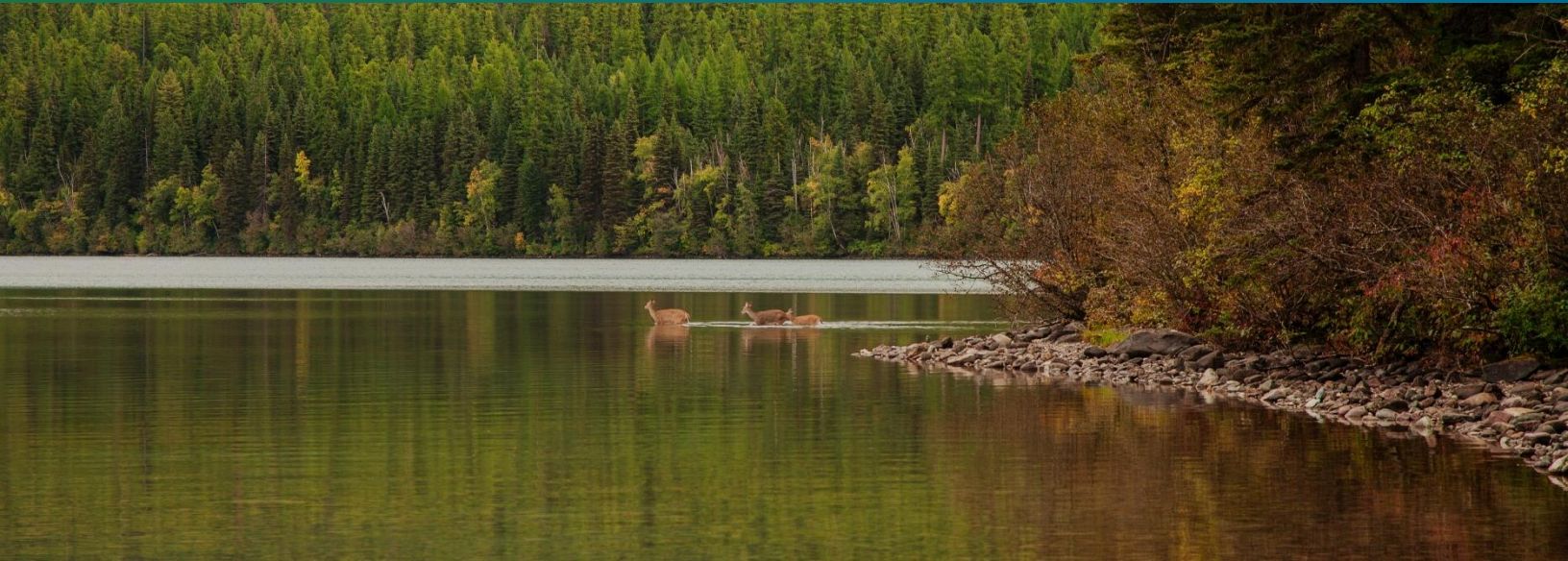




Introduction

Epizootic hemorrhagic disease (EHD) is a type of hemorrhagic disease caused by epizootic hemorrhagic disease virus. EHD virus is transmitted through biting midges from the genus *Culicoides*. EHD affects white-tailed deer and can cause significant mortality events during outbreaks. EHD virus is also related to Bluetongue virus which affects mostly domestic ruminants but has also been documented in cervids. The first documented case of EHD in New Jersey was in 1955 and continues to occur seasonally during the late summer and early fall months.

Species Affected

EHD affects wild ruminants, particularly white-tailed deer. In the western United States EHD can also affect mule deer and pronghorn sheep.

Clinical Signs

Clinical signs begin to present approximately 2-10 days after infection. Deer that begin to show clinical signs often die within 8 to 36 hours. Clinical signs can

include reduced activity, inappetence, lameness, small hemorrhages on the mouth or nose, reduced fear of humans, and fever as well as swelling of the head, neck, tongue, or eyelids. Often deer that have died of EHD will be found near or in bodies of water, due to the fever which causes them to seek out water. EHD can also cause sloughing (shedding) of the hoof walls in chronic infections.

Transmission

EHD virus is transmitted through biting midges of the genus *Culicoides*. These biting midges are also known as “no-see-ums”, gnats, or punkies. Biting midges are the vector for EHD, a vector is an organism that transmits disease from one animal host to another. In the case of EHD, a female biting midge picks up EHD virus from the blood of an infected deer and transmits it when it bites another deer. Biting midges cannot infect humans with EHD. These midges are also responsible for the transmission of Bluetongue virus in ruminants. Once a deer is dead it can no longer transmit the virus.

Diagnosis

Only a tentative diagnosis can be made without laboratory testing based on signs and lesions. EHD is indistinguishable from bluetongue and testing is required for confirmation.

Epidemiology

EHD occurs seasonally through late summer to early fall when biting midge activity is greatest. Biting midges typically emerge during drought from riverbeds as the water level decreases. Biting midges can also be carried north from the southern states during summer storm systems like hurricanes. Due to the influx of biting midges during the late summer and early fall seasons EHD can cause major mortality events in the northern United States. After

frost begins during the fall, biting midges will die off and stop the transmission cycle until the following year. New Jersey Fish and Wildlife has been tracking EHD in the state since the first documented case in 1955.

What to Do/Who to Contact

If you suspect a deer has EHD and is exhibiting the above-mentioned signs, report to the following:

Bureau of Wildlife Management:

State Deer Biologist:

Jodi Powers, 609-223-6073

Wildlife Veterinarian:

Dr. Nicole Lewis, 908-735-6398

Additional Information

[Epizootic Hemorrhagic Disease | Cornell Wildlife Health Lab](#)

Cover image: [Be on the watch for Epizootic Hemorrhagic Disease \(EHD\) in deer | Purdue Extension Forestry & Natural Resources](#)



**Office of Fish and
Wildlife Health and
Forensics**

