

UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

Canids and Humans in Oklahoma:

How Rabies Shaped the Interactions Between Humans, Dogs, and Coyotes in Oklahoma between  
1870 and 1920

A THESIS

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

Master of Arts in History of Science, Technology, and Medicine

By

KENDALL GEHRKE

Norman, Oklahoma

2021

Canids and Humans in Oklahoma:  
How Rabies Shaped the Interactions Between Humans, Dogs, and Coyotes in Oklahoma between  
1870 and 1920

A THESIS APPROVED FOR THE  
DEPARTMENT OF THE HISTORY OF SCIENCE

BY THE COMMITTEE CONSISTING OF

Dr. Aparna Nair, Chair

Dr. Kathleen Crowther

Dr. Peter Soppelsa

© Copyright by Kendall Gehrke 2021

All Rights Reserved.

## Table of Contents

Abstract	v
Introduction	1
Literature Review	3
Medical History and Rabies	13
False Hydrophobia and Fear	19
Rabies as a Public Spectacle	26
The Boundaries between Humans, Dogs, and Coyotes	31
Conclusion	38
Bibliography	40
Primary Sources	40
Secondary Sources	44

## **Abstract**

Focusing on the period between 1870 and 1920 in Oklahoma, this thesis examines the ways in which rabies and hydrophobia shaped the interactions between humans, dogs, and coyotes, primarily by examining the ways in which these relationships developed among settlers. This paper begins with a general medical history of rabies during this time period before moving to a discussion of false hydrophobia and the debate as to whether or not rabies was a disease. This then leads to the issue of the ways in which rabies manifested as a public spectacle, spreading concerns about the illness. Lastly, the paper discusses how the economic implications of rabies were intertwined with broader understandings of coyotes, rabies, and the success of Oklahoma as a settler state.

This paper involves primarily discussions of medical history and animal history. Animal histories frequently struggle to find traces of animals in archives, and the topic of rabies is one where they have clearly left an impression. Medical histories have examined rabies in the past, although usually in terms of a personal tragedy but an economic insignificance. However, both historiographies have ignored the ways in which settlers in Indian Territory and then Oklahoma, as a relatively rural area and an area that was colonized later than the rest of the United States, would have a very different relationship with dogs, coyotes, and rabies.

## Introduction

In 1905, Theodore Roosevelt wrote a piece for *Scribner's Magazine* that described hunting for wolves and coyotes in Oklahoma, providing a clear window into the mindset of white American settlers. Amidst his recollections of pitching his camp under wide open skies and the “bravery” of both man and dog in the chase, he mentions a particularly harrowing incident where

...a mad coyote coming into camp sprang on a sleeping man who was rolled in his bedding and bit and worried the bedding in the effort to get at him. Two other men hastened to his rescue, and the coyote first attacked them and then suddenly sprang aside and again worried the bedding, by which time one of them was able to get in a shot and killed it. All coyotes, like big wolves, die silently and fight to the last.<sup>1</sup>

The publication of Roosevelt's account in a national popular magazine highlighted the beauty and ferocity of the Oklahoman wilderness to other American readers, but can also be seen as one among the many narratives showcasing man's ability to “triumph” over nature, despite the odds. The fate of the man who was attacked by the coyote is unclear, but for readers, Roosevelt's prose and the dramatic narration of the mad coyote would evoke powerful images: of the slavering jaws and diseased bite of the wild animal, of the unpredictability of the “West,” of the juxtaposition of wild and domesticated canids, and most striking perhaps, the fear of hydrophobia, a horrifying, painful, and certain death. At the time that Roosevelt was writing, the understandings of rabies in medicine, public health and in popular narratives were in flux. Pasteur's invention of the rabies vaccine in 1885 meant that the bite of a rabid animal was not guaranteed to kill, although once infection set in in earnest, the end result, without question, was death. Rabies shaped the way that humans perceived its vectors, most obvious in the way that the

---

<sup>1</sup> Theodore Roosevelt. “A Wolf Hunt in Oklahoma.” *Scribner's Magazine*. November, 1905. <https://digitalprairie.ok.gov/digital/collection/culture/id/1388/518>

disease and the fear that surrounded it influenced the ways in which people viewed and attempted to control both dogs and coyotes.

This thesis focuses on the relationships between humans, dogs, and coyotes, and the role that rabies played in shaping these relationships. This analysis will move from an examination of the history of the human reactions to rabies and hydrophobia during this time to the surrounding social contexts to, even more broadly, the environmental context surrounding all of the previous topics. As white settlers colonized Oklahoma and integrated it into the United States around the turn of the 20th century, their dogs worked alongside them to shape the landscape into what they saw as the productive ideal. Any forces that opposed this colonial project, be they human or animal, were met with hostility and force, as seen in how these settlers and their dogs worked to kill coyotes on a large scale, because coyotes were perceived as menaces to farms and remnants of a hostile, unproductive wilderness. Rabies and hydrophobia further complicated this relationship, as the disease appeared to blur the lines between “productive,” domesticated canids - dogs - and “unproductive,” wild canids - coyotes - that settlers were trying to impose. Rabies thus posed a threat to the imperialist project in and of itself, and amplified the threat posed by other organisms. In response, settlers utilized various technologies of control and strengthened the medical infrastructure needed to prevent what was a literally and metaphorically horrifying demise.<sup>2</sup>

---

<sup>2</sup> Unfortunately, this paper was written during the COVID-19 pandemic, and as a result there were a variety of research limitations that I faced. These gaps are most noticeable when it comes to looking at indigenous perspectives on rabies, as most relevant indigenous have remained closed in order to prevent the spread of COVID-19.

## Literature Review

As this thesis discusses the history of Indian Territory and Oklahoma, it should not be surprising that an analysis of the relevant literature includes a discussion of the sources on the history of the state itself. In order to do so, though, one must first look at histories of the American West more broadly. Many of these histories focus on the narrative of “taming” or “conquering” the American frontier - this framing of American history tends to emphasize the roles of white soldiers and settlers as “brave” heroes as they “civilized” a harsh landscape. This trend is most commonly seen in sources printed earlier in the 20th century, but echoes of this narrative can still be found today in military histories. That does not mean that more domestic histories focusing on daily life are inherently free of these connotations; for example, Mary Jones’ *Daily Life on the Nineteenth Century American Frontier* looks at Turner’s frontier thesis and expands upon the idea of different frontiers for different professions, as well as the various reasons that people headed to the frontier.<sup>3</sup> Of course, not all scholarship follows this path. Texts such as *An Oklahoma I Had Never Seen Before: Alternative Views of Oklahoma History* and *Alternative Oklahoma: Contrarian Views of the Sooner State*, both essay collections edited by Davis Joyce, challenge many of the more traditional hegemonic narratives surrounding the history of the state, such as the idea that the colonial transformation of the land was unquestionably a step towards progress.

Also key to any thesis discussing the history of disease and medicine, specifically with respect to rabies, are medical histories. There is no shortage of literature covering this broader medical framework relevant to this time period, such as *The Western Medical Tradition: 1800 to*

---

<sup>3</sup> Mary E. Jones. *Daily Life on the Nineteenth Century American Frontier*. The Greenwood Press "Daily Life through History" Series. Westport, Conn.: Greenwood Press, 1998. 8.



2000 and *Science and the Practice of Medicine in the Nineteenth Century* although not all of it is immediately relevant to this paper.<sup>4</sup> Work on germ theory is one of the more relevant areas of focus for this paper, especially as these efforts tie into the ways in which humans perceived animals as potential threats. Books like *Germ Theory: Medical Pioneers in Infectious Diseases* chronicle the advances in understanding the role of bacteria and other germs in labs, while other books, such as Bert Hansen's *Picturing Medical Progress* focus more on the public reception to these ideas, albeit in primarily urban areas.<sup>5</sup> Pasteur's work is especially significant as his progress in germ theory contributed to the progress that he made in developing a vaccine for rabies. In order to examine the ways in which rabies might be approached outside of a strict Western biomedical framework during this time, it is helpful to look at some of the books discussing folk medicine on the American frontier. These topics tend to be covered more frequently in articles than in books, such as Watson Arnold's "Home Remedies, Folk Medicine, and Mad Stones" and Robert Trotter's "Folk medicine in the Southwest: Myths and medical facts." Both these articles and a significant portion of the related literature focus more on the aspects of frontier medicine that more heavily deviate from Western biomedicine.

As important as it is to examine the medical framings that settlers used to interact with the frontier, looking at the animals that experienced and altered this landscape alongside them can be equally rewarding, a framing found most frequently in animal histories. Animal histories seek to examine the role that animals have played in human history, and how the presence and contributions of animals have influenced and been influenced by the ways that humanity has changed with time. To prove the value of animal history, scholars frequently point out the

---

<sup>4</sup> William F. Bynum, Anne Hardy, Stephen Jacyna, Christopher Lawrence, and E. M. Tansey. *The Western Medical Tradition: 1800-2000*. Cambridge University Press, 2006.

<sup>5</sup> Bert Hansen, *Picturing medical progress from Pasteur to polio: A history of mass media images and popular attitudes in America*. Rutgers University Press, 2009.

significance of animals throughout history and how this history has been traditionally subsumed into larger historical analysis, if thought of at all. In *The Great Cat and Dog Massacre*, Hilda Kean challenges the British perception of their own actions in World War I as firmly good and just, ignoring the ways in which dogs and cats were sacrificed in the name of the greater good, even though their deaths were ultimately pointless. Kean argues that anthropocentric histories “subsuming” narratives of animal experiences and functions - in her words, this “incorporation can lead to oblivion.”<sup>6</sup> Rather than contenting themselves with this subsumption, animal historians work to pick apart these narratives, to attempt to restore agency to nonhuman historical subjects, and to see if these newly revealed threads can give scholars better insight into the nuance of the past.

