

Quarterly Newsletter of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville Winter 2023-2024 Volume 27, No. 4

Worrisome Wildlife Diseases

by Jamie Benn

There are many aspects to consider when developing an effective wildlife management plan that maintains a healthy and sustainable population. Sustainability is of particular importance in Texas because wildlife recreation and hunting contribute significantly to the state's economy. While perfect population health and sustainability cannot be guaranteed, disease management is an important consideration when creating a wildlife management plan.

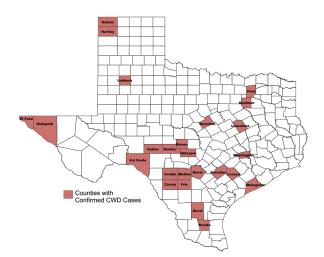
Disease management approaches can vary depending on the disease, species, season, environment, etc. They also should be tailored to the specific needs of each ranch. Thus, disease management can become complicated. But biologists, ecologists, and veterinarians at CKWRI, Texas Department of Parks and Wildlife, and elsewhere are always eager to provide guidance. Two diseases of significant interest for deer species in Texas are chronic wasting disease (CWD) and anthrax.

CWD is an infectious disease caused by a misfolded prion. A prion is a type of protein that can trigger normal proteins in the brain to fold abnormally. CWD was first characterized in Colorado in the early 1980s and has been detected in at least 31 states to date. The first case in Texas was discovered in 2012 in a free-ranging mule deer in West Texas, with hundreds of cases identified in both captive and free-ranging deer since then. CWD is difficult to manage because following exposure it may take anywhere from a few months to a few years for an animal to begin showing

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symptoms. Yet, during that time, they may be spreading infectious prions to other animals and shedding them in the environment. To further complicate matters, CWD prions are extremely stable and can remain infectious in the environment for many years. Scientists all over the world are devoting their research efforts to combatting CWD. From evaluating different methods of environmental decontamination to investigating other susceptible species, CWD research is at the forefront of the wildlife research field. At CKWRI, our CWD-focused research is looking at how animal movements may impact disease spread and understanding how different concentrations of minerals may



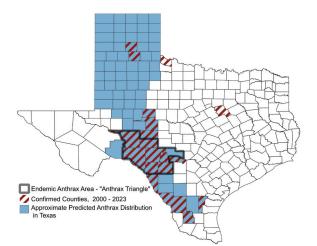
CWD has been confirmed in deer in 25 Texas counties.

Dr. Jamie Benn is a Research Scientist and Assistant Professor of Research at CKWRI. \sim

affect CWD propagation. To learn more about CWD and for some of our suggested private land management options, please refer to our bulletin, "Chronic Wasting Disease and Deer Management on Private Land" (https://www.ckwri.tamuk.edu/publications/ technical-publication/management-bulletin-no-10).

Anthrax is another problematic, but less publicized, disease affecting Texas wildlife. Outbreaks occur yearly, generally in the summer after cool, wet weather followed by hot, dry conditions. All mammals are believed to be susceptible, and many Texas ranchers report death rates between 70% and 90% in their white-tailed deer populations from a single outbreak. While anthrax can kill an animal within 1-3 days, it is similar to CWD in that it can persist in the environment for extended periods of time. Both of these factors pose significant challenges to anthrax prevention and control. Because anthrax is also known as a potential bioterrorism agent, most anthrax research is focused on the prevention and treatment of human infections. Wildlife-focused anthrax research is investigating details related to the ecology and potential distribution of anthrax. At CKWRI, we are working with external collaborators on developing new tools and information to manage wildlife anthrax outbreaks, including continued work for an oral vaccine for wildlife. We are also initiating various projects to determine rates of anthrax exposure across Texas.

Wildlife diseases like CWD and anthrax can be complicated by a range of scientific and public perceptions. A better understanding of these diseases through data-driven research will clarify many unknowns and inform wildlife management practices. ~



Estimated distribution of anthrax in Texas is shown in blue, while red stripes denote counties with at least one confirmed anthrax case since 2000.



Dr. Clay Hilton

Dr. Clay Hilton, who was formerly Director of the TAMUK Veterinarian Technology program and who supported CKWRI's veterinarian needs part time, is now full time with CKWRI. Clay will focus much of his effort on ocelot recovery and will continue supporting wildlife capture activities and wildlife health research at CKWRI. He will also teach a class on wildlife physiology and nutrition for Institute graduate students. Clay is well suited for this position given he has a graduate degree in wildlife biology and is a licensed veterinarian. We could not be more pleased to have Clay supporting CKWRI's research.



Wildlife Photography Program

CKWRI's Wildlife Photography program has just completed its 6th year. During this time the program engaged 206 students, awarded 12 certificates and 6 minors, and helped support a variety of photography needs of both students and faculty.

CKWRI News is continued on page 4.

Did You Know?

Female Canada geese choose a nesting site, but the male defends it by displaying territorial behaviors such as lowering of the head and hissing. (Audubon Society, https://www.audubon. org/field-guide/bird/canada-goose)

2023 is a Wrap

by David G. Hewitt

Leroy G. Denman, Jr. Endowed Director of Wildlife Research

Recently I had one of those moments that reminds a person how lucky they are. The moment snapped into focus when the sun lit up a green jay at a bird feeder outside our kitchen window. After the sun made the jay "pop," I realized I was in danger of taking such a stunning sight for granted. Of all the people passionate about wildlife across the United States, only those of us south of I-10 in Texas can enjoy a green jay in the bright morning sunlight.

Our unique wildlife is a draw for wildlife professionals from across North America, and it is a pleasure to show them species they cannot see in their home states. This year people visited CKWRI for many reasons. Here are some of them:

- Fifteen hunters, landowners, and faculty came to the Institute from Mexico to learn how to measure hunting trophies for the Boone and Crockett Club.
- CKWRI hosted a wildlife policy workshop for 15 participants given by policy veterans from Washington D.C. and Montana.
- Nearly 20 students and scientists came from across the western United States to attend a nutrition workshop, spend time in our forage analysis lab, and learn about foraging from our captive deer.
- The directors of state wildlife agencies from southeastern states met on the Kingsville campus and were addressed by CKWRI's Dr. Cherry, who told them about the Institute and our impact.
- Individual scientists from Ontario, Idaho, Georgia, and Colorado came to Kingsville to interact with our scientists, and to hunt or birdwatch.
- In December, Dr. Evelyn Merrill from Alberta gave the Killam Lecture and brought with her friends from British Columbia and New York. These 3 women of wildlife hosted a panel discussion of their careers for Institute students and faculty before venturing out to enjoy the South Texas brush and its wildlife.

By The Numbers

12 The average number of eggs in an Attwater's Prairie Chicken nest. (Texas Parks & Wildlife Department, https://tpwd.texas.gov/huntwild/wild/species/apc/)



All the visitors to CKWRI were here to interact with our faculty and students and to enjoy South Texas wildlife. They were thrilled to see species we take for granted, such as roadrunners, caracaras, javelinas, nilgai, and bobwhites, a species many biologists can no longer see in their home states. For example, many of the participants in our nutrition workshop were from the Rocky Mountains, Pacific Northwest, and Alaska. They mentioned they had never seen javelina but would consider seeing one as frosting on their trip. Lo and behold, at a social the first night of the workshop at the Caesar Kleberg Wildlife Center, a pack of 10 javelina materialized out of the darkness, milled around for 5 minutes, then disappeared into the brush. Our workshop participants were thrilled.

Just as there is the risk of taking our unique wildlife for granted, there is also a risk of taking for granted the gem that is CKWRI. The Institute is an integral part of the Texas landscape and is working every day on behalf of wildlife conservation. The Institute is nationally recognized and attracts scientists and students from across North America to work on our conservation challenges, either directly or through collaborative partnerships.

As we enter 2024, reflect on the privilege you have to enjoy the wildlife in your home country. Please continue to engage with CKWRI through our newsletter, magazine, Current Research Report, website, and social media. In doing so, you will be reminded of the conservation benefits CKWRI brings. Meanwhile, all of us at CKWRI will count our blessings of having you as supporters and will work hard to make sure your support is never taken for granted. ~



Caesar Kleberg Wildlife Research Institute 700 University Boulevard MSC 218 Kingsville, Texas 78363-8202

Editor: Sandra Rideout-Hanzak, Ph.D. Wildlife Research is printed on recycled paper.



More CKWRI News...

Women of Wildlife

Dr. Evelyn Merrill of the University of Alberta gave 2023's Killam Lecture during the first week in December. Dr. Merrill presented results of a longterm elk study outside Banff National Park in Alberta and the implications for elk of different migration strategies. The next day, she presented research on the spread of chronic wasting disease in mule and white-tailed deer in Alberta. CKWRI students and faculty enjoyed a bonus because Evie brought with her 2 friends who are also prominent in the wildlife field. Dr. Wini Kessler recently retired from a long career in academia and with the US Forest Service.

What Do They Eat?

Bobcat diets consist primarily of small mammals and birds. In Texas, wood rats, ground squirrels, mice, and rabbits make up the bulk of the diet. (Texas Parks & Wildlife Department, https://tpwd.texas.gov/huntwild/wild/species/bobcat/)

Wini is also a winner of the Aldo Leopold Award, the profession's highest honor. Dr. Jacqui Frair is Professor and Director of the Roosevelt Wildlife Station at the State University of New York College of Environmental Science and Forestry. Evie, Wini, and Jacqui led a panel discussion about their careers and gave students guidance on being successful wildlife professionals.

Advisory Board The Advisory Board of the Caesar Kleberg Wildlife Research Institute provides leadership in all aspects of our work. We are indebted to them for their commitment to the Institute and its mission. Kenneth E. Leonard Stuart W. Stedman Chad Auler Karen Hunke Chris C. Kleberg Ben F. Vaughan, III Tio Kleberg James McAllen, Jr. Whit Jones Gus T. Canales David W. Killam (Chair) Ellen B. Randall Bryan Wagner C. Berdon Lawrence Lauren Fisher Ben Wallace T. Dan Friedkin Mason D. King Tim Leach **Barry Coates Roberts** Charles A. Williams Jeff Hildebrand

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