

Dr. Deer's Whitetail World

BY DR. JAMES C. KROLL

A Tale Of Two Deer Diseases — Part 2: EHD And BT

Last month I discussed chronic wasting disease (CWD). Since it's gotten so much press in recent years, CWD is probably the best-known deer disease. If you believe newspaper accounts and articles in some of the outdoor magazines, we only have a few years of deer hunting left! Models published by Wisconsin scientists have predicted that deer will be extirpated from the Wisconsin landscape in 20 or so years.

I presented the facts about the disease in Part 1. CWD is certainly a disease to be concerned about, yet its potential for devastating our deer and elk herds has been somewhat overstated. Looking at data from the Rocky Mountain states where the disease was first discovered over 30 years ago indicates no significant changes in deer or elk numbers. Some of these states have even issued bonus antlerless tags in the last few years.

During the first two decades after CWD's discovery, deer and elk populations in Colorado (the original source of the disease) increased by 67 percent and 90 percent, respectively. The truth is, CWD is more a political problem than a biological one. In this last installment of the series, I will tell you about a disease that kills thousands, if not hundreds of thousands, of deer each year, and yet few hunters have ever even heard of it!

Its name doesn't exactly roll off the tongue: epizootic hemorrhagic disease (EHD). It has a cousin with a more reasonable name, blue tongue disease (BT). We first became interested in these diseases when our experimental herd near Columbus, Georgia, became infected. Over the course of two weeks, we lost about 75 percent of our deer. EHD and BT are viral diseases, related in some ways to the dreaded Ebola virus, which affects humans (so far, outbreaks in humans have been confined to Africa). Fortunately, EHD and BT do not infect humans, but their effect on deer is every bit as gruesome as what Ebola does to humans.

In seven to 14 days after infection, a deer with EHD or BT develops a high fever, followed by erosion of the mouth and tongue, then the digestive tract. The intestines of an EHD/BT victim appear to dissolve