



Chronically Wasting Deer

Changing the way Texas Parks and Wildlife handles CWD

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My name is Taylor Schmidt. I am a 2022 graduate from Regents School of Austin and currently a freshman at Texas A&M University. In order to graduate from Regents, a thesis and antithesis is required. Both sides of a particular subject matter must be thoroughly researched before choosing a certain stance. I spent numerous hours searching for scholarly sources in libraries, consulted several individuals in the deer and feed industry and hunted for any information to aid my research. I also had counselors and advisors that worked with me throughout the entire process to be certain I was using all available and reliable resources. The thesis was presented in front of a live audience with a four-judge panel. For the final thesis we were only allowed a limited number of pages and time for the presentation. No more than two pages were to be used at the podium and the thesis was to be approximately twenty minutes of speaking with an additional 20 minutes of questions from the judges. Needless to say, you must be prepared and you must know your subject. With all of the time and tedious work that went into it, I am confident

of all claims made in my thesis. I am also proud to say that my thesis was awarded a medal as one of the top six in my graduating class of eighty-two students.

I hope that by sharing my thesis, the Texas Parks and Wildlife Department will begin to realize the importance of bettering their Chronic Wasting Disease program.

Thank you.

Credit: Taylor Schmidt



More than a dozen whitetail deer walk toward Maree Lou Williams, quietly surrounding her and eyeing her hands for snacks. She knows these deer by name. She knows their personalities and even their favorite foods. She has bottle raised several of them. "They're like my babies", Maree Lou states when asked about her relationship to these animals. Now, all of their lives are in danger as Texas Parks and Wildlife plans to slaughter the entire herd. In the spring of 2021, RW Trophy Ranch, owned by Robert Williams and managed by Maree Lou Williams, tested three deer for chronic wasting disease after they died during a harsh winter storm. One of those deer tested positive for CWD. Based on this single positive result, Texas Parks and Wildlife immediately implemented a plan to exterminate their entire herd of 500 deer. In an effort to save his herd, Robert Williams offered to perform live testing for CWD on every deer in his facility. However, Texas Parks and Wildlife refused this offer. After months of back and forth, the only solution offered by Texas Parks and Wildlife was to slaughter the entire herd of deer. Not only are they going to slaughter all Mr. Williams's deer, but the Texas Parks and Wildlife Department has informed him that he will be required to pay for all of the agency's costs associated with killing his deer, including salaries, travel, lodging and food. In addition, Mr. Williams will be required to remove and replace several inches of the topsoil throughout his deer facility. Mr. Williams filed a lawsuit against Texas Parks and Wildlife alleging violation of private property rights but a Travis County court dismissed the lawsuit. Mr. Williams filed another lawsuit in Kaufman County where the ranch is located. Days after the Kaufman County lawsuit was filed, Mr. Williams received a depopulation order from Texas Parks and Wildlife. When Mr. Williams refused to agree to leave his property and have no media coverage of the slaughter, Texas Parks and Wildlife decided to conduct their operations at night. This doubled the number of employees needed to complete their plan therefore costing Mr. Williams even more. The Kaufman County court issued a ten day restraining order preventing the Texas Parks and Wildlife Department from entering Mr. Williams property to pursue their depopulation plan. However, they planned to begin the herd extermination as soon as the ten day period ended. The plan that Texas

Parks and Wildlife is pursuing will cost Mr. Williams up to 3.5 million dollars.

CWD was first identified in captive deer in a Colorado research facility in the late 1960s, and in wild deer in 1981. Dr. Elizabeth Williams, a veterinary pathologist from Wyoming was the first to discover this new disease in the Colorado research facility in a mule deer. So, what even is CWD? The official website for information on Chronic Wasting Disease defines it as an always fatal, contagious, neurological disease affecting deer species (including reindeer), elk, and moose. Chronic Wasting Disease causes a characteristic spongy degeneration of the brains of infected animals resulting in emaciation, abnormal behavior, loss of bodily functions and death. It goes on to say that the most widely accepted theory is that the CWD agent is a misfolded prion, an abnormal form of cellular protein that is most commonly found in the central nervous system and lymphoid tissue. This prion infects the animal hosting it by promoting conversion of normal cellular prion

protein to the abnormal form. The agent, CWD, does not contain any genetic material (DNA or RNA) as occurs with bacterial, viral, fungal, and parasitic disease agents. And according to Jessy Slota from the National Microbiology Laboratory, there is no dysregulation of microRNAs in infected cervids. This infectious agent is smaller than most viral particles and does not evoke any detectable immune

response or inflammatory reaction in the host animal. Not only does the immune system emit no response, the CWD agent is highly resistant to enzymes, chemicals, heat and other materials or procedures that typically are used to inactivate disease agents, making the disease seemingly incurable.