Dogs are a particularly interesting subject in animal histories, in part due to how much of human history is intertwined with theirs. Marion Schwartz writes that “Not only are dogs a product of culture, but they participate in the cultures of humans... Because of their ubiquity across cultural boundaries, dogs have been so commonplace that their history has seemed to warrant little consideration. And yet for the past twelve thousand years dogs have played an integral part in human lives.”<sup>7</sup> To an extent, dogs can be and represent a common factor across many human cultures, and the differences in the ways that they are treated and behave provide some insight into individual cultural contexts. They can serve not only as points of comparison, but also as points of contact. Aaron Skabelund argues that “Dogs traverse environmental boundaries and have long crisscrossed international and domestic political and cultural borders, as well as various divisions and demarcations of culture... Canines, as assistants to people in

---

<sup>6</sup> Hilda Kean. *The Great Dog and Cat Massacre: The Real Story of World War Two's Unknown Tragedy*. Chicago: The University of Chicago Press, 2017, 9

<sup>7</sup> Marion Schwartz. *A History of Dogs in the Early Americas*. New Haven: Yale University Press, 1998, 2.

gaining and maintaining power, often serve as intermediaries between opposing human groups both at home and in foreign lands.”<sup>8</sup> Dogs act as points of contact between both colonizing forces and colonized groups and within the different factions of settlers themselves, an idea that plays a significant role in the creation of this paper.

However, with this contact comes the frequent reality of violence and the question of whether animals are capable of violence to the same extent that humans are, and whether these animals can be held responsible for the violence that they enact in order to survive within human societies. At times, this violence is more symbolic - for example, as discussed in *The Invention of the Modern Dog*, the ways in which the Victorian idealization of dog breeding meshed with contemporary scientific theories of racial differences, as discussed in *The Invention of the Modern Dog*. In *Empire of Dogs*, Skabelund focuses extensively on the role that dogs played in Japanese imperialism as a symbol in addition to as actors capable of both physical and ecological harm. That does not mean that this physical harm should be downplayed in any way. As Pearson discusses in reference to dogs as actors in World War I in “Dogs, History, and Agency,” “The dogs were not purposeless objects that were simply manipulated by human intelligence. Instead they were agents who were unwittingly drawn into the conflict, but whose abilities and characteristics allowed them to perform varied and skilled work in conjunction with human agents.”<sup>9</sup> Dogs have been bred for their physical stamina, speed, tracking ability, and destructive force, and they often eagerly use those abilities in circumstances where human observers see violence both large, such as in dog attacks and the threat thereof during military campaigns, and small, such as using dogs to hunt scarce food sources. To that end, the level of agency possessed

---

<sup>8</sup> Aaron Skabelund. *Empire of Dogs: Canines, Japan, and the Making of the Modern Imperial World*. Ithaca: Cornell University Press, 2019. 7.

<sup>9</sup> Chris Pearson. "Dogs, history, and agency." *History and Theory* 52, no. 4 (2013): 128-145, 129.

by dogs is not inherently equal, much like with humans; some dogs, due to intelligence, physical ability, or even role in human society, would be more capable of shaping the situation than others, and the agency of dogs in general pales in comparison to that of most humans.<sup>10</sup> While many authors have done excellent work on the symbolic aspect of dogs, it is crucial not to “overlook how dogs are physical, living, and capable creatures.”<sup>11</sup> Watching a farm dog chase away a coyote might evoke certain symbols or themes, but the dog barking at the heels of the other canid is also acting of its own volition. As Haraway wrote in *The Companion Species Manifesto*, “Dogs are not an alibi for other themes... Dogs are not surrogates for theory; they are not here just to think with. They are here to live with.”<sup>12</sup>

No matter how eager a historian is to begin focusing more on animal histories, though, the issue of what form of records to analyze becomes apparent. After all, a vast majority of the available resources, especially when archival access is limited, are created and curated by and for human audiences. Even the vocalizations and body language of animals may be frequently misinterpreted, although “the corporal presence of animals, whether recorded on film or stuffed, makes animals less than completely malleable to human manipulation.”<sup>13</sup> More conventional and artistic forms of media along with textual representations might have little to no connection to the living, breathing canids of the time that have not been filtered through a thoroughly human lens, but traces of animal agency can still be found amidst the copious metaphors and anthropomorphizations. While dogs have not left behind their own diaries and coyotes have no archival records of their own, echoes of their presence in the lives of humans can be found in

---

<sup>10</sup> Pearson. "Dogs, history, and agency." 135.

<sup>11</sup> Ibid, 136

<sup>12</sup> Donna Jeanne Haraway. *The companion species manifesto: Dogs, people, and significant otherness*. Chicago: Prickly Paradigm Press, 2003, 5

<sup>13</sup> Skabelund. *Empire of Dogs*, 15

what archival material remains. After all historians “can never gain unmediated access to the inner workings of any agent’s mind, human or otherwise.”<sup>14</sup> Finding the traces of animal agency may be a difficult task, but it is crucial when parsing the nuances of historical situations, just as finding the traces of various human agents is.

One area in which dogs certainly left a marked archival impression is in the context of rabies and rabid dog attacks. Rabies was not the only disease that domesticated animals could spread to humans during the nineteenth century, and the economic impact of the disease itself was generally rather limited on a national level, especially when comparing the true number of rabies transmissions to livestock with what other fatal cases of disease could arise.<sup>15</sup> The larger threat came in the form of what rabies cases amongst dogs could represent, as Harriet Ritvo explains: “The relatively small number of afflicted animals and their minimal economic importance paradoxically enhanced the symbolic significance of a rabies outbreak, the limited influence of rabies on concrete human interests removed certain constraints on exegesis.”<sup>16</sup> The death caused by rabies is horrifying, but the number of infected and dying does not rise as quickly as might happen during more virulent epidemics. Rabies could be, and at certain points was, a threat to the health of the public, but at the same time, preventive steps could be taken to corral any potential outbreaks fairly quickly, such as isolating and euthanizing potentially infected animals. The number of infected and dying did not rise as quickly as with more virulent epidemics, such as cholera, leaving humans to watch the violent and painful deaths of the humans and animals in their community and wait to see any signs of illness in any of the potentially exposed.

---

<sup>14</sup> Pearson. “Dogs, history, and agency,” 138.

<sup>15</sup> Harriet Ritvo. *The animal estate: The English and other creatures in the Victorian age*. Cambridge: Harvard University Press, 1987, 167.

<sup>16</sup> *Ibid*, 170.

However relatively scarce rabies was, though, the intense proximity of the contacts between dogs and humans proved to be an ideal place for disease transmission. Dogs that hunted or protected against wildlife would frequently come into contact with potentially ill animals, and the very closeness and affection of a pet allows for disease transmission, with behavior such as licking becoming dangerous if the dog's saliva is contaminated by the virus. This situation is exacerbated by one of the earliest clinical signs of a rabies infection being a reversal in behavior in dogs, with previously nervous dogs becoming far more affectionate even as previously sociable dogs becoming more irritable and skittish.<sup>17</sup> To an extent, the reversals in behavior and loss of control associated with the progression of rabies is a key factor in why the virus holds such a visible spot in the history of disease despite a relatively minuscule number of infections.<sup>18</sup> As the disease progresses, the infected host loses control over their actions, either becoming paralyzed or incredibly aggressive. The more aggressive form will "eventually turn the generally tractable dog into an uncontrollable whirlwind that will attempt to bite anything that moves, often inflicting severe damage to its own teeth and oral tissues... quite shocking to humans who are generally unaccustomed to witnessing savage canine behavior."<sup>19</sup> Once infected, humans were also by no means exempt from exhibiting bizarre behavior once symptomatic. As Swabe writes, "A rabid person breaches the gap between humans and other animals, thus opening the floodgates to fear, fantasy, and folklore. In this way, rabies has been blown up out of all proportion, for it has appealed to people's imaginations and inflamed their sense of danger and disgust."<sup>20</sup>

---

<sup>17</sup> J Swabe, "Folklore, Perceptions, Science and Rabies Prevention and Control." in *Historical Perspectives on rabies in Europe and the Mediterranean Basin*. Paris: OIE, 2004. 312-322, 320.

<sup>18</sup> *Ibid*, 315.

<sup>19</sup> *Ibid*.

<sup>20</sup> *Ibid*, 312.

The brutal, animalistic behavior associated with rabies infection would be shocking and horrifying to onlookers, both in a very visceral, literal sense and potentially a more metaphorical way. A previously friendly animal, and loyal working companion potentially lethally attack its owner or kill valuable livestock. The reversal of a previously stable yet fundamentally asymmetrical power dynamic in such a stark way echoes fears of the collapse of other hierarchical structures, such as that between parent and child, rich and poor, government and subjects.<sup>21</sup> Jessica Wang explains in *Mad Dogs and Other New Yorkers* that diseases are “simultaneously the product of biological agents or circumstances independent of human will... and yet profoundly social in multiple guises,”<sup>22</sup> including being a source for individual experiences with illness, an object of human study, a cause of broader fears and disruptions, and a cause for institutionalized interventions.<sup>23</sup> A history of rabies does involve examining the individual experiences of disease, but it also involves examining the surrounding social responses and understandings of the illness.

Given the important role of social context when discussing the history of medicine and disease, it is worth taking a moment to discuss the terminology surrounding rabies. To an extent, the modern understanding of rabies can be somewhat detrimental to a thorough reading of historical sources. As Neil Pemberton and Michael Worboys write in their introduction to *Mad Dogs and Englishmen: Rabies in Britain, 1830-2000*, “What is rabies? Well, we would prefer not to tell you at this point. We would rather you learn what rabies was and how understandings changed with our historical actors ... it is essential that we do not regard past ideas and actions

---

<sup>21</sup> Skabelund, *Empire of Dogs*, 7.

<sup>22</sup> Jessica Wang, *Mad dogs and other New Yorkers: rabies: medicine, and society in an American metropolis, 1840-1920*. Baltimore: Johns Hopkins University Press 2019, 3.

