



Chronic Wasting Disease

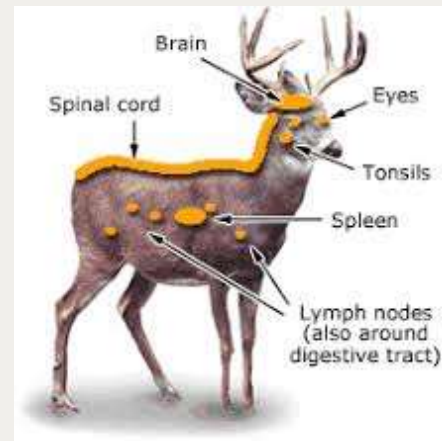
KENTON LOHRAFF
Chief, Natural Resources Branch
573-596-2814
Kenton.M.Lohraff.civ@mail.mil

Version 1
19 NOV 2020



Pulaski County's First Case

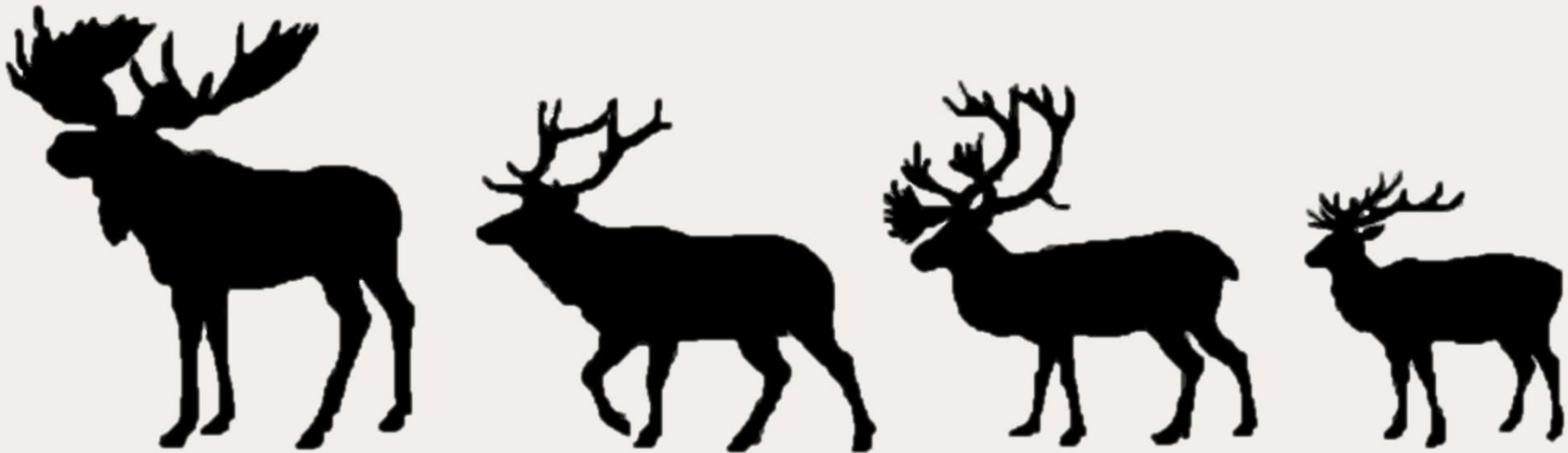
The Missouri Department of Conservation (MDC) reports it has recently confirmed the first case of chronic wasting disease (CWD) found in Pulaski County. The confirmed case is from an adult male deer harvested by a hunter near Waynesville. A tissue sample was collected from the deer for CWD testing as part of MDC's routine annual statewide surveillance for the disease.