Based on this understanding of chronic wasting disease, Texas Parks and Wildlife Commission implemented stringent rules on the deer breeding industry in Texas beginning on June 20, 2016. The Commission adopted additional rules pertaining to CWD monitoring zones and carcass movement restrictions on August 25, 2016. As more cases of CWD were found in captive and free-range white-tailed deer and elk in 2016 and 2017, the commission modified the rules pertaining to the movement of live deer in and out of CWD containment and surveillance zones. The rules began with the quarantining of infected deer herds as well as quarantining any breeders who had



Credit:Lone Star Outdoor News

sold or bought deer from the infected herd for five years. Now, Texas Parks and Wildlife has implemented full herd depopulation, their reasoning being that post mortem testing is slightly more accurate than live testing. These rules have caused several Texas deer breeders to suffer severe financial loss, and many have even gone out of business.

However, CWD is not only an issue for a small population whose occupation or research revolves around cervid species. It has recently been used by several media outlets as a tactic to gain readers or viewers by instilling fear in the public, calling CWD the 'zombie deer disease'. Describing chronic wasting disease in this way causes individuals who do not have experience or research with any cervid species or cervid diseases to panic, instantly believing that there will be a sort of 'outbreak' of zombie deer. The idea of an animal zombie apocalypse causes public fear. Public fear enables those in power, such as Texas Parks and Wildlife, to implement draconian policies. Texas Parks and Wildlife has done just that. They are wasting deer. They are murdering businesses. They need to be stopped.



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Texas Parks and Wildlife should reform the practices they have implemented in addressing Chronic Wasting Disease. CWD affects an incredibly small number of deer in Texas, it has no effect on human health, and it should not even be considered its own prion disease.

Let's begin with the discovery of CWD. The woman who discovered the disease, Dr. Elizabeth Williams, was faced with a peculiar situation of a mule deer, mixed with sheep and elk, that became sick in the research pen. When this deer became ill, Dr. Williams did not recognize the disease. So, she decided to perform testing on the mule deer, believing she discovered a new disease. However, she was misinformed. She relied on unreliable testing methods to 'discover' chronic wasting disease, and therefore had no way of knowing that the malady was actually scrapie, because the sheep disease was not known in cervids. But

what is scrapie? Scrapie is a degenerative TSE disease affecting the central nervous system of sheep and goats. However, a study performed by Dr. Justin Greenlee, USDA, proved that a variant of scrapie can occur in cervids, it's what we mistakenly call chronic wasting disease. Dr. Greenlee used the Western Blot test, rather than the standard IHC and Elisa tests in his experiments. The Western Blot test shows an in-depth molecular profile of the brain, allowing us to see the similar banding patterns of CWD and scrapie, specifically in the brainstem, lymph nodes, and cerebellum, making CWD and scrapie indistinguishable on the molecular level. Dr. Greenlee states that his study also suggests many similarities in the manifestations of CWD and scrapie in white-tailed deer, proving that CWD is just a variant of scrapie. It is important that in depth testing methods are used to detect CWD, as they enable the detection of minute amounts of infectious prions in animal tissues and environmental samples. IHC and Elisa tests do not allow for such an extensive view of the brain, and should therefore be considered inadequate testing methods. Because of this, we can also consider the CWD Control Program to be a false hypothesis, since it was completely based on the IHC and Elisa testing methods. CWD and scrapie are both TSE diseases affecting the brain. CWD and scrapie have the same molecular profile. CWD and scrapie are the same disease in two different species. Therefore, we know much more about CWD than Texas Parks and Wildlife likes to admit.

But even if you're not convinced that CWD is really just another form of scrapie, there are some inarguable data points that prove the insignificance of chronic wasting disease. Currently, there are 228 total CWD positives in Texas. So, yes, CWD is present, however, Texas is home to an estimated 3.6 million white-tailed deer. Therefore, only 0.0063 percent of all Texas deer have CWD, so why in the world does Texas Parks and Wildlife advertise it as such an intense problem? Not only is there a miniscule population of positive cases right now at under one percent, there has actually never been more than one percent of Texas deer infected with CWD. According to the USDA – from 1998 to 2012 – there have been 1,017,826 wild and captive Cervids tested in the entire nation. Only 4,003 have tested positive for CWD. That is only 0.39 percent. Over a 14 year period over 99.5 percent did not have the disease. This disease is not only rare, but it also takes up to seven years to kill the host animal, meaning deer are more likely to die from predators, they are more likely to die from hunters, and they are more likely to die from cars before they are killed by CWD.

