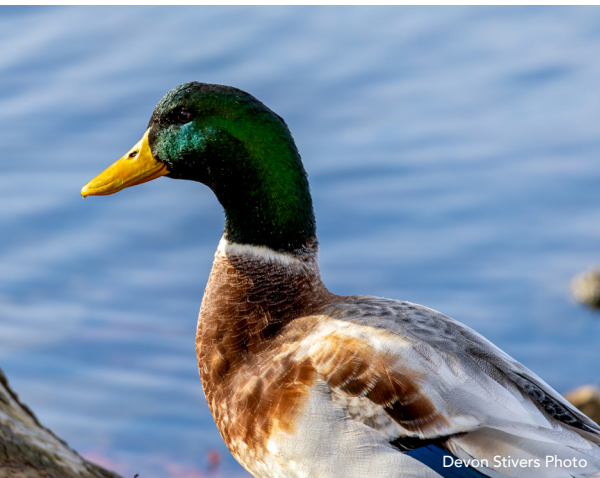




# WILDLIFE HEALTH PROGRAM NEWSLETTER

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Fall 2024 | Vol. 1, No. 3



WILDLIFE  
HEALTH  
PROGRAM

# CWD Sample Mail-in Kits

The Wildlife Health Program is offering [Chronic Wasting Disease \(CWD\) sample mail-in kits](#) to hunters. These kits allow hunters to collect lymph node tissue samples from their deer at home and send them to the Kentucky Department of Fish and Wildlife Resources for CWD testing. This initiative plays a crucial role in monitoring and managing the spread of CWD in Kentucky's wild deer and elk herds.

## How it Works

Hunters across Kentucky can sign up for a kit. Kits are available on a first-come, first-served basis, and hunters can also use kits obtained in previous years. Kits, testing, and return shipping are free of charge. Testing results are typically available within 4-6 weeks after Kentucky Fish and Wildlife receives



the returned kit. Hunters can sign up for kits throughout deer season until supplies run out.

# Highly Pathogenic Avian Influenza Cases

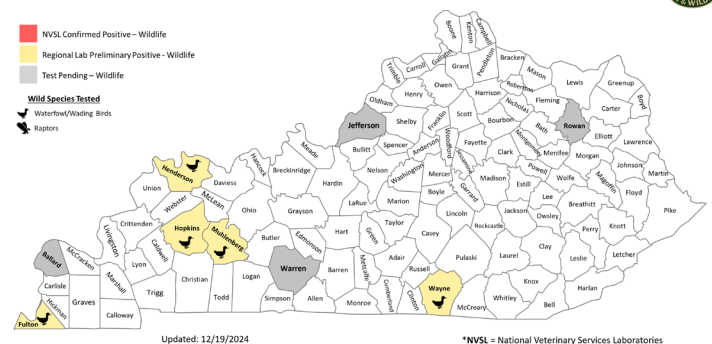
In December 2024, cases of Highly Pathogenic Avian Influenza (HPAI) were reported in several counties in Kentucky, including Henderson, Wayne, Muhlenberg, Fulton, and Hopkins. The Wildlife Health Program typically observes an uptick in reported cases of avian flu due to migratory patterns in the fall and winter. As birds travel to their wintering grounds, they come into contact with new populations, increasing the risk of spreading the virus. Colder weather can also stress birds, making them more vulnerable to infections, while dense congregations at feeding sites further elevate the risk of disease transmission.

In addition to birds, a variety of wild mammals, and dairy cattle across the U.S. have been infected with HPAI. Earlier this year, HPAI was found in two raccoons and an American mink in Kentucky.

Signs of HPAI in infected birds may include swimming in circles, incoordination, lethargy, unwillingness to fly, and head tremors.

More information on avian flu can be found [here](#). Educational resources, including fact sheets and flyers, are also available.