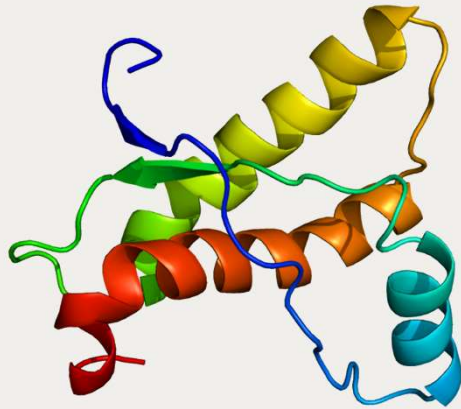
What Is Chronic Wasting Disease?

Chronic Wasting Disease (CWD) is an always fatal, contagious, neurological disease affecting deer species (including reindeer), elk, and moose. It causes a characteristic spongy degeneration of the brains of infected animals resulting in emaciation, abnormal behavior, loss of bodily functions and death.





What Causes CWD?



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. The abnormal prion “infects” the host animal by promoting conversion of normal cellular prion protein to the abnormal form. As a protein, the CWD agent does not contain any genetic material (DNA or RNA) as occurs with bacterial, viral, fungal, and parasitic disease agents.

Transmissible Spongiform Encephalopathies (TSEs)

Deer	Chronic Wasting Disease (CWD)
Cattle	Mad Cow Disease
Humans	Creutzfeldt-Jakob disease (CJD)

The CWD infectious agent is smaller than most viral particles and does not cause any detectable immune response or inflammatory reaction in the host animal. Like the abnormal prions that cause other TSEs, the CWD agent is highly resistant to enzymes, chemicals, heat and other materials or procedures that typically are used to inactivate disease agents.

