

October 2011

Invasive Species of the Month

Chronic Wasting Disease



A deer with chronic wasting disease. Photo by Colorado Division of Wildlife.

What? Chronic Wasting Disease (CWD) is a transmissible neurological disease of deer, elk, and moose that produces small lesions in brains of infected animals. It is characterized by loss of body condition, behavioral abnormalities and death. CWD was classified as a transmissible spongiform encephalopathy (TSE) in 1978 and is similar to mad cow disease in cattle and scrapie in sheep. Infectious agents of CWD are neither bacteria nor viruses, but are hypothesized to be prions. Prions are infectious proteins without associated nucleic acids. Although CWD is a contagious fatal disease among the ungulates listed above, research suggests that humans, cattle and other domestic livestock are resistant to natural transmission. Although the possibility of human infection remains a concern, it is important to note there have been no verified cases of humans contracting CWD. CWD can reduce the growth and size of wild deer and elk populations in areas where the prevalence is high, and is of increasing concern for wildlife managers across North America. The mode of transmission is not fully understood, but evidence supports the possibility that the disease is spread through direct animal-to-animal contact or as a result of indirect exposure to prions in the environment. CWD is a degenerative neurological illness that has affected both farmed and wild cervids in the U.S., thus impacting the hunting and wildlife industries as well as domestic and international markets for farmed cervids and cervid products.

Where? CWD was first identified as a fatal wasting syndrome in captive mule deer in Colorado in the late 1960s and in the wild in 1981. By the mid-1990s, CWD had been diagnosed among free-ranging deer and elk in a contiguous area in northeastern Colorado and south-eastern Wyoming, where the disease is now endemic. The disease also has been diagnosed in southwestern Nebraska, and has recently been found in several new areas across the North American continent. In recent years, CWD has been found in areas outside of this disease-endemic zone. In February 2011, a white-tailed deer harvested in Maryland tested positive for CWD. The geographic range of diseased animals currently includes 15 U.S. states and two Canadian provinces and is likely to continue to grow.

Lookalike? In early stages of infection, animals do not show any symptoms. In fact, most deer with CWD do not appear sick. The incubation period can range from 1-5 years. In later stages, infected animals begin to display abnormal behavior such as staggering, carrying the head and ears lowered, drooling, not showing fear of humans, and an exaggerated wide posture. Sick animals may have poor hair coats and appear emaciated, or starving - thus the name "wasting disease." Some CWD symptoms may also be characteristic of diseases or conditions other than CWD (e.g., bacterial brain abscesses, hemorrhagic disease, or normal spring and fall hair shedding). The only way to make a definitive diagnosis is to examine the brain and/or lymph nodes in a laboratory. There is no practical live-animal test for free-ranging cervids, and there is no vaccine or treatment for CWD.

What can you do?

Do not attempt to contact, disturb, kill, or remove an animal you suspect has CWD. You should accurately document the location of the animal and immediately contact ODFW at (503) 947-6000 or report suspected invaders to www.oregoninvasiveshotline.org or 1-866-INVADER.