Highly-Pathogenic Avian Influenza Cases in KY  
(October 2024 – present)



**Suspected cases of HPAI can be reported to the Kentucky Department of Fish and Wildlife Resources by calling the Information Center at 1-800-858-1549 from 8 a.m. to 4:30 p.m. (Eastern) on weekdays or submitted [online](#).**

# Grants Update: Enhancing CWD Surveillance in Kentucky

The Wildlife Health Program is pleased to announce the award of \$98,620 from the USDA's Animal and Plant Health Inspection Service (APHIS) Wildlife Services. This funding will support the project titled "A Streamlined Approach to Increase Hunter Engagement in CWD Surveillance, Education, and Outreach in Kentucky."

Chronic Wasting Disease (CWD) poses a significant threat to wild cervid populations, and this project aims to play a pivotal role in addressing this challenge.

## Project Highlights

This initiative focuses on expanding a self-service CWD surveillance program, which will include:

- **Mail-in Kits for Hunters:** Simplifying the process for hunters to collect and submit samples for CWD testing.

- **Mobile App Development:** A complementary app will enhance data collection and allow for real-time reporting of findings, ensuring timely communication of vital information and educational resources to stakeholders.

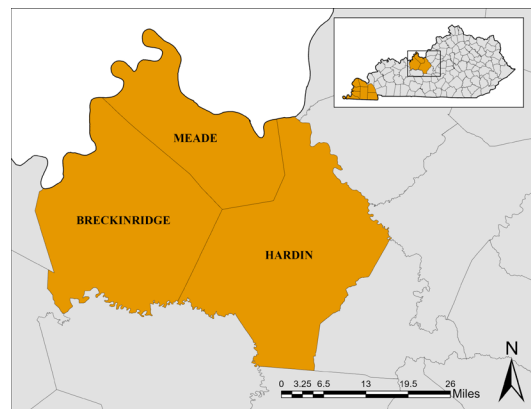
By actively engaging hunters and the broader community, the program aims to empower informed decision-making and promote compliance with management strategies. This approach not only enhances sample collection but also optimizes departmental resources and staffing, leading to long-term cost reductions associated with CWD outreach and education. Enhanced engagement and collaboration will provide invaluable insights into CWD prevalence and distribution, ultimately refining control strategies and ensuring the health of Kentucky's deer and elk herds.

# Chronic Wasting Disease Detected in Captive Cervid from Breckinridge County

In October 2024, the Kentucky Department of Agriculture [announced](#) that lab testing confirmed Chronic Wasting Disease (CWD) in a deceased captive deer from Breckinridge County. It marks Kentucky's first case of CWD in a captive cervid.

Following the announcement of this detection, the Kentucky Fish and Wildlife Commission voted to establish a [CWD Surveillance Zone](#) for Breckinridge, Hardin, and Meade counties. Special regulations in this zone include:

- **No baiting or feeding:** Grain feed, mineral blocks, or other baits used to attract deer cannot be used in a CWD Surveillance Zone.
- **Carcass importation prohibited:** Whole carcasses or high-risk parts (head, skull cap, or skull with any brain material, or spine) of cervids cannot be brought into Kentucky.
- **Carcass transportation restrictions:** Carcasses or high-risk parts of deer harvested within a CWD Surveillance Zone may not be taken outside of the zone. Only de-boned meat, antlers attached to a clean skull cap, a clean skull, clean teeth,



hides, and finished taxidermy products may be taken outside of a zone.

- **Prohibition of the rehabilitation of cervids:** The rehabilitation of deer or any other cervid in a CWD Surveillance Zone is prohibited.

More information on CWD in Kentucky can be found [here](#).

# Diagnostic Case Highlight: Green Lung Syndrome • John Lawson Shrewsbury D.V.M.

This article reviews a case from August 2022 involving a female white-tailed deer (*Odocoileus virginianus*) received by the Wildlife Health Program.

Necropsy findings from lung samples were consistent with “green lung”, a syndrome rarely diagnosed in white-tailed deer across the Southeastern United States. Green lung syndrome can vary in severity, sometimes without noticeable symptoms, but in this case, a large portion of the lung was affected, likely causing respiratory distress and other issues.