<sup>23</sup> Wang, *Mad Dogs and Other New Yorkers*, 3.

that are different to ours as simply wrong or foolish.”<sup>24</sup> What may have seemed like a logical conclusion to some people, such as some arguing that rabies and hydrophobia did not exist, could reasonably seem absurd today, in light of various discoveries, such as exactly what virus causes rabies. One text that exemplifies the framing of rabies in a context focused more on social and animal histories than frequently seen in pure histories of medicine is *Mad Dogs and Other New Yorkers*, written by Jessica Wang. The author examines the cultural fears and fervor surrounding rabies in New York City between roughly 1840 and 1910, and uses the realities underscored by rabies and rabies prevention to illustrate the way that dogs fit into life in New York near the turn of the 20th century. As she says, “In this study, rabies functions as both lens and subject matter, as part of a dialectic between disease and society.”<sup>25</sup> Rabies is the key pathogen being discussed in this book, but at the same time, it is not purely a history of the disease. Wang’s analysis focuses on not only viewing the dog as simply a potential vector, but also as part of the hum of city life. The technologies used to halt the spread of rabies, from Pasteur’s testing on dogs to advance pharmacology to the changes in infrastructure necessary to start a large-scale dog-catching operation, further highlight how intensely nonhuman actors factor into how humans attempted to control and eradicate the disease.<sup>26</sup>

It is also worth noting a potential point of confusion with terminology throughout this paper, namely the use of both rabies and hydrophobia in a significant amount of primary source material. In the nineteenth century and to a lesser extent the beginning of the twentieth, rabies was used to describe a form of “madness” in animals whose bites could infect others to be similarly dangerous, while hydrophobia was the condition that manifested as a result in humans.

---

<sup>24</sup> Neil Pemberton and Michael Worboys. *Mad Dogs and Englishmen: Rabies in Britain, 1830-2000*. New York: Palgrave Macmillan, 2007.

<sup>25</sup> Wang, *Mad Dogs and Other New Yorkers*, 6.

<sup>26</sup> *Ibid*, 10.



However, this term was frequently used to “indicate the suffering victim, regardless of species, as opposed to the mad, violent, salivating animal perpetrator of the disease.”<sup>27</sup> Horses, cattle, and livestock were at times referred to as hydrophobic, as well as more sympathetic dogs at times. Rabies was frequently seen as the more physical, aggressive disease with hydrophobia being a more mental affliction.<sup>28</sup> The boundaries between what hydrophobia and rabies were could be quite thin at times, especially as medical research proved that the illnesses came from the same pathogen.

---

<sup>27</sup> Ibid, 4.

<sup>28</sup> Pemberton and Worboys. *Mad Dogs and Englishmen*, 3.

## Medical History and Rabies

Rabies has been a looming threat for humans and their animals for an incredibly long time, but Western medicine had little in the way of stopping the disease prior to Pasteur's discovery of the antirabies vaccine. The connection between rabies in animals and rabies infection in humans was proved by an experiment by Georg Gottfried Zinke wherein he demonstrated that dog saliva could transmit rabies.<sup>29</sup> However, prior to 1880, hydrophobia was a looming threat for which Western biomedicine had no real response, leaving people in Oklahoma to turn to other solutions, namely the mad stone. Never sold and only ever given as a gift, these rocks would be placed on a bite wound to draw out the poison and then placed into milk to draw the poison out of the rock, discoloring the milk in the process. This process was then repeated until the milk stopped discoloring, the indicator that all of the poison was removed from the wound.<sup>30</sup> Mad stones therefore were intended to work as a form of sympathetic healing or cure. Beyond this, there was little to do but treat the wound and wait to see if symptoms developed.

In the early 1880s, the medical developments that would shift this understanding were taking place across the world. In his laboratory in Paris, Pasteur was working on a vaccine that would shift the relationship between rabies and humanity. He first changed the properties of the virus by transmitting it to and from various mammals, especially dogs and rabbits. The implications of these efforts were fully understood on July 6, 1885, when Pasteur used his treatment to prevent a nine year old boy, Joseph Meister, from becoming rabid after being bitten multiple times by a rabid dog.<sup>31</sup> This treatment quickly became the accepted method of

---

<sup>29</sup> David Knipe, *Fields Virology*. 5th ed. Lippincott Williams & Wilkins, 2007, 1018

<sup>30</sup> Watson C. Arnold, "Home Remedies, Folk Medicine, and Mad Stones." *Southwestern Historical Quarterly*. 117 no. 2 (2013): 132-142. 141

<sup>31</sup> Knipe, *Fields Virology*, 1018.

preventing a full case of rabies, even though it could at times cause severe allergic reactions and it was not as effective in cases of bites on the head and neck and especially severe bites.<sup>32</sup>

Nevertheless, the standard treatment for potentially rabid bites quickly became:

In the treatment, if the wound is in parts at all fleshy, the flesh wound should be freely cut out immediately or made to bleed very freely, and the part cupped, or thoroughly sucked by the mouth if the mouth is healthy. If immediate the wound may be cauterized with pure carbolic acid or by hot iron. Turpentine is of some value. Hot dry air of 200 to 4000 degrees is especially good, but the great aim should be to reach some place where the Pasteur treatment may be given and the case carefully watched.<sup>33</sup>

There was still the potential for the treatment to be ineffective, but this was a far greater amount of hope than biomedicine had previously been able to provide.

One key issue still remained for widespread use of this vaccine, namely accessibility.

There was the matter of being able to physically access the vaccine in time - the cost of reaching a place that would administer the treatment, much less the physical infrastructure associated with getting there, could prevent people from being properly protected. Moreover, the cost of the treatment itself could pose an issue, as well as the problem that time spent reaching and being administered the vaccine was time that could not be spent working. As a result, the state of Texas established the State Pasteur Institute which provided closer access than places like Chicago or New York. Moreover, patients paid on a sliding scale for treatment, with the cost being anywhere from nothing to \$150, depending on the circumstances, rather than the \$200 expected in Chicago, even if patients still faced the cost of lost labor. While this was outside of Oklahoma, the institute advertised heavily in Oklahoma, proclaiming that, "A dog bite is by no means a sentence of death. The proportion of dog bites that produce hydrophobia to those that do not is so small that the public would not believe the figures if they were given. Even the bites of dogs that

---

<sup>32</sup> Knipe, *Fields Virology*, 1018.

<sup>33</sup> Hyde, A. W. "Animal Poisons." *Oklahoma Farmer*. (Guthrie, OK) June 15, 1910.

are actually suffering from rabies need be no more serious than any slight wound, providing proper treatment be followed.”<sup>34</sup> This advertisement was then followed by a description of the wonders of the institute, as well as another reassurance that no one needed to be terrified of hydrophobia anymore if proper precautions were taken.

As transformative as the vaccine was, it still was a prophylactic rather than a cure. In the words of the Oklahoma State Board of Health, “There is no cure for actual rabies, except the final cure for all human ills.”<sup>35</sup> If the rabies infection moved too quickly or the serum was administered too late, the results could still be fatal. For example, in September, 1912, *The Guymon Herald* reported on a woman who had died from hydrophobia despite access to the serum, even as others bitten by the same dog lived.<sup>36</sup> To combat tragedies such as this, public health officials and newspapers alike would repeatedly remind readers that prompt action was crucial to avoiding the manifestation of rabies symptoms. The *Oklahoma Farmer* warned on June 15, 1910, “That poison of rabies does its work quickly is sure, yes mighty quick. To arrest the disease without serum inoculation action must be immediate.”<sup>37</sup> Giving more specifics, *The Guymon Democrat* reported that in suspected cases of rabies, “Treatment should not be delayed more than four days. Three persons in Oklahoma died of hydrophobia last year because preventive measures were not taken until three weeks after they had been bitten.”<sup>38</sup> The newspaper went on to caution against using madstones instead of seeking biomedical treatment. The effort of the state and various medical professionals to make the rabies vaccine as accessible as possible was meaningless unless people sought prompt medical treatment.

---

<sup>34</sup> Wheeler, William L. “If a Dog Bite You.” *Checotah Enquirer* July 31, 1908.

<sup>35</sup> Oklahoma State Department of Health. *Annual report of the Oklahoma State Board of Health, 1917*. Commissioner of Public Health, 1917. <https://digitalprairie.ok.gov/digital/collection/okresources/id/17629>, 31.

<sup>36</sup> “Pasteur Treatment for Rabies Now Given in Wichita.” *Guymon Herald* (Guymon, OK) September 5, 1912.

<sup>37</sup> Hyde, A. W. “Animal Poisons.” *Oklahoma Farmer*. (Guthrie, OK) June 15, 1910.

<sup>38</sup> “Rabies in Oklahoma.” *Guymon Democrat* (Guymon, OK) September 2, 1915.

As a result, other methods were used to control rabies on a larger scale, which generally came in the form of controlling dogs, even alongside the use of Pasteur's treatment. With the bacteriological breakthroughs going on at the time, non-human animals were increasingly seen as reservoirs and potentially transmitters of disease -- germs that they carried could then be spread to humans. As a result, controlling these animals was a matter of significant epidemiological significance.<sup>39</sup> In the case of rabies, fully controlling any potential vectors was made more difficult by the wide variety of potential mammalian hosts, the majority of which lived beyond human control.<sup>40</sup> In the case of suspected rabies attacks, people would watch their animals for signs of rabies and kill them when the threat of disease seemed credible. For example, when a mad dog bit other dogs, horses, and cattle, the other animals were monitored to see if they developed rabies. When several horses showed signs, two of them were shot by their owner, and the report stated that the other animals would most likely be killed.<sup>41</sup> Even if humans were treated for rabies, if an animal survived the attack of another, rabid animal, more violence could quickly ensue.

Another, less lethal, manner of preventing the spread of rabies was to have widespread muzzle ordinances; after all, it is harder to transmit infected saliva when a dog is unable to bite. This was sometimes applied in addition to euthanizing even potentially infected dogs, as if dogs were not completely supervised by a human, they could have gotten infected outside of their awareness. In one instance, a dog biting other dogs was ordered killed in addition to the several dogs it had attacked, while the rest of the dogs in town were preemptively ordered to be muzzled

---

<sup>39</sup> Lynteris, Christos, ed. *Framing animals as epidemic villains: Histories of non-human disease vectors*. Springer Nature, 2019, 3.

<sup>40</sup> Deborah Nadal, "To Kill or Not to Kill? Negotiating Life, Death, and One Health in the Context of Dog-Mediated Rabies Control in Colonial and Independent India" in *Framing animals as epidemic villains: Histories of non-human disease vectors*. Springer Nature, 2019, 91.

<sup>41</sup> "Mad Dog Amuck in Kansas: Spread of Rabies Necessitates Killing of Two Horses." *Press Democrat* (Hennessey, OK) April 29, 1910.

for thirty days. Fortunately, no other cases were reported.<sup>42</sup> Other muzzling mandates were less severely enforced, though. A muzzling mandate in Muskogee in October, 1911 was apparently strictly adhered to at first, but the public adherence quickly faltered with times: “Many owners complied with the spirit of the law, but lived not up to the letter. They equipped their poodles with temporary straps, which in no way prevented them, the dogs, from annexing a large hunk of meat from a human calf.”<sup>43</sup> The lack of public participation was certainly bemoaned by various groups. For example, the Oklahoma State Board of Health found it necessary to argue that with the idea of muzzles is met with such intense, “opposition by dog owners and such indifference on the part of the general public that little can be accomplished. Therefore hundreds must annually die one of the most terrible deaths known and many more suffer incalculable mental anguish.”<sup>44</sup> Similarly, a reporter for the *Tulsa Daily Democrat* argued that “The lives of people should not be endangered by those who wish to enjoy the luxury of a dog. Muzzle the dogs, shut them up or kill them.”<sup>45</sup> Humans had access to a post-exposure prophylactic serum to avoid hydrophobia, but eliminating the threat required increasing exertion of power from the state and various towns and rigorous the ways in which dogs were permitted to co-exist with humans in private and in public. This shift is not inherently detrimental, but it does tie into a broader recontextualization of the relationship between dogs and humans.

The human focus on primarily dogs as a vector for rabies was based in real cases of transmission, although the surveillance for and prevention of rabies could and frequently did

---

<sup>42</sup> Oklahoma Territorial Board of Health. *Fourth biennial report of the Territorial Superintendent of Public Health for the years 1897 and 1898*. Leader Printing Company, 1898.

<https://digitalprairie.ok.gov/digital/collection/territorial/id/1280/rec/1> 41

<sup>43</sup> “Take Off the Dog Muzzles.” *Muskogee Times-Democrat* (Muskogee, OK) October 31, 1911.

<sup>44</sup> Oklahoma State Department of Health. *Annual report of the Oklahoma State Board of Health, 1917*.

Commissioner of Public Health, 1917. <https://digitalprairie.ok.gov/digital/collection/okresources/id/17629>. 33.

<sup>45</sup> “While there is great diversity of belief about hydrophobia...” *Tulsa Daily Democrat* (Tulsa, OK) December 1, 1912.

result in the death of dogs. In 1917, the Oklahoma State Board of Health found that the vast majority of positive cases of rabies were found in dogs during the examination of the heads of suspected animal vectors, with 61 positive cases -- unfortunately, there were also 77 negative results.<sup>46</sup> When writing about the history of controlling rabies through dogs in colonial and independent India, Deborah Nadal writes “Acknowledging that dogs too are victims of rabies is key for the purpose of this paper. Indeed, dogs fall victim of rabies twice as, in endemic areas like India, they die not only from rabies but also because of rabies.”<sup>47</sup> In a similar instance in Oklahoma, the mayor of Liberal declared a muzzle mandate even before an outbreak of rabies in town, based purely on the elevated rates of rabies in other portions of the state. This decree was enforced quite harshly, as any unleashed and unmuzzled dogs were to be shot on sight by the city marshal.<sup>48</sup> Significant medical breakthroughs had made the risk of hydrophobia far less daunting for humans, but the effort to further reduce the possibility of transmission involved shaping the ways that humans and dogs interacted.

---

<sup>46</sup> Oklahoma State Department of Health. *Annual report of the Oklahoma State Board of Health, 1917*. 32.

<sup>47</sup> Deborah Nadal, “To Kill or Not to Kill? Negotiating Life, Death, and One Health in the Context of Dog-Mediated Rabies Control in Colonial and Independent India” in *Framing animals as epidemic villains: Histories of non-human disease vectors*. Springer Nature, 2019, 92.

<sup>48</sup> “Some Things Other Papers Tell.” *Guymon Herald* (Guymon, OK) June 15, 1911.

## False Hydrophobia and Fear

Even as advancements in the field of microbiology and medicine changed the potential ways in which people would interact with rabies and hydrophobia, non-biological origins of the disorder were still suspected by both professionals and members of the public. One common line of thinking in Oklahoma was that rabies was caused by heat and a lack of water, as the froth so closely associated with rabies could be replicated by dogs while dehydrated and panting - that the heat could cause irritability only strengthened the case. *The Immigrants Guide* warned readers in October, 1912, that they needed to ensure that dogs had ready access to drinking water during hot weather given that “It is said that in those localities where there is a good supply of drinking fonts for animals rabies is of rare occurrence.”<sup>49</sup> While we may retroactively argue that this belief is a case of a confusion between correlation and causation - areas with drinking fonts may very well have the other infrastructure necessary to prevent the spread of rabies from wild animals and between pets - any potential source of rabies needed to be eliminated for the sake of the community.

The other suspected cause of hydrophobia was some sort of fear or nervous disorder. Some scholars believed that all cases of hydrophobia were caused by fear, while others argued that only some cases of suspected hydrophobia actually were. These cases would frequently manifest as symptoms that one would associate more with mad dogs than with the symptoms of both rabies and hydrophobia in humans, such as in a case reported by the *Hooker Advance* in 1905:

"Snapping and barking like a dog Fred Reiger, of Ilegewisch, is laboring under the delusion that he has hydrophobia. The sufferer imagines that he was bitten by a dog belonging to Fred Johnson, who died from rabies two months ago. Since the death of his

---

<sup>49</sup> “The owners of pet dogs should see that....” *Immigrants’ Guide* (Guymon, OK) October 3, 1912.



friend Reiger has run from every dog that chanced to come near him. Several days ago he became violent, and would growl at anyone who approached him. Physicians declare that he will die of prostration unless his hallucination is dissipated.”<sup>50</sup>

Cases of false hydrophobia were also reported even after prophylactic use of Pasteur's treatment would have made the chances of a genuine case of rabies incredibly unlikely. The *Shattuck Monitor* reprinted a case from Portland, Oregon where,

“Dr. E. H. Thornton, one of the city’s most prominent physicians, has been removed to a sanitarium, completely prostrated, mentally and physically, through fear of a mad dog bite. Doctor Thornton was bitten by a mad dog last summer... [and] took a serum treatment to render himself immune from the dreaded effects of the bite, but has since worried constantly, fearing the bite might have some ill effect upon him. A specialist declares that neither the bite nor the subsequent treatment did him any bodily harm.”<sup>51</sup>

Despite the length of time since the bite that would have been the source of transmission and the use of Pasteur’s serum, the anxieties surrounding rabies were so intense for this man that he experienced severe physical manifestations. As a medical professional, he would have been aware of the miniscule likelihood that he had actually contracted rabies by the time that his symptoms started manifesting, but he would have also been familiar with the excruciating death awaiting him if he had, in fact, been infected.

This phenomenon was well-known enough to warrant general familiarity with the terms false or spurious hydrophobia in reference to these cases in newspaper reports.<sup>52</sup> In newspaper reports on these instances, familiarity with the severity and symptoms of rabies increases the severity of the suffering of the victim. In some instances, over-familiarity could absolutely lead to cases of spurious hydrophobia in medical professionals horrified by what they observed during treatment or autopsies, as seen in a case originally printed in the *Chicago Tribune* and then reprinted in the *Thomas Tribune* in 1903. In this instance, a young physician was so

---

<sup>50</sup> “Man Barks Like a Dog.” *Hooker Advance* (Hooker, OK) June 9, 1905.

<sup>51</sup> “Dog Bite Makes Him Insane.” *Shattuck Monitor* (Shattuck, OK) April 2, 1914.

<sup>52</sup> Pemberton and Worboys. *Mad Dogs and Englishmen*, 3

horrified after an autopsy of a man who had died from a true case of hydrophobia that he developed symptoms himself, eventually leading him to wander the streets and unable to sleep, eat, or drink. He was able to recover once his colleagues convinced him that "he was simply under the influence of his frightened imagination, and that if he could overcome his fear he would recover."<sup>53</sup> However, newspapers and medical professionals especially worried about women who might occasionally show hydrophobic symptoms in a fit of hysteria after a perfectly benign bite, convinced that they were now doomed to die horribly.<sup>54</sup>

When writing about his experience with false hydrophobia, the retired US Surgeon General William A. Hammond noted that as people with false hydrophobia only manifest the symptoms that they are aware of, it can at times be simple to spot someone who is not, in fact, experiencing true hydrophobia. Hammond suggested looking for inconsistencies in behavior, such as barking like a dog, running on all fours, and drinking liquids aside from water, as these were markers of "false hydrophobia." In one particular case, he noticed that a man had been able to drink two glasses of brandy despite snapping at anyone who came near the bed and convulsing at the sight of water. Hammond, who knew that those with "true hydrophobia" would be unable to consume any liquid at all, filled a tumbler with ice water, held the container to the man's lips, and commanded him to drink. As the man gulped down the water, "the spell was broken, and a few minutes later he got out of bed, declaring that he was perfectly well."<sup>55</sup> He solemnly notes, though, that not all sufferers of false hydrophobia are as fortunate, which he claims "is as well established as any other fact in medical science."<sup>56</sup> As a result, his frustration with newspaper

---

<sup>53</sup> "Hydrophobia From Fear: The Remarkable Case of a Young Physician Who Witnessed an Autopsy." *Thomas Tribune* (Thomas, OK) July 23, 1903.

<sup>54</sup> Swabe, "Folklore, Perceptions, Science and Rabies Prevention and Control." 317.

<sup>55</sup> William A Hammond, "False Hydrophobia." *The North American Review* 151, no. 405 (1890): 167-172. <https://www.jstor.org/stable/25102030>, 171.

<sup>56</sup> *Ibid.*

articles publicizing the terrors and symptoms of rabies and hydrophobia, mentioned later in the essay, is certainly understandable; the more panicked a person is about hydrophobia, the more likely they are to develop false hydrophobia and the more likely they are to die. Hammond ends his discussion of false hydrophobia with the warning that “A little knowledge is a dangerous thing; and this is especially true of the sciolism which prevails relative to hydrophobia.”<sup>57</sup> The fear surrounding rabies and any suspicious dog bites was strong enough to be potentially lethal, and the reprinting of stories from across the US in local newspapers, as seen in this thesis, did nothing to calm these anxieties.

To some, the severity of these fear-based cases was even more reason to bolster the efforts against rabies. When commenting on the extent of their efforts in light of the rarity of actual rabies cases, especially when compared against other diseases, the Oklahoma State Board of Health argued that “It must also be remembered that many persons who may never develop hydrophobia, nevertheless suffer intense mental anguish after being bitten by the dog or some other animal from the fear of being infected with rabies.”<sup>58</sup> After all, even after the development and distribution of Pasteur's vaccine, if a person had, in fact, been bitten by a rabid animal, the inevitably fatal disease could still develop if the proper treatment was not given in time. As the Oklahoma Farmer reported, “The mad dog bite is a most vicious wound, as it carries with it the awful scare that so impresses the nervous system - even though the blood be not poisoned. The victim is in danger of hysteric insanity, almost as bad as hydrophobia itself.”<sup>59</sup>

To others, though, these cases cast doubt on the reality of rabies as a disease, and suggested that those killed by true hydrophobia were, just as those with false hydrophobia, or

---

<sup>57</sup> Hammond, “False Hydrophobia,” 172.

<sup>58</sup> Oklahoma State Department of Health. *Annual report of the Oklahoma State Board of Health, 1917*. 33.

<sup>59</sup> Hyde, “Animal Poisons.”

were dying due to exhaustion, dehydration, and, most of all, terror. Especially prior to the discovery of Negri bodies in 1903, distinctive markers that indicated the presence of rabies under a microscope,<sup>60</sup> the reported observably fear-based cases of sickness were justification for the idea that all cases of rabies and hydrophobia were actually fear-based. One especially prominent essay about this topic, “The Hydrophobia Bugbear,” was written by Edward Spitzka, a neurologist and anatomist, and published in *Forum* in April 1887. He was frustrated that the symptoms of hydrophobia seemed to be vague and unpredictable, especially when even those that believed hydrophobia existed admitted that there were provably false cases.<sup>61</sup> He also detested claims that Pasteur’s vaccine had saved over two thousand people, as it “is based on assumptions no better grounded than those which have been alleged time out of mind, for mad-stones and nostrums, faith cures, and other more legitimate medical agents.”<sup>62</sup> After all, while all of the treatment recipients may have been given the treatment without developing rabies, there is no guarantee that all of the attacking mammals in question were even rabid, much less that the recipient would have been infected. Of particular note to Spitzka is the seeming improbability of a disease causing such animalistic behavior in humans. At the end of his essay, he writes, “Let in once be inoculated in the public mind .. that it is no more possible for a dog to inoculate a man with the tendency to bark and run on all fours than it is for a man to inoculate a dog with the faculty of speech and an upright gait; and nine-tenths of what has been drifting through medical and other literature as rabies in man would disappear.”<sup>63</sup> The specific symptoms mentioned here by Spitzka were also pointed to later by Hammond as clear markers of false hydrophobia, as

---

<sup>60</sup> “Rabies: Histologic Examination,” Centers for Disease Control and Prevention, U.S. Department of Health & Human Services, April 22, 2011. <https://www.cdc.gov/rabies/diagnosis/histologic.html>.

<sup>61</sup> Edward C. Spitzka, “The Hydrophobia Bugbear.” *Forum* 3, no. 2, April, 1887. 178-187, 180.

<sup>62</sup> *Ibid*, 187.

<sup>63</sup> *Ibid*, 187.

mentioned earlier in this thesis. However, Spitzka's clear disdain for the idea that rabies could, in fact, cause such severe reversals in behavior and the people who believe this also reflects wider discomfort with the idea of a disease that could so easily blur the understanding of humans with respect to the rest of the world; the idea of a man snapping and barking is just as ridiculous and unnatural to Spitzka as that of a dog standing up and speaking.

For some, their dismissal of hydrophobia was based less on medical reasoning than their personal experience due to the exceedingly slim chance of actually becoming infected. For example, *The Mannsville News* reported in a broader story that hydrophobia was an overblown fear that "At the Philadelphia dog pound, where, on an average, over six thousand vagrant dogs are taken up annually, and where the catchers and keepers are frequently bitten while handling them, not one case of hydrophobia has occurred during its entire history of twenty-five years, in which time about 150,000 dogs were handled."<sup>64</sup> In another case, the story of a dog catcher from the city of Denver, was reported in *The Shawnee Daily Herald*. Having claimed to have caught roughly 10,000 dogs a year and been bitten two thousand times, he claimed to have relied on carbolic acid rather than Pasteur's serum treatment to treat his wounds. Blithely treating his two thousandth bite and getting back to work, he noted that "Dog bites ain't nothing... good deal rather have 'em [sic] than mosquito bites, Take it from me, there's nothing to this hydrophobia business... I'm still here."<sup>65</sup> Given how rare truly rabid dogs were, receiving two thousand dog bites without the transmission of rabies would be possible, even if the bites themselves were certainly unpleasant and could pass along other diseases had the dog catcher not used carbolic acid to sterilize the wound. However, if the dog catcher had received Pasteur's treatment even once, this could have prevented future infections entirely -- it is far easier to doubt the presence

---

<sup>64</sup> "Hydrophobia." *Mannsville News* (Mansville, OK) September 28, 1906

<sup>65</sup> "Dog Bites Ain't Nothin'" *Shawnee Daily Herald* (Shawnee, OK) September 16 1911,

of a disease once one is immune to it and there is nothing to fear. Especially given that there are established cases in which the victim dies due to fear of rabies alone, one could easily dismiss the idea of hydrophobia entirely.

But the idea that rabies was a purely imaginary disease was also met with a fair amount of pushback, both in the press and from the Oklahoma State Board of Health. In 1910, the *First Biennial Report on Public Health* argued that “Hydrophobia is just as real as diphtheria or tuberculosis, and its existence is just as easily demonstrated. It is caused by some small organism and it progresses along invariable lines.”<sup>66</sup> Rather than viewing rabies as a difficult to understand toxin, the Oklahoma State Board of Health is drawing on the germ theory of disease to compare hydrophobia to two far more common illnesses. Several years later, some still doubted the existence of true hydrophobia, and the Oklahoma State Board of Health once again commented on the serious threat of rabies without proper prevention and intervention: “It is not an uncommon occurrence to hear such a physician say that in the course of a long experience he has never met with a case of hydrophobia. There are many physicians who never have met with a case of cholera. Nevertheless, cholera is not an imaginary disease.”<sup>67</sup> That the Board of Health felt it necessary to comment on the pervasiveness of this line of thinking is a testament to how widespread this line of thinking truly was, even as doctors continued to administer Pasteur’s treatment and newspapers continued to report on mad dog attacks.

---

<sup>66</sup> Oklahoma State Department of Public Health. *First biennial report of the Oklahoma State Public Health Department for the years 1909 and 1910*. Printers Publishing, 1910.  
<https://digitalprairie.ok.gov/digital/collection/okresources/id/10239/>. 46.

<sup>67</sup> Oklahoma State Department of Health. *Annual report of the Oklahoma State Board of Health, 1917*. 33.

## Rabies as a Public Spectacle

Given that the fear of hydrophobia and of rabid animals was at times intense enough to lead humans to kill those suspected animals, it is worth exploring the role of rabies as a public spectacle in driving these fears. In Oklahoma and throughout the United States, reports of rabid animals were reprinted from publications in wildly different geographic locations, such as Illinois or Oregon – in these cases, the papers are not printing in order to warn of an imminent threat, but rather for their readers to be able to take part in the spectacle of watching rabid animals rampage. Readers in Ponca City, Oklahoma, could experience the vicarious horror of the story of Jack Stewart in Arapahoe County, Colorado, investigating a disturbance in a corral only to be attacked: “Stewart felt the foam dripping from the creature’s fangs, and knew he had to deal with a mad wolf, and he vainly strove to throttle the creature, which again and again sought to close its white teeth on his throat.”<sup>68</sup> This account of rabies is certainly gripping, but it serves little purpose other than to potentially render readers even more wary of rabid wolves and coyotes. Other reprinted accounts of rabies were less serious, such as a story originally from Philadelphia recounting chickens that seemingly became hydrophobic after surviving a rabid coyote attack whose “antics were so unnatural so as to cause great merriment.”<sup>69</sup>

In some of the published stories, the threat of rabid animals is second to the threat posed by humans. The *Guymon Herald* reprinted a story wherein a sheriff and veterinarian tried to shoot a potentially rabid or poisoned dog, but the buckshot ricocheted and struck two passersby, leading the reporter to comment “there is considerable room for conjecture as to which is the

---

<sup>68</sup> “Desperate Struggle: In the Dark with a Mad Wolf Which Was Finally Killed.” *Ponca City Daily Courier* (Ponca City, OK) September 2, 1900.

<sup>69</sup> “Chickens Have Hydrophobia” *El Reno Evening Star* (El Reno, OK) January 13, 1897.

more dangerous, a mad dog or a fool marshal.”<sup>70</sup> The spectacle of the dramatic behavior changes associated with rabies was established in the public consciousness that these fears show up in fictional accounts, too. As part of an ongoing story published in the *Tyrone Observer* by Maria Daviess called “Miss Selina Lue and the Soap-Box Babies,” a child injuring their mother is speculated to “have the rabies,” presumably being bitten by a mad dog without their parents noticing.<sup>71</sup> In both of these stories, rabies is not an immediate threat, but the violence starts due to a potentially rabid dog, underscoring the implicit threat posed by these animals. Neither one advocates for the killing of dogs, but the fact that they are a potential source of chaos and suffering is assumed by observers.

The prevalence of stories drumming up fear surrounding rabies even prompted the American Antivivisection Society to issue a letter begging newspapers and the broader public to avoid circulating sensational stories about violent rabid dogs and the agonizing suffering of their victims; these stories could frighten readers to the point of spurious hydrophobia, but also potentially result in entirely superfluous backlash against dogs.<sup>72</sup> As previously mentioned, dogs are thus both victims of the initial disease and of the public anxieties and fears around the disease, as the value of humans as opposed to dogs became increasingly evident.

In some instances, the violence aimed at dogs in response to a potential threat was as a direct result of an attack. Dogs that were suspected of being rabid were generally quickly hunted down and attacked, to the dismay of those wanting to examine the dog more scientifically - through observation and dissection - to see if the dog was diagnosably rabid. Newspapers

---

<sup>70</sup> “Some Things Other Papers Tell.” *Guymon Herald* (Guymon, OK) February 16, 1911.

<sup>71</sup> Maria T. Daviess. “Miss Selina Lue and the Soap-Box Babies: Ethel Maud Sews Her Thumb.” *Tyrone Observer* (Tyrone, OK) March 9, 1911.

<sup>72</sup> “Existence of Rabies Doubted: Physicians Say Fright is at the Bottom of Nearly all Alleged Cases.” *Hennessey Clipper* (Hennessey, OK) August 13, 1896.



advised readers to try to obtain the suspected rabid dog, saying that “It often happens that the dog causing the bite is killed, and an examination of its brain fails to reveal rabies, whereas, if the dog were confined until the disease thoroughly developed, the treatment of persons bitten would have been indicated.”<sup>73</sup> In this instance, the death of the dog is an accepted conclusion, but the combination of the necessity to warn against knee-jerk violence and the discussion of the dog as an inanimate object of study necessary as part of a human medical treatment indicates the relative lack of concern for dogs as beings capable of experiencing sickness, pain, and fear.

More frequently, though, the frustration felt by humans worried about rabies manifested as preemptive violence. The question directly became what level of control is acceptable in order to prevent the spread of rabies, mostly in relation to human interests. Articles on the importance of towns enforcing muzzling restrictions could and did quickly devolve into a discussion of the relative worth of dogs. After arguing that towns across Kansas, Arkansas, and Oklahoma were obligated to actually enforce muzzle restrictions to avoid hydrophobia outbreaks, the reporter declares, “It is little short of criminal neglect of those in authority to allow the town to be overrun with worthless dogs. What is all the dogs in the country compared to one child suffering the danger of hydrophobia? Take it home to yourself; suppose it is your own child. Now don’t it seem reasonable to take every precaution to prevent such a terrible thing?”<sup>74</sup> This reporter was certainly not alone in this sentiment, as *The Shattuck Monitor* printed a ruling from Chicago in which a judge fined seven women five dollars each due to improperly muzzling their dogs, saying “All the dogs in Chicago are not as valuable as one child.”<sup>75</sup> A local paper, states away in

---

<sup>73</sup> “Pasteur Treatment for Rabies Now Given in Wichita.” *Guymon Herald* (Guymon, OK) September 5, 1912.

<sup>74</sup> “Dog Had Rabies.” *Hennessey Clipper* (Hennessey, OK) September 12, 1912.

<sup>75</sup> “Dog Bite Makes Him Insane.” *Shattuck Monitor* (Shattuck, OK) April 2, 1914.

Oklahoma, found it noteworthy to print this article amidst broader discussions of rabies, underscoring the sympathies of those in its readership.

Part of the reason for such intense emotions surrounding this issue is the relative frequency with which children were injured by potentially diseased dogs, which was in turn due to the ways in which children and dogs interacted during this time period. Even as humans increasingly leashed dogs after the turn of the century, dogs still had a much higher degree of freedom than modern viewers might necessarily expect; children, too, had a fair amount of unsupervised play. Unfortunately, children would with some regularity play with or taunt dogs, which might snap as a result of the unwanted interactions. As sometimes happened, if a child were then to shout that the dog was rabid, their previous slights might be forgotten by other people in exchange for sentencing the original dog to death.<sup>76</sup> For example, after a school fair in Guymon on April 27 1916, a “shepherd dog” was killed and decapitated by the deputy sheriff at its home after the dog bit three children. The children were given the prophylactic serum, but a fair number of witnesses claimed that “the dog was being tormented, which made him vicious.”<sup>77</sup> A dog snapping at children after being tormented seems to modern viewers completely expected if not warranted. However, the social value of these school children outweighed a dog that could potentially be a lethal threat, even if the dog was most likely a working animal and not sick.

Also key to this discussion of relative worth, though, is the ways in which perceptions of class shifted the ways in which dogs were valued. The 19th century in Britain and the United States found increasing reverence for certain breeds of dogs, generally those who worked alongside humans or had a pedigree. Unfortunately, this increase in status for some dogs took place alongside the discovery that dogs could transmit a lethal disease to humans, straining the

---

<sup>76</sup> Swabe, “Folklore, Perceptions, Science and Rabies Prevention and Control.” 318.

<sup>77</sup> “Dog Bites Three Children.” *Guymon Herald* (Guymon, OK) April 27, 1916.

human perception of this loyal bond. In order to ease the dissonance of this situation, “Just as the middle classes had laid blame at the door of the unruly working classes for the proliferation of other infectious diseases, the dogs most commonly owned by the lower classes were identified as the most likely culprits for the spread of rabies.”<sup>78</sup> These dogs were generally in a less formal framework with humans, existing on the edges of towns and cities while roaming and scavenging.<sup>79</sup> An even more imminent threat, though, were the stray dogs completely outside of human control. To humans, these animals existed as almost a midpoint between loyal partners and feral beasts, and posed a literal threat of violence and disease transmission and a metaphorical threat as a creature unnaturally outside of human control. Their unrestricted access to potentially rabid dogs and coyotes meant that they were more statistically likely to become rabid themselves, but they were also viewed as being innately more susceptible to rabies.<sup>80</sup> These ownerless dogs were seen as being even innately capable of developing rabies, something that middle and upper classes could not accept may also apply to their own pets.<sup>81</sup> Both lower class and ownerless dogs posed an intrinsic threat to human residents, especially the middle and upper classes, and as such were socially valued far less than potential bite victims, especially if they were children. This tension lurked beneath the horror of rabid dog attacks, enhancing their nature as a spectacle.

---

<sup>78</sup> Swabe, “Folklore, Perceptions, Science and Rabies Prevention and Control,” 318.

<sup>79</sup> Skabelund, *Empire of Dogs*, . 3.

<sup>80</sup> Swabe, “Folklore, Perceptions, Science and Rabies Prevention and Control,” 320.

<sup>81</sup> Nadal, “To Kill or Not to Kill?” in *Framing animals as epidemic villains*. 96.

### **The Boundaries between Humans, Dogs, and Coyotes**

While the emotional toll was often far greater, rabies still could and at times did have an economic impact, frequently due to the necessity of euthanizing rabid animals to avoid further spread of the disease. The majority of secondary literature regards rabies as a relatively minor economic threat, but this belief is complicated by the experiences of ranchers and farmers in more rural areas, like Oklahoma. For example, during a “hydrophobia scare” in Ardmore in April, 1919, a horse and mule had died and another mule was “suffering from hydrophobia,” each valued at \$250.<sup>82</sup> More frequently, though, the economic impact came from the death of livestock, especially cattle and sheep. On May 23, 1895, *The South and West* reported that a mad dog bit a large number of sheep in a flock belonging to William Keller of Tiffin, Oklahoma. While nineteen were killed during the actual attack, “Nine more went mad and had to be killed on the 15th, on the order of the township trustees. Keller killed the remaining 150. Their carcasses were burned to prevent a further spread of the rabies” – one rabid dog led to the loss of an entire flock of sheep, completely removing a farmer’s entire livelihood.<sup>83</sup> Moreover, the mobility of rabid dogs would pose a threat to the entire community until the diseased animal was isolated and then killed, such as in the case of a rabid dog in Beaver, Oklahoma, which attacked “a number of stock” on its journey towards town.<sup>84</sup> This threat was compounded by the fact that another dog could just as easily repeat the incident if its owners were unaware that their dog had been attacked, which left the community to carefully and likely warily watch their pets and working dogs for any signs of rabies.<sup>85</sup>

---

<sup>82</sup> “Oklahoma State News.” *Hooker Advance* (Hooker, OK) April 4, 1919.

<sup>83</sup> “General News.” *South and West* (Beaver, OK) May 23, 1895.

<sup>84</sup> “Over the Southwest: Mad Dog Scare.” *Tyrone Observer* (Tyrone, OK) January 29, 1920.

<sup>85</sup> *Ibid.*

The conflict between human farmers and carnivores, such as coyotes, is far from new. Isolated from humans, coyotes will typically eat "practically anything," ranging from rabbits to birds to insects to carcasses to fruits and vegetables.<sup>86</sup> As human settlement increases in an area, this development fragments the areas that coyotes would typically occupy and places the animals in closer proximity to humans and their livestock. Moreover, this habitat fragmentation alongside human hunting efforts depletes the available prey animals, forcing coyotes to turn to alternative food sources.<sup>87</sup> At the same time, farmers frequently bring animals with them that are both easier for coyotes to kill and frequently restrained to a limited space. One report from 1905 explained that "it is probable that the quality of the introduced food had much to do with the coyote's preference for it."<sup>88</sup> As this new food source was introduced in Oklahoma, hunters are slaughtering wolves, leaving room for the coyote population to expand.<sup>89</sup>

Given the nature of their new diet, conflict quickly arose between coyotes and farmers and ranchers. Coyotes were especially seen as a threat to chickens, an animal raised commonly by settlers, and in this capacity were seen primarily as cunning, destructive and annoying. Allen Bannister, recalled his time guarding his chickens at night at his new homestead in central Oklahoma, saying, "They came in droves. I have seen as many as eleven at one time....We could not have a house cat unless we kept it locked up..."<sup>90</sup> Coyotes were seen as clever as they were

---

<sup>86</sup> Frank Van Nuys, *Varmints and Victims: Predator Control in the American West*. University Press of Kansas, 2015, 5

<sup>87</sup> Kim Murray Berger, "Carnivore-livestock conflicts: effects of subsidized predator control and economic correlates on the sheep industry." *Conservation Biology* 20, no. 3 (2006): 751-761. <https://doi.org/10.1111/j.1523-1739.2006.00336.x>, 752

<sup>88</sup> Lantz, David E. *Coyotes in their Economic Relations*. U.S. Department of Agriculture, Biological Survey, 1905. 14.

<sup>89</sup> Van Nuys, *Varmints and Victims*, 5.

<sup>90</sup> James A. Bannister interviewed by Ruby Wolfenbarger, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/3444>. 2.

persistent, with one woman even wondering during an interview years later how a coyote managed to catch and eat a 40 pound turkey that had roosted in a tree out of its reach.<sup>91</sup>

However, it is important not to understate the level of frustration that many settlers had with these animals, seeing them as greedy thieves. In their search for food, coyotes would at times target animals that settlers viewed as unfair targets. For example, another homesteader, Core B Cahoon, described the pride she took in swiftly completing farmstead tasks and raising chickens, but “the coyotes, though, had other ideas.”<sup>92</sup> She also recounted an anecdote where one coyote was brazen enough to come into her yard and try to kill and eat her big rooster, and she tried to chase the coyote away with a mop stick as the rooster struggled and screamed in the canid’s mouth. Eventually between the blows of the mop stick and the struggling of the rooster, the coyote decided to drop the animal and run away. Unfortunately, the rooster died shortly after.<sup>93</sup>

Coyotes certainly evoked frustration in many of these homesteaders, but they also were seen as emblematic of the isolation and natural threat of the plains. Ida Colville, living in the Texoma area, described how, “The coyotes were the most annoying foes we had among the wild animals. We were very much afraid of them ... They would come almost to our dugout on moonlit nights. Their howling was very weird sounding and made me feel lonesome. I never heard of a coyote attacking a human being, not even a child, but we were afraid just the same.”<sup>94</sup> Even though Colville admits that the coyote was not logically a threat, their unfamiliar vocalizations were tied to loneliness and fear for her, too. In another oral history, J.T. Jamieson

---

<sup>91</sup> Rosa W.H. Moore interviewed by Nora Lorrin, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/772>. 2.

<sup>92</sup> Cora B.C. Kelly interviewed by Nora Lorrin, 1938. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/4776>. 6.

<sup>93</sup> Ibid.

<sup>94</sup> Ida Colville, interviewed by Zaidee Bland, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/7133>. 6

recalled how he, like others he knew, carried a pistol “for self-preservation” at the start of his time in Oklahoma, as well as camping on one of his first nights in the newly declared territory, in around 1890. He continued, saying, “While sleeping out that night on the prairie I was disturbed in my slumbers by a coyote sniffing around, the noise of which finally awakened me. After firing at it I was not disturbed anymore that night, but the report from that gun out there on the open prairie, and in the stillness of the night, sounded as loud as a cannon report.”<sup>95</sup> This incident was noteworthy enough to him that he felt it worth noting years later in an interview about his experience as a settler. To Jamieson, the coyote and the vast, still prairie were inexorably linked. For both Colville and Jamieson, coyotes were individual actors, but also emblematic of what they viewed as a harsh and unforgiving landscape.

While people recounted fears associated with coyotes, many of these recollections also include dogs protecting humans and livestock from the other canids. Mary Alive Mount Huff described keeping vigil for her sister in a hastily constructed dugout, amounting to little more than a curtain separating a carved-out space in a canyon wall. During the night, “The coyotes would come howling down the canyon almost to the dug-out and the two dogs laid right in front of the door until they would get very near; then, they would chase them off.”<sup>96</sup> In a similarly exposed position during her time travelling to her future homestead, Ida M Shreves recalled: “I realized that I was left alone in a covered wagon with three little children and all the protection I had was a big dog. All I could hear were the rustling leaves and the howling wolves.”<sup>97</sup> In both stories, dogs are the force standing between settlers and a seemingly dangerous wilderness, and

---

<sup>95</sup> J.T. Jamieson, interviewed by Bessie Thomas, 1938. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/2407>. 2

<sup>96</sup> Mary A.M. Huff, interviewed by Hazel Harslson, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/1408>. 23

<sup>97</sup> Ida M. Shreves, “Experiences of Early Days in Oklahoma.” University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection. <http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/8173>. 2.

while they certainly feel exposed in both anecdotes, dogs are present to protect the humans with whom they have formed a relationship. These protective relationships would persist as settlers claimed portions of the land to farm and raise livestock on, with dogs chasing these canids away from their home.

However, dogs did not simply defend places and people – at times, different dogs were used in order to proactively hunt and kill coyotes, most frequently when livestock were threatened. During the period from 1880 to 1915, industrial technology, such as various poisons and repeating rifles, as well as state control were increasingly used against coyotes, along with other predators, in the western US.<sup>98</sup> Some hunters objected to the use of strychnine, a highly effective and inexpensive poison, due to the potential for their own dogs ingesting the toxin rather than the intended targets. As for more practical concerns, animals who were poisoned could wander quite a distance before actually dying, meaning that collecting their pelts would be more difficult for the hunter, and over time coyotes learned to avoid baited carcasses.<sup>99</sup> As coyotes learned to avoid poisoned meat, trappers could turn to using guns, but for ranchers worried about livestock loss, “this is a feeble and wholly inadequate means.”<sup>100</sup> What some settlers turned to instead was using dogs in order to hunt: “Occasionally residents of a district combine and have a grand round-up hunt, driving the coyotes toward the center of a circle and slaughtering them there, and this is the only means of appreciably thinning them out occasionally.”<sup>101</sup> In this situation, the goal of the hunters was not direct economic profiting - the violence that would kill the coyotes would also almost certainly destroy any profitable pelt - but

---

<sup>98</sup> Van Nuys, *Varmints and Victims*, 27.

<sup>99</sup> *Ibid.*, 23.

<sup>100</sup> “Coyotes Among the Cattle: Western Ranchers Wrestling with the Problem of Extermination.” *Blackburn Globe* (Blackburn, OK) March 6, 1896.

<sup>101</sup> *Ibid.*



rather the promise of fewer losses to predation. Even in 1912, the Oklahoma State Game and Fish Warden wrote about how prolific coyotes were throughout the state, commenting on how, “When the coyotes grow too bold and numerous, farmers join together and buy a pack of hounds. Hunting with hounds is not only fine sport, but soon rids a neighborhood of coyotes.”<sup>102</sup> Speaking about the slaughter of coyotes may very well be disturbing to modern readers, but the economic concern justified these actions for farmers and ranchers.

Moreover, the political power of this group led to the territorial and state governments, especially in western areas like Oklahoma, to use their power to decrease the number of predators in the area, first indirectly through bounties for their pelts and then directly through establishing government agencies.<sup>103</sup> This concern even reached the federal level when, in 1915, Congress appropriated \$125,000 to the Bureau of Biological Survey specifically in order to reduce the number of livestock lost to predators.<sup>104</sup> By 1920, the Department of Agriculture employed 400 to 500 hunters through this Bureau based on an estimated \$20,000,000 in livestock and wool losses annually.<sup>105</sup> Coyotes were an immediate threat to the economic status of settlers, and increasing levels of authority and technology were used to try to eliminate the risk that their presence posed, just as technology and authority were used to try to thwart the risk of rabies; the deaths of coyotes were understood by settlers to be an absolutely acceptable price to pay for economic growth.

This pattern was echoed in other portions of the American West. The infrastructure built to better link Oklahoma to the rest of the United States enabled for a mass slaughter of animals –

---

<sup>102</sup> Oklahoma State Game and Fish Warden. *Annual report of the State Game and Fish Warden, 1912*. Cooperative Publishing, 1912. <https://digitalprairie.ok.gov/digital/collection/okresources/id/8731> 83

<sup>103</sup> Van Nuys, *Varmints and Victims*, 28

<sup>104</sup> Berger, “Carnivore-livestock conflicts.” 752.

<sup>105</sup> United States Department of Agriculture, “Exterminating Harmful Animals.” *Farmers News* (Knowles, OK) February 2, 1920.

railroads could bring poison, guns, and ammunition in and bring animal pelts out and to the global market. Even efforts to conserve wildlife seen in the early conservation movement, championed by those such as Theodore Roosevelt, focused on preserving animals that could be useful to humans through hunting and exterminating those that posed a risk to human business interests.<sup>106</sup> Other species were similarly massacred in this effort to shape the landscape into one most productive for the United States, such as bison and passenger pigeons either just to or over the precipice of extinction.<sup>107</sup> Unfortunately for politicians and ranchers, the intelligence that made coyotes frustratingly capable of killing livestock ensured that while their numbers dipped significantly, they never were completely eliminated. Nonetheless, while, as previous sources have indicated, coyotes were present in Oklahoma through 1920, the wilderness that they were seen as symbolizing increasingly gave way to the US imperial vision. In underscoring the impressive nature of the Garfield County school district, J.D. McGill bragged that “The school houses of this county would be a credit to a much older country than this. Yet, they have all been built on lands which seven years ago were inhabited only by the coyote and antelope.”<sup>108</sup>

---

<sup>106</sup> Donald Worster, *Nature's economy: a history of ecological ideas*. Cambridge University Press, 1994, 262.

<sup>107</sup> Wayne Pacelle, "The Evolution of Wildlife Management Ethics: From Human-Centered to Humane." *The George Wright Forum* 10, no. 2 (1993): 45-52. Accessed January 25, 2021. <http://www.jstor.org/stable/43597244>.

<sup>108</sup> J.D. McGill. *Fifth Biennial Report of the Territorial Superintendent of Public Instruction of the Territory of Oklahoma for the two years beginning July 1, 1898 and ending June 30, 1900*. State Capital Printing Company, 1900. 15.

## Conclusion

Technological, state, and social changes shaped the ways in which humans, dogs, and coyotes interacted in the early days of the state of Oklahoma. Pasteur's vaccine meant that rabies was no longer a looming, lethal certainty, but rather something that could be prevented given the proper medical treatment. However, as Pasteur's treatment offered new hope, local government strengthened its authority in order to try to prevent any spread of rabies among dogs. Rabies remained a subject of intense fear and public interest, though, as seen in cases of spurious hydrophobia and the copious amounts of news coverage on the subject. Human relationships with coyotes at the time were shaped primarily by economic interests - coyotes could be lethal to livestock ordinarily, but a rabid coyote could cost an entire herd. Dogs were frequently used to protect livestock, acting as a barrier against coyotes, but they could just as easily become incredibly violent and threaten humans and livestock if infected with rabies.

Humans are not the sole actors within their environment, and other actors play a role in the disease ecology of a location. At the same time, our actions shape their lived experiences, too, frequently in profound ways. Disease ecologies are shaped by the health and habits of nonhuman animals, a point that is especially obvious in the areas where our health interests overlap. One important aspect of this paper is the concept that there is not one dynamic between humans and dogs, but a series of relationships that are impacted by various social and economic factors among humans and drives and skills among dogs. The relationship between a rancher and his herding dog varies wildly from that of a woman living in town and her pet and from that of a child and a stray dog. Nonetheless, these relationships developed within the broader framework of an imperialist project. Additionally, this paper complicates the current historiographic focus

on rabies as a relatively inconsequential disease in the late 19<sup>th</sup> and early 20<sup>th</sup> century – one rabid animal could lead to the destruction of entire herds, and as such the amount of concern with which settlers regarded rabies is warranted. Histories of medicine tend to focus on urban areas, but this can lead to oversights when it comes to the nuances of how various groups experience disease.

## Bibliography

### Primary

Bannister, James A. interviewed by Ruby Wolfenbarger, 1937. . Transcript University of

Oklahoma Western History Collection: Indian-Pioneer Papers Collection.

<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/3444>

“Chickens Have Hydrophobia” *El Reno Evening Star* (El Reno, OK) January 13, 1897.

Colville, Ida. interviewed by Zaidee Bland, 1937. Transcript University of Oklahoma Western

History Collection: Indian-Pioneer Papers Collection.

<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/7133>.

“Coyotes Among the Cattle: Western Ranchers Wrestling with the Problem of Extermination.”

*Blackburn Globe* (Blackburn, OK) March 6, 1896.

Davies, Maria T. “Miss Selina Lue and the Soap-Box Babies: Ethel Maud Sews Her Thumb.”

*Tyrone Observer* (Tyrone, OK) March 9, 1911.

“Desperate Struggle: In the Dark with a Mad Wolf Which Was Finally Killed.” *Ponca City Daily*

*Courier* (Ponca City, OK) September 2, 1900.

“Dog Bite Makes Him Insane.” *Shattuck Monitor* (Shattuck, OK) April 2, 1914.

“Dog Bites Ain’t Nothin’” *Shawnee Daily Herald* (Shawnee, OK) September 16 1911.

“Dog Bites Three Children.” *Guymon Herald* (Guymon, OK) April 27, 1916.

“Dog Had Rabies.” *Hennessey Clipper* (Hennessey, OK) September 12, 1912.

“Existence of Rabies Doubted: Physicians Say Fright is at the Bottom of Nearly all Alleged

Cases.” *Hennessey Clipper* (Hennessey, OK) August 13, 1896.

“General News.” *South and West* (Beaver, OK) May 23, 1895.

Hammond, William A. "False Hydrophobia." *The North American Review* 151, no. 405 (1890): 167-172. <https://www.jstor.org/stable/25102030>

Huff, Mary A. M. interviewed by Hazel Harslson, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection.  
<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/1408>.

Hyde, A. W. "Animal Poisons." *Oklahoma Farmer*. (Guthrie, OK) June 15, 1910.

"Hydrophobia From Frear: The Remarkable Case of a Young Physician Who Witnessed an Autopsy." *Thomas Tribune* (Thomas, OK) July 23, 1903.

"Hydrophobia." *Mannsville News* (Mansville, OK) September 28, 1906.

Jamieson, J. T. interviewed by Bessie Thomas, 1938. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection.  
<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/2407>

Kelly, Cora B. C. interviewed by Nora Lorrin, 1938. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection.  
<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/4776>.

Lantz, David E. *Coyotes in their Economic Relations*. U.S. Department of Agriculture, Biological Survey, 1905.

"Mad Dog Amuck in Kansas: Spread of Rabies Necessitates Killing of Two Horses." *Press Democrat* (Hennessey, OK) April 29, 1910.

"Man Barks Like a Dog." *Hooker Advance* (Hooker, OK) June 9, 1905.

McGill, J.D. *Fifth Biennial Report of the Territorial Superintendent of Public Instruction of the Territory of Oklahoma for the two years beginning July 1, 1898 and ending June 30, 1900*. State Capital Printing Company, 1900.

Moore, Rosa W. H. interviewed by Nora Lorrin, 1937. Transcript University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection.

<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/772>.

Oklahoma Territorial Board of Health. *Fourth biennial report of the Territorial Superintendent of Public Health for the years 1897 and 1898*. Leader Printing Company, 1898.

<https://digitalprairie.ok.gov/digital/collection/territorial/id/1280/rec/1>

Oklahoma State Department of Public Health. *Annual report of the Oklahoma State Board of Health, 1917*. Commissioner of Public Health, 1917.

<https://digitalprairie.ok.gov/digital/collection/okresources/id/17629>

Oklahoma State Department of Public Health. *First biennial report of the Oklahoma State Public Health Department for the years 1909 and 1910*. Printers Publishing, 1910.

<https://digitalprairie.ok.gov/digital/collection/okresources/id/10239/>

Oklahoma State Game and Fish Warden. *Annual report of the State Game and Fish Warden, 1912*. Cooperative Publishing, 1912.

<https://digitalprairie.ok.gov/digital/collection/okresources/id/8731>

“Oklahoma State News.” *Hooker Advance* (Hooker, OK) April 4, 1919.

“Over the Southwest: Mad Dog Scare.” *Tyrone Observer* (Tyrone, OK) January 29, 1920.

“Pasteur Treatment for Rabies Now Given in Wichita.” *Guymon Herald* (Guymon, OK) September 5, 1912.

“Rabies in Oklahoma.” *Guymon Democrat* (Guymon, OK) September 2, 1915.

Roosevelt, Theodore. “A Wolf Hunt in Oklahoma.” *Scribner’s Magazine*. November, 1905.

<https://digitalprairie.ok.gov/digital/collection/culture/id/1388/>

Shreves, Ida M. "Experiences of Early Days in Oklahoma." University of Oklahoma Western History Collection: Indian-Pioneer Papers Collection.

<http://digital.libraries.ou.edu/cdm/ref/collection/indianpp/id/8173>

Spitzka, Edward C. "The Hydrophobia Bugbear." *Forum* 3, no. 2, April, 1887. 178-187.

"Some Things Other Papers Tell." *Guymon Herald* (Guymon, OK) February 16, 1911.

"Some Things Other Papers Tell." *Guymon Herald* (Guymon, OK) June 15, 1911.

"Take Off the Dog Muzzles." *Muskogee Times-Democrat* (Muskogee, OK) October 31, 1911.

United States Department of Agriculture, "Exterminating Harmful Animals." *Farmers News* (Knowles, OK) February 2, 1920.

"The owners of pet dogs should see that..." *Immigrants' Guide* (Guymon, OK) October 3, 1912.

Wheeler, William L. "If a Dog Bite You." *Checotah Enquirer* (Checotah, OK) July 31, 1908.

"While there is great diversity of belief about hydrophobia..." *Tulsa Daily Democrat* (Tulsa, OK) December 1, 1912.



## Secondary

- Arnold, Watson C. "Home Remedies, Folk Medicine, and Mad Stones." *Southwestern Historical Quarterly*. 117 no. 2 (2013): 132-142.
- Berger, Kim Murray. "Carnivore-livestock conflicts: effects of subsidized predator control and economic correlates on the sheep industry." *Conservation Biology* 20, no. 3 (2006): 751-761. <https://doi.org/10.1111/j.1523-1739.2006.00336.x>
- Bynum, William F., Anne Hardy, Stephen Jacyna, Christopher Lawrence, and E. M. Tansey. *The Western Medical Tradition: 1800-2000*. Cambridge University Press, 2006.
- Hansen, Bert. *Picturing medical progress from Pasteur to polio: A history of mass media images and popular attitudes in America*. Rutgers University Press, 2009.
- Haraway, Donna Jeanne. *The companion species manifesto: Dogs, people, and significant otherness*. Chicago: Prickly Paradigm Press, 2003.
- Jones, Mary E. *Daily Life on the Nineteenth Century American Frontier*. The Greenwood Press "Daily Life through History" Series. Westport, Conn.: Greenwood Press,
- Kean, Hilda. *The Great Dog and Cat Massacre: The Real Story of World War Two's Unknown Tragedy*. Chicago: The University of Chicago Press, 2017.
- Knipe, David. *Fields Virology*. 5th ed. Lippincott Williams & Wilkins, 2007.
- Lynteris, Christos, ed. *Framing animals as epidemic villains: Histories of non-human disease vectors*. Springer Nature, 2019.
- Pacelle, Wayne. "The Evolution of Wildlife Management Ethics: From Human-Centered to Humane." *The George Wright Forum* 10, no. 2 (1993): 45-52. Accessed January 25, 2021. <http://www.jstor.org/stable/43597244>.
- Pearson, Chris. "Dogs, history, and agency." *History and Theory* 52, no. 4 (2013): 128-145.

Pemberton, Neil and Michael Worboys. *Mad Dogs and Englishmen: Rabies in Britain, 1830-2000*. New York: Palgrave Macmillan, 2007.

“Rabies: Histologic Examination,” Centers for Disease Control and Prevention, U.S.

Department of Health & Human Services, April 22, 2011.

<https://www.cdc.gov/rabies/diagnosis/histologic.html>.

Ritvo, Harriet. *The animal estate: The English and other creatures in the Victorian age*.

Cambridge: Harvard University Press, 1987.

Schwartz, Marion. *A History of Dogs in the Early Americas*. New Haven: Yale University Press, 1998.

Skabelund, Aaron. *Empire of Dogs: Canines, Japan, and the Making of the Modern Imperial World*. Ithaca: Cornell University Press, 2019.

Swabe, J, “Folklore, Perceptions, Science and Rabies Prevention and Control.” in *Historical Perspectives on rabies in Europe and the Mediterranean Basin*. Paris: OIE, 2004. 312-322.

Van Nuys, Frank. *Varmints and Victims: Predator Control in the American West*. University Press of Kansas, 2015.

Wang, Jessica. *Mad dogs and other New Yorkers: rabies: medicine, and society in an American metropolis, 1840-1920*. Baltimore: Johns Hopkins University Press 2019.

Worster, Donald. *Nature's economy: a history of ecological ideas*. Cambridge University Press, 1994.