INDIANA DIVISION OF FISH & WILDLIFE

Hemorrhagic Disease in White-Tailed Deer

DNR
Indiana Department of Natural Resources

What is it?

Hemorrhagic disease is an important viral disease that affects white-tailed deer every year. The disease is caused by related orbiviruses in the epizootic hemorrhagic disease (EHD) or bluetongue (BT) virus serogroups. The difference between the two diseases is often indistinguishable in deer. Both diseases are transmitted by biting flies of the genus *Culicoides*. The disease was first reported in 1955, though deer die-offs consistent with hemorrhagic disease were reported as early as 1886.

Jeff Thompson, DNR

How does it affect deer?

Initially, deer may appear depressed or feverish. Deer often seek comfort in or around water. Other signs may include blue tinted tongue or eyes, ulcers on the tongue, sloughed hooves or an eroded dental pad. Hemorrhagic disease is often fatal to deer, though some deer will survive the illness. Not every deer will contract hemorrhagic disease, and the disease can be present or absent in any area, often dependent on the vector population. Severity and distribution of the disease is highly variable and unpredictable. Death losses during an outbreak can range from negligible to greater than 50% or more. Severe outbreaks rarely occur in subsequent years due to immunity gathered from previous infections.

How does it occur?

The vector for hemorrhagic disease are flies of the genus *Culicoides*, commonly known as biting midges, sand gnats, and no-see-ums, which transmit the virus when they are most abundant, typically during the late summer and early fall. There is evidence that shows outbreaks may be worse during drought years. The onset of freezing temperatures often brings a sudden halt to disease outbreaks. It is unknown how the virus persists through winter.

What should we do?

There is currently no management for hemorrhagic disease. If you suspect an outbreak is occurring, contact your local wildlife biologist. Humans are not at risk for contracting hemorrhagic disease in any manner.

Photos: Chad Stewart, DNR