An examination of the lung samples revealed a firm green mass measuring 2 cm x 2 cm x 1 cm. Microscopic analysis showed that approximately 70-80% of the lung architecture was obliterated and replaced by numerous irregular aggregates—clusters of cells and debris—with a subtle branching appearance. These aggregates consisted of necrotic debris, viable and degenerated white blood cells, multinucleated giant cells, fibrin, and mineralized debris, indicating a pathological response to injury or disease.

Using Grocott’s methenamine silver (GMS) stain, numerous clusters of fungal hyphae were identified, often with necrotic foci—localized areas of dead tissue. The hyphae measured 5-15 micrometers, were non-septate, and exhibited irregular branching.

The surrounding lung tissue displayed thick bands of fibrous connective tissue, few small blood vessels, and scattered white blood cells. Some pulmonary alveoli contained nematode larvae, likely from *Parelaphostrongylus* sp., noted as an incidental finding. No bacteria were detected by Brenn-Brown Gram stain, and diffuse vascular congestion (widespread accumulation of blood in the blood vessels) was observed.

Samples collected during the necropsy were submitted to the Southeastern Cooperative Wildlife Disease Study (SCWDS) for histopathological examination and further testing. SCWDS is continuing its investigation of green lung syndrome in white-tailed deer, having reported over 40 cases since 2003 across 12 member states, primarily in Florida, North Carolina, and Georgia. Ongoing PCR testing of archival cases with unknown causes aims to identify difficult-to-isolate

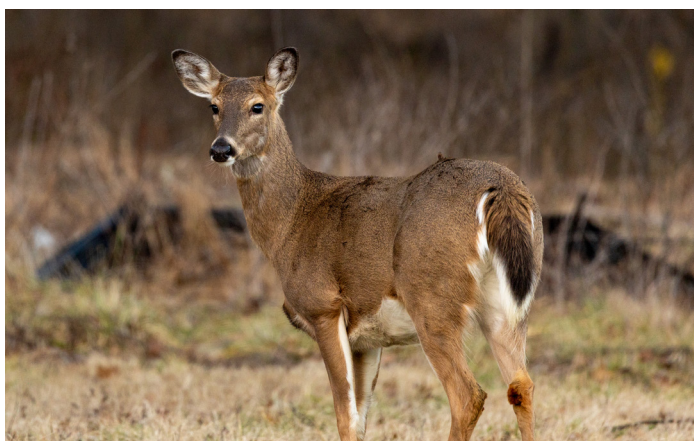


Photo: Rachel Cummings

pathogens such as *Pythium* sp. and *Conidiobolus* sp. The results are expected to help determine potential routes of exposure and enhance understanding of how this disease affects white-tailed deer.

Research into green lung syndrome has revealed that lesions resembling this condition, caused by fungus-like organisms, are seldom reported in wildlife. These organisms are typically opportunistic pathogens, often acquired through contact with stagnant water. Notably, a specific pathogen is often not identified, raising significant public health concerns. Organisms such as *Pythium insidiosum*, *Conidiobolus coronatus*, and *Basidiobolus ranarum* can infect both humans and domestic animals, primarily causing cutaneous and intestinal infections in the latter.