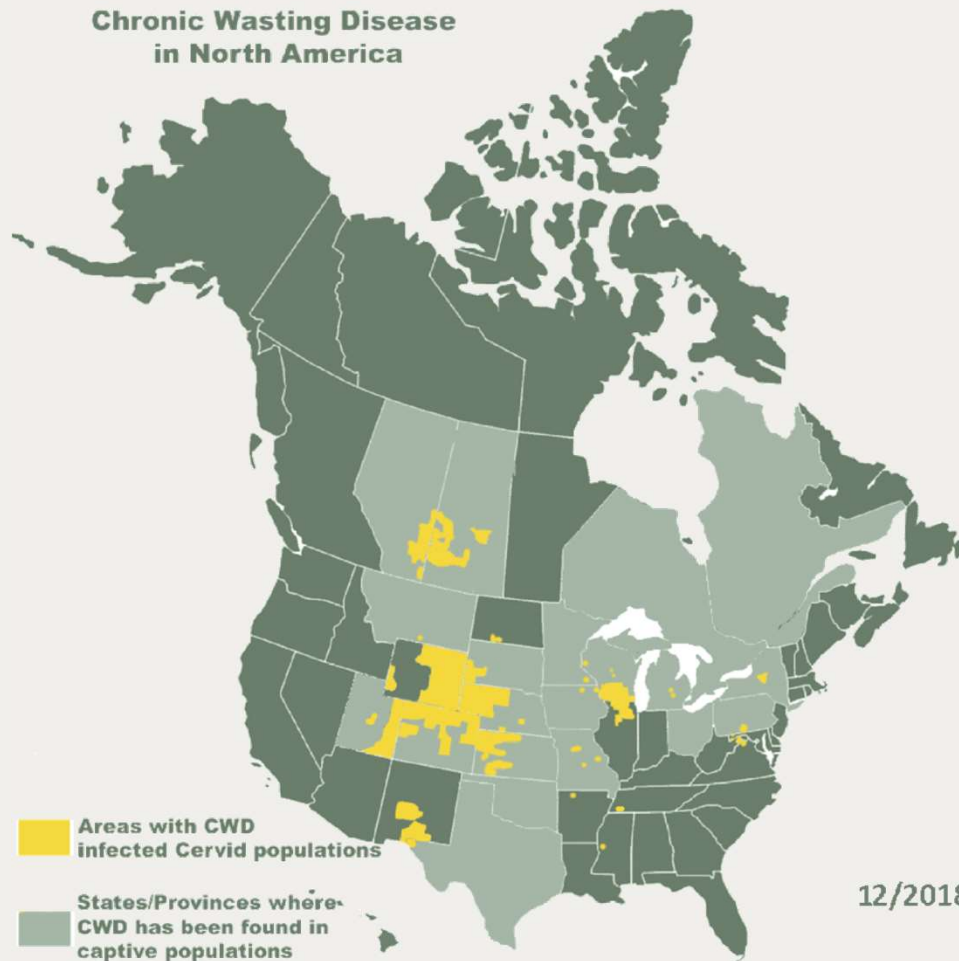




U.S. ARMY

Where Does CWD Occur? (North America)

Chronic Wasting Disease
in North America



Areas with CWD
infected Cervid populations

States/Provinces where
CWD has been found in
captive populations

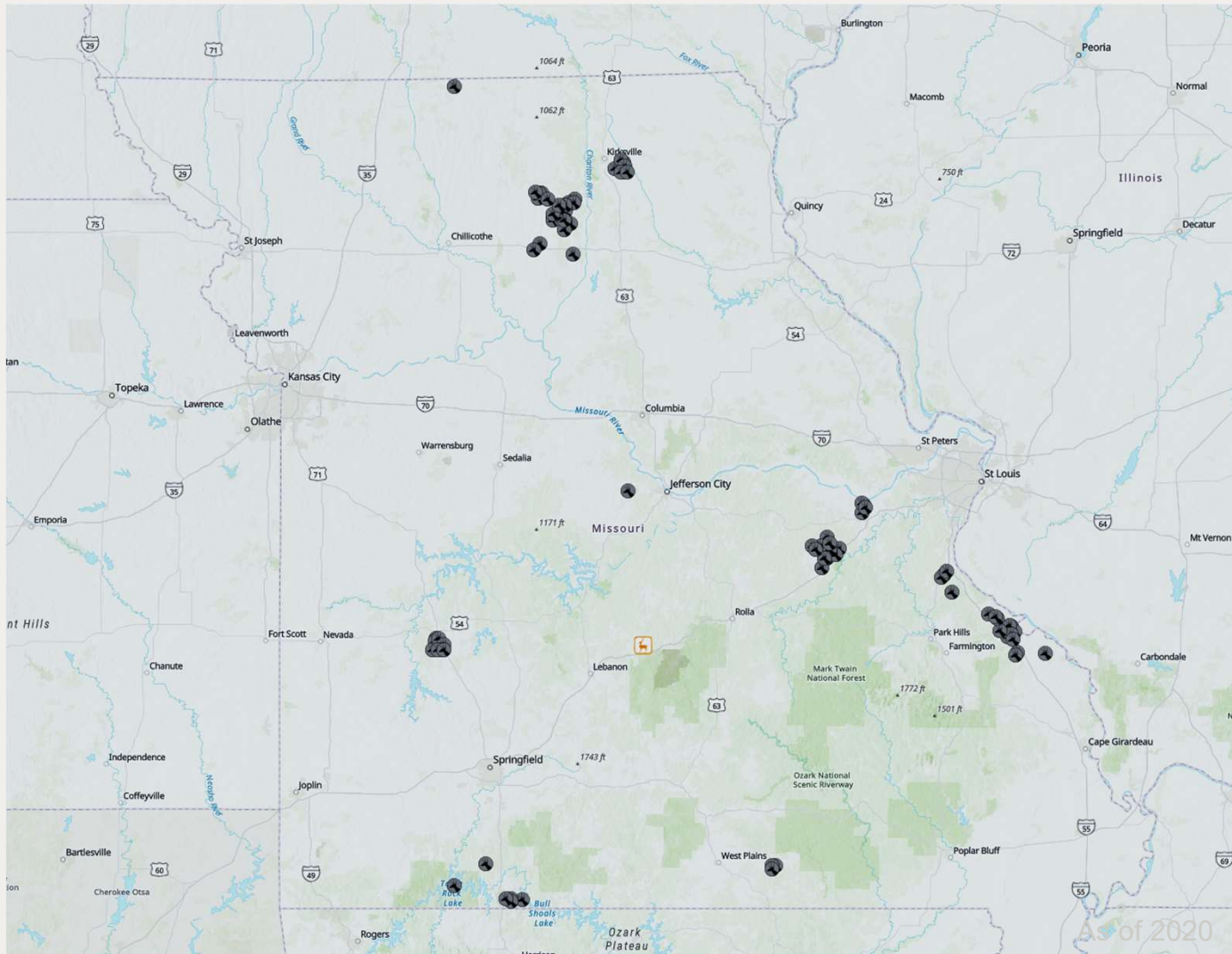
12/2018





U.S. ARMY

Where Does CWD Occur? (Missouri)





How Does CWD Spread?

The CWD prions can be present in many organs and tissues within the body and can be shed by an infected animal in feces, urine, and saliva prior to onset of clinical disease. Because CWD is extremely resistant to decomposition in the environment, transmission of CWD may occur indirectly via exposure to a contaminated environment as well as directly from animal to animal. Artificially concentrating deer and elk in captivity or by providing supplemental feed, bait, minerals, or other materials to wild animals are all human behaviors that increase opportunities for spread of CWD.

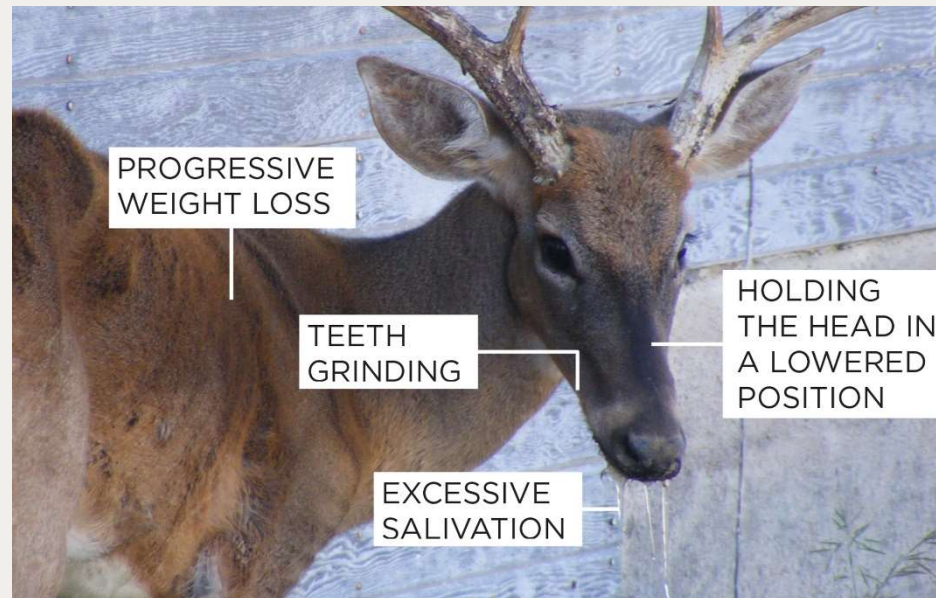
The persistence of the CWD prions in contaminated environments and a lack of proven decontamination procedures represent a significant obstacle to the eradication of CWD from captive and free-ranging cervid populations.





How Is CWD Detected?

Clinical signs and visible lesions of CWD alone are not conclusive, and currently there is no practical live animal test. A definitive diagnosis is based on examination of the brain for the characteristic microscopic spongiform lesions and/or accumulation of the CWD-associated prion protein in brain and lymphoid tissues using a technique called immunohistochemistry.





CWD Sampling

MDC offers statewide, voluntary CWD sampling and testing of harvested deer during the entire deer season at select locations throughout the state including participating MDC offices, cooperating taxidermists, and new freezer head-drop locations.

MDC provides hunters in the Pulaski County area with opportunities to have their harvested deer tested for CWD. Two sampling stations have been set up on FLW. These include a freezer at the Outdoor Adventure Center and a collection barrel near the Amnesty Site off of FLW just North of Range Control.

Sampling and test results are provided free.

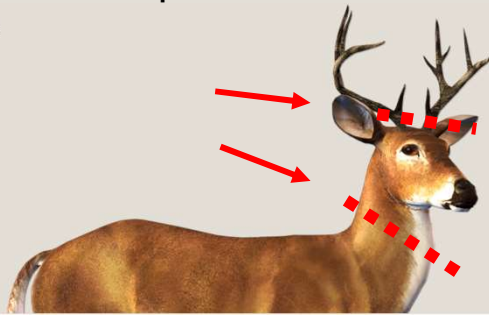




How To Get Your Deer Tested

STEP 1

Remove antlers if present. Cut neck 4-6 inches below head.



STEP 2

Place head in the bag provided and knot.



STEP 3

Fill out ALL information on the sample tag.

Don't forget your Telecheck ID!

CWD Biological Sample Tag (For Biologist Only) Add one barcode here

Instructions: Fill out ALL information on this tag. Attach sample tag to the outside of the sample bag. Write your Telecheck ID Number to check results in 2-4 weeks.

Harvest Date (mm/dd/yyyy): _____ Check One: Buck Doe

County of Kill: _____ RES/GPS: _____

Hunter Name: _____ Hunter Phone Number: _____

Telecheck ID Number: _____ (Print number beginning with 1, 2, or 8)

Name of Sample Collector: _____ (For Biologist Only)

Age of Deer: Fawn Yearling Adult

For more information: Call MOCD at 573-635-8100 Visit our website at www.mo.gov/cwd Results of samples will be available at www.mo.gov/cwd

STEP 4

Take note of your Telecheck ID Number. It can be used to check your results in 2-4 weeks.

CWD Biological Sample Tag (For Biologist Only) Add one barcode here

Instructions: Fill out ALL information on this tag. Attach sample tag to the outside of the sample bag. Write your Telecheck ID Number to check results in 2-4 weeks.

Harvest Date (mm/dd/yyyy): _____ Check One: Buck Doe

County of Kill: _____ RES/GPS: _____

Hunter Name: _____ Hunter Phone Number: _____

Telecheck ID Number: _____ (Print number beginning with 1, 2, or 8)

Name of Sample Collector: _____ (For Biologist Only)

Age of Deer: Fawn Yearling Adult

For more information: Call MOCD at 573-635-8100 Visit our website at www.mo.gov/cwd Results of samples will be available at www.mo.gov/cwd



STEP 5

Attach tag with the provided zip tie to bag.



STEP 6

Place bag in the CWD Testing Drop-Off container.





What Is The Risk To Humans?

“To date, there have been no reported cases of CWD infection in people. However, some animal studies suggest CWD poses a risk to certain types of non-human primates, like monkeys, that eat meat from CWD-infected animals or come in contact with brain or body fluids from infected deer or elk. These studies raise concerns that there may also be a risk to people. Since 1997, the World Health Organization has recommended that it is important to keep the agents of all known prion diseases from entering the human food chain.”

Centers for Disease Control and Prevention





What Can I do?

- Participate in testing programs; get your harvested deer tested.
- The CDC advises, if your animal tests positive for CWD, do not eat the animal; properly dispose of the meat and carcass parts.
- Practice good hygiene while dressing your deer. Avoid cutting into organs and parts that may hold CWD.
- Avoid activities that result in the unnatural concentrations of deer (feeding, used of mineral blocks).
- Dispose of carcasses properly (burial or landfill is preferred method).
- Avoid transportation of live deer, deer parts, and products into or out of other areas (especially counties where CWD is known to be present).
- Learn more: Missouri Dept of Conservation www.mdc.mo.gov





Let us know how
we're doing

END OF BRIEF

**Environmental Division
Directorate of Public Works
USAG Fort Leonard Wood
573-596-0882**

