

It was reported in the *Lawrence Daily Journal* in May of 1892 that one George Carr had discovered nine coyote pups near Nine Mile creek. He received 27 dollars for the scalps. Carr's story was very common but commentary from the article makes it noteworthy. The author first pointed out that the area in question was a "fertile and productive place for wolf raising" and later suggested that "no business in the livestock roll will pay better."²⁸ A year later the *Daily Journal* still seemed to be pro-coyote raising. Almost exactly a year after Carr's story, the paper published another article that once again suggested that raising coyotes paid well. The article from 1893 even chastised coyote hunters for killing the adult females. According to the writer, it was wrong to kill females because "no one should kill the hen that lays the golden egg. If the business is to be continued it is therefore a wrong notion to kill the old ones if they expect to drive business with profit and to continue business at the old stand."²⁹ To put Carr's 27 dollars

²⁷ "Fate of Jenkin's Coyote." *The Kearny Daily Hub*, March 10, 1899.

²⁸ "Pony Creek." *Lawrence Daily Journal*, May 31, 1892.

²⁹ "Pony Creek." *Lawrence Daily Journal*, May 16, 1893.

in perspective, one dollar in the 1890s had roughly the same purchasing power as 24 dollars in 2016.³⁰ So his 27 dollars would be worth about 660 dollars today. Given that information, the *Daily Journal* was almost certainly correct to argue that raising coyotes would have been a very profitable industry. Figure 5 illustrates how successful that “golden egg” could be.



Figure 5: 17 men and 3 children killed about 50 coyotes in one hunt. The average would have been about three coyotes per person and a bounty payment of three dollars each. SOURCE: Kansasmemory.org.

There were several other newspapers that mentioned raising those animals as a cottage industry.

Many of the articles addressed local rumors; however, it seems likely that raising coyotes occurred often enough that the industry became public knowledge. An article in the *Atchison Daily Patriot* in 1888 simply stated that “the wolf raising industry in Western Kansas

³⁰ Based on currency value in 1913 found in the United States Bureau of Labor Statistics, http://www.bls.gov/data/inflation_calculator.htm (accessed 12/6/2016).

appears to be a good industry.” The same article mentioned that one farmer had four females that collectively had raised 28 cubs. The farmer received a bounty of 84 dollars for their scalps.³¹ Another example comes from the Lawrence paper which reported that “everyone on Sarcoxie Heights know that wolf raising pays better than any other livestock raising, as there is no money invested for a start.”³² Yet another mention was found in the *Concordia Empire*. The paper noted that the industry seemed to be thriving in Dickinson County based on 128 dollars in scalps turned in during one commissioners meeting.³³ Still, more evidence was found in the *Burlington Republican* which speculated whether or not Jim Baldwin, a local farmer, was raising coyotes as a source of income. The speculation was based solely on the appearance of three coyotes in the immediate area.³⁴ More reports show that people in Clay Center, Clay County, raised coyotes in abandoned areas of the town. The practice was known to be profitable.³⁵ With the exploitation established, the question is how did these Kansas residents come up with the idea?

One explanation was found in the *Fort Scott Daily Monitor*. It was reported that sheep ranchers in Oregon were debating raising coyotes instead. The argument was simple: a single sheep was only worth about two dollars compared to six for a coyote scalp. Plus, a single female sheep would only give birth to only one or two young, but a coyote would birth as many as seven.³⁶ Stories like that would have spread throughout Kansas either by paper or word of

³¹ Reported in the *Atchison Daily Patriot*, May 29, 1888.

³² “Upper Mud Creek.” *Lawrence Daily Journal*, May 18, 1893.

³³ Reported in the *Concordia Empire* August 5, 1897.

³⁴ Reported in the *Burlington Republican*, November 25, 1892.

³⁵ Reported in the *Concordia Empire*, July 24, 1890.

³⁶ Reported in the *Fort Scott Daily Monitor*, November 16, 1894

mouth and may have been the inspiration for people raising coyotes. Another possibility is a report like one in 1893 of people in the eastern U.S. raising crows for a ten cent bounty.³⁷ An important final step to understanding the economics of coyote bounties is to examine Riley and Clay Counties as concrete examples of the shift in bounty payments throughout the decade.

Data from the 1890s will be used for Riley and the 1930s for Clay.³⁸ In both cases, the same pattern emerged. In Riley County the years between 1892 and 1894 had significantly more payments compared to 1895 through 1899. In the first three years, the average payout was \$257 compared to an average of \$125 after 1895. The largest amount was \$274 in 1883 and the lowest was \$86 in 1899.³⁹ People in the years between 1892 and 1895 were the most affected by drought and the Panic of 1893. The numbers show that in those years, rural Kansans turned to the bounty as a source of income. A similar trend is seen in the 1930s in Clay County. The highest paying year for coyote bounties was 1936 with \$185 and the lowest was 1933 with \$7.⁴⁰ While the sample used here is only two counties, this data suggests that during severe economic downturns, people turn to alternative sources of income, in this case, coyote scalps. The historic trend of bounties increasing during economic depressions, when combined with other factors (such as drought and farm loss), suggests a bleak picture: some Kansas residents did not have many options left.

For many people in Kansas, the 1890s was a decade of drought, economic depression, and despair. The jackrabbits appeared with the drought closely followed by the coyotes, and

³⁷ Reported in *The Times*, April 13, 1893.

³⁸ County Commissioner Records for Riley County are available and include bounty system data; Clay County Commissioner Records in the 1890s do not include bounty data; however, the records for the 1930s do include it.

³⁹ Riley County Commissioner Records, 1882-1899.

⁴⁰ Clay County Commissioner Records from 1933 and 1936.

exploitation of the bounty followed after that. While the soil dried up and the jobs went elsewhere, the coyote industry remained strong. Whether it was leaving the females alive in the wild or raising them on farms, people took advantage of the system. In the 21st century, the story of the black market bounties is one of how environmental and economic factors shaped rural society, but for people who lived through it, it was simply a story of survival.

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