# Deer Hunters!

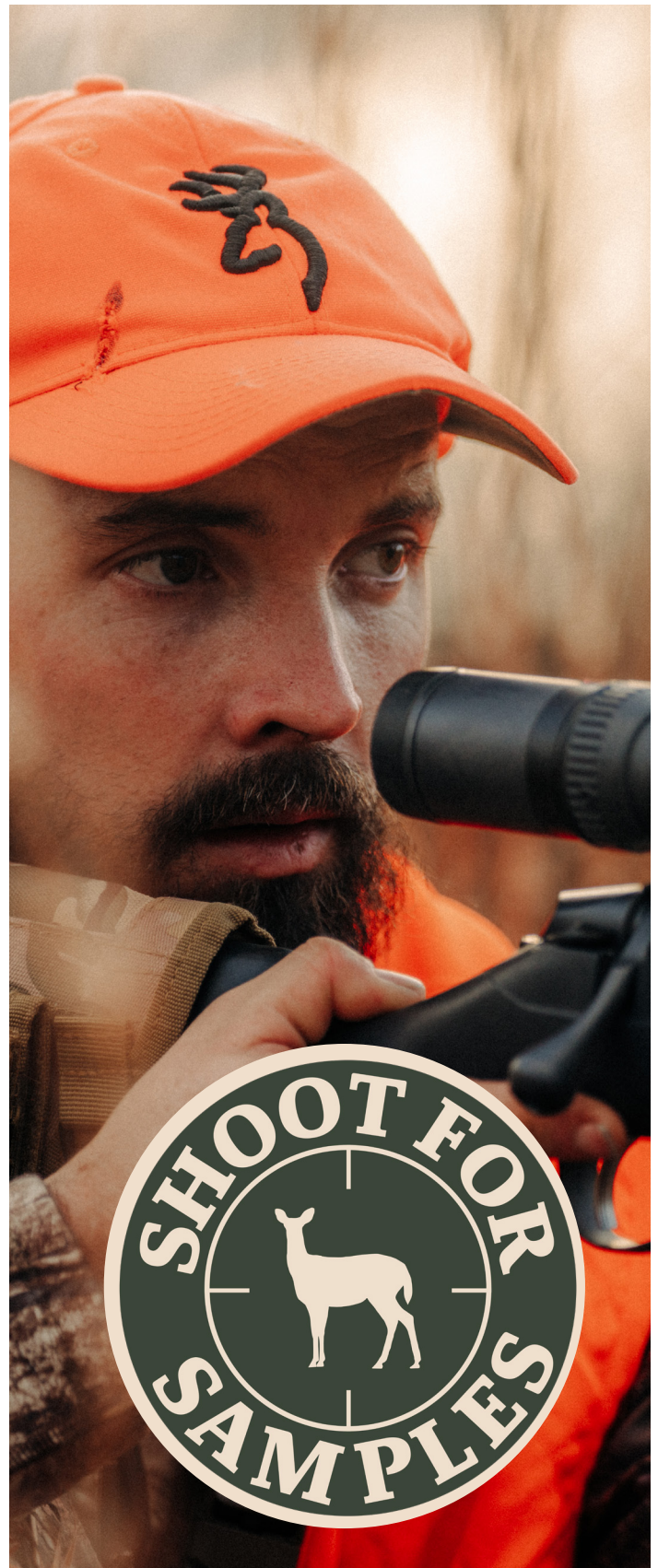
## Enter the Shoot for Samples Giveaway

The Kentucky Department of Fish and Wildlife Resources is launching the regional [Shoot for Samples Giveaway](#), running until January 20, 2025. By submitting samples for CWD testing, hunters play a vital role in safeguarding Kentucky's deer and elk herds.

### How to Participate

- 1. Submit Samples:** Hunters can submit samples through the following methods until January 20, 2025:
  - **CWD Sample Drop-off Sites:** Bring the head of legally harvested and telechecked bucks or does to one of our designated CWD Sample Drop-off sites. Follow the instructions for proper drop-off procedures. [Find a list of drop-off locations.](#)
  - **CWD Sample Mail-in Kits:** Collect lymph node samples from legally harvested and telechecked deer and send them to Kentucky Fish and Wildlife using CWD Sample Mail-in Kits. [Sign up for a kit and find a pick-up location near you.](#)
- 2. Enter to Win:** For each deer head dropped off or lymph nodes submitted, hunters will receive an entry into the giveaway—each entry counts as one chance to win. **Hunters must abide by all bag limits.**
- 3. Win Prizes:** Prizes include \$500 and \$1000 gift cards, an Elite Carbon Era bow, and a TenPoint Crossbow. Prizes are being offered in five regions across Kentucky—Bluegrass, Northeast, Southeast, Green River, and Purchase. One winner will be drawn for each region and announced at the end of deer season.

### Sponsors



# Research Highlights

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*Trichomonas gypaetini* was detected in 117 (88%) of 133 Bald Eagles (*Haliaeetus leucocephalus*) and in 0/7 Golden Eagles (*Aquila chrysaetos*) in the USA, with no sex or age prevalence difference. All eagles lacked associated lesions. This study indicated that *T. gypaetini* is common and widespread in Bald Eagles, but rarely associated with disease.