However, the media coverage surrounding chronic wasting disease portrays it as this incredibly dangerous 'zombie deer disease'. If one were to google 'zombie deer disease', they'd find stories by every outlet from the San-Antonio Express News to Newsweek to the Associated Press, with



headlines declaring that zombie deer are spreading across America, or that the zombie deer disease will soon be transmitted to humans. This representation of CWD is incredibly misleading, making many American citizens believe misinformation about the issue. Describing deer infected with chronic wasting disease as ‘zombies’ is illogical; E. S. Williams, a professor at the University of Alabama college of business states that when CWD infects a host animal, the only symptoms that can be externally detected are weight loss and behavioral changes that typically span weeks or months. However, he goes on to say that these behavioral changes can be subtle and fall within the normal repertoire of cervids. Similarly, normal seasonal changes in body mass occur in free-ranging and captive cervids. This means that CWD infected cervids can look nearly identical to healthy cervids, not ‘zombie-like’ at all. Not only do media outlets falsify chronic wasting disease traits in cervids, they also alter the truth about its effect on humans. A collaborative study performed by a group of professors and researchers at the Centers for Disease Control who focus on agriculture and infectious diseases was done in order to test if CWD could be linked to any cases of CJD in humans. CJD, also known as Creutzfeldt-Jakob disease, is a fatal

neurodegenerative disorder believed to be caused by an abnormal isoform of a cellular glycoprotein known as the prion protein. And according to the CDC, it is an extremely rare disease, being that only one in every million person younger than 50 years in the United States has it and only 3.6 people of every million ages 50 years and above have it. Because of its similarity as a prion protein disease, some believe that CJD is a form of CWD in humans, arguing that humans infected with CJD have acquired it from infected venison. Since CWD is also a prion protein disease, the researchers began testing to find out if CWD in cervids could mutate into CJD in humans. They concluded that the lack of evidence of a link between CWD transmission and unusual cases of CJD, despite several epidemiologic investigations, and the absence of an increase in CJD incidence in Colorado and Wyoming suggest that the risk, if any, of transmission of CWD to humans is low, as no human cases of prion disease with strong evidence of a link with CWD have been identified. The anatomical differences in the brains of cervids and humans would not even allow for CWD to manifest into CJD. To put it in Layman’s terms, it would be like trying to fit a square peg in a

round hole. It just wouldn’t work. Therefore, chronic wasting disease poses no threat to the hunting industry in Texas, as the prion disease will not infect humans. Dr. James Kroll, a whitetail deer specialist agrees, claiming that Texans annually consume about 15 million pounds of deer meat, and there have been no reports of this venison ever having a negative effect on human health because of CWD. Lindsay Thomas, Chief Communications Officer for the National Deer Association, depicts the situation as the news media just trying to get more clicks from a mainstream audience that may not otherwise care about wildlife diseases, but they are doing real damage both to the public’s understanding of this issue and to the hunting community’s efforts to unite against this threat.

Texas Parks and Wildlife claims that they make such harsh rules because the containment and control of chronic wasting disease is of vital importance to the deer breeding industry in Texas. They argue that it is simply not sustainable to continue deer breeding operations without following their policies of rigorous monitoring and attempts to control the spread of CWD. Additionally, the unmitigated spread of CWD in deer breeding facilities would eventually result in debilitating losses of deer and



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thus loss of income without their rules. The handling and discussion of CWD in deer breeding pens by Texas Parks and Wildlife would lead one to believe that CWD originated because of the existence of captive deer breeding facilities, since their rules violently target captive deer and don't target free ranging deer at all. However, the first case of CWD was recorded in a private research facility in Colorado before deer breeding was even established in that state. The first cases of CWD in Texas were discovered in wild Mule deer in the far western part of the state. The existence of CWD has been known since 1967. If CWD was going to exterminate entire deer herds, it would have happened by now, and it would have happened before Texas Parks and Wildlife implemented their chronic wasting disease protocols. Texas Parks and Wildlife has taken the approach that CWD is a "sky is falling" disease, but it seems that they only believe the sky is falling inside of breeder pens. Deer breeders are required to test 100 percent of all mortalities and live test any deer that are released from the pens. We know that CWD is present in the wild, yet testing for CWD in wild deer continues to be on a voluntary basis. The percentage of wild deer tested each year compared to the percentage of captive deer tested each year is miniscule. There are about 70,000 deer in breeder pens in Texas. Since 2003, deer breeders have tested 21 times more captive deer for CWD than Texas Parks and Wildlife has tested in the wild out of the population of 3.6 million. If CWD truly threatens the deer population of Texas, we should be conducting stringent testing on all portions of the state's deer herd. That is not what is currently happening. Instead, Texas Parks and Wildlife has forced Texas deer breeders to endure uneducated and endure unnecessary rules regarding chronic wasting disease. In order to enforce