**Learn More:** [doi.org/10.7589/JWD-D-24-00008](https://doi.org/10.7589/JWD-D-24-00008)

Cunningham AJ, Garrett KB, Nemeth NM, Barron H, Stasiak I, Groves B, Gibbs SEJ, Ruder MG, Kunkel MR, Weyna AAW, Teo XH, Goodwin C, Radisic R, O'Reilly A, Swanepoel L, Cleveland CA, Slankard KG, Yabsley MJ. 2024. High prevalence and broad distribution of *Trichomonas gypaetini* in bald eagles. *Journal of Wildlife Diseases* 60:4.

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Wild turkeys (*Meleagris gallopavo*) are an important game species facing population declines in various US regions, including Kentucky. To assess their health, postmortem examinations were conducted on 36 hunter-harvested adult males in western Kentucky in April 2018. The turkeys were found to be in fair to good nutritional condition, with no significant lesions. Ticks (94%) and lice (31%) were present, along with intestinal nematodes and cestodes; coccidian oocysts were found in 39% of birds, and capillarid eggs in 6%. Lymphoproliferative disease virus and reticuloendotheliosis virus were detected in 39% and 11% of samples, respectively. PCR tests on spleen samples identified *Borrelia burgdorferi* (11%), *Haemoproteus* sp. (83%), and *Leucocytozoon* sp. (3%). Histologic assessments showed abundant sperm in most testis tissues. Mineral and toxicant analyses from 32 liver samples were unremarkable. Further research is needed to evaluate population risk factors and the impacts of pathogens on both adults and poults.

**Learn More:** [doi.org/10.7589/JWD-D-23-00162](https://doi.org/10.7589/JWD-D-23-00162)

Haynes E, Yabsley MJ, Nemeth NM, **Danks ZD**, Stasiak I, Garrett KB, Adcock KG, Chamberlain MJ, Ruder MG. 2024. Health assessment of adult male eastern wild turkeys (*Meleagris gallopavo silverstris*) from Western Kentucky, USA. *Journal of Wildlife Diseases* 60:3.

This research described a U.S. national survey of ongoing management and communication efforts by state wildlife agencies in response to CWD. Questionnaires were distributed to all 50 states in 2020 (response rate = 76%, n = 38). States with CWD were predicted to differ from states with no known cases of this disease (independent variable). The dependent variables were all related to CWD: current and proposed surveillance, current practices, public involvement, survey research, and other communication forms. Across all 47 variables, the average percent difference between CWD and non-CWD states was 27%, all but seven comparisons were double-digit differences, and the overall average for the effect sizes was .30. Although the findings implied that CWD states were more engaged with the disease, non-CWD states need to recognize that the disease shows no signs of slowing down and will likely spread to most states.

**Learn More:** [doi.org/10.1080/10871209.2021.2023712](https://doi.org/10.1080/10871209.2021.2023712)

Miller CA & Vaske JJ. 2022. How state agencies are managing chronic wasting disease. *Human Dimensions of Wildlife* 28:1.

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Chronic wasting disease (CWD) is a prion disease affecting various captive and free-ranging cervids. Over the past few decades, CWD has spread rapidly across North America, leading to increased incidence and a wider geographical impact. This rise poses risks such as environmental contamination, transmission to animals cohabiting animals, and potential transmission to humans. This review will discuss the mechanisms and routes of CWD transmission, strain diversity, spillover and zoonotic potential, and strategies to mitigate the threat of CWD.

**Learn More:** [doi.org/10.3390/v14071390](https://doi.org/10.3390/v14071390)

Pritzkow S. 2022. Transmission, strain diversity, and zoonotic potential of chronic wasting disease. *Viruses* 14:7.



# WILDLIFE HEALTH PROGRAM

Through the Wildlife Health Program, Kentucky Fish and Wildlife is dedicated to safeguarding the health of Kentucky's wildlife and fostering resilient ecosystems that support the well-being of both wildlife and people for generations to come.