these oppressive management plans on breeders without causing major riots, Texas Parks and Wildlife uses the argument that Texas law classifies live whitetail as a public resource, regardless of whether the deer are free-ranging or captive. Legally, a breeder can only hold the right to keep the deer in captivity. Therefore, a breeder may have very little legal say about what occurs with the deer on their property. If this is the case, they are violating the rights of deer breeders across Texas. Texas Parks and Wildlife requires all costs of testing and extermination to be covered by the breeder themselves, as they are the

breeder's deer. This expectation is hypocritical, as they are only considered to be the breeder's deer when Texas Parks and Wildlife needs payment. If any individual or herd of deer cannot legally belong to a breeder, then why are they being forced to pay for their veterinary bills, disease testing, and execution fees? When Texas Parks and Wildlife uses this policy to gain an advantage over breeders in a court of law, they neglect the fact that they themselves are in violation of the law. If all whitetail deer belong to the state, the state should be paying for all of their care, not the breeders. But this is not the current situation. The law that all deer belong to the state needs to be implemented fully or not at all when it comes to creating management plans for the control of CWD. Either the deer breeders own, pay, and get legal say over the deer in their facility or those deer are owned by the state and the state pays for them. When a hypocritical rule or plan is forced on Texas breeders, it only makes them more resistant and angry toward Texas Parks and Wildlife, as they feel that their entire livelihood isn't being taken into consideration.

Ultimately, Texas Parks and Wildlife needs to be held responsible for their draconian rules that they have enacted on Texas deer breeders. Chronic wasting disease has no effect on wild deer populations. Chronic wasting disease has no effect on human health. Chronic wasting disease has only been recorded in less than one percent of all Texas deer. Chronic wasting disease is an insignificant disease. However, Texas Parks and Wildlife refuses to consider it as such, despite all of the evidence against them. Because of this, Texas Parks and Wildlife needs to be legally forced to change their management plans for chronic wasting disease. We need to stop Texas Parks and Wildlife from killing so many because of a disease that kills so few.



CWD/Scrapie Research Commentary

by Ted Nugent

Well, the cat is out of the bag! Those who have questioned the validity of the USDA research on CWD and scrapie will have to bite the bullet. A peer-reviewed paper has been published in the *Journal of Infectious Diseases* that reports the relationship between Chronic Wasting Disease (CWD) and Old World scrapie. The results are available to the World!



The paper reports that the molecular profiles of CWD and scrapie are so identical that "differentiation will be difficult." The bottom line is that CWD and scrapie are the same, or almost the same and the molecular profiles are such that they are not "insidious or deadly" to cervid herds or humans. We have had scrapie in our midst since 1609 in the Colonies, and 1492 with Columbus in the West Indies. Sheep are the oldest agricultural animal in the world! The Team at Colorado State in 1967 made a scientific blunder for lack of testing techniques. I submit that there never was "CWD"--only scrapie.

As many of you know, not one deer is known to have died from "CWD/scrapie" in Texas, and 15 million pounds of whitetail venison is consumed by Texans every year. Where is the proof that "CWD/scrapie" is insidious or deadly?.

The state's whitetail population has increased by about 1/2 million since "CWD/scrapie" was discovered. Why? Because "CWD/scrapie" is a clinically slow TSE, and infected animals can produce offspring for years before the malady causes death (which is normally from some other cause). Thus, a cervid herd can have incidental cases of death from scrapie, while reproduction is 10-fold and herds are actually increasing. It is a no-brainer for those who care to add and subtract.

"CWD/scrapie" is exceptionally rare in wild whitetails. The 206,000 IHC and ELISA tests from Texas showed 16 positives for folded prions (7/100,000). A gambler would say that 7/100,000 is a loser--every time!

You will hear more about this peer-reviewed paper, and the consequences of the study on current whitetail rules and regulations, as well as containment zones that are eroding deer hunting and the economy of rural communities--all for naught!

As Dr. James Kroll has said many times: "There are only two questions to be answered about CWD". 1) Does the TSE affect the welfare of cervid herds? 2) Does the TSE affect human health? The obvious answer to both questions is NO. Kroll--"So, what's the problem?"

Find the paper here:

<https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jiac443/6809058>

or scan QR code to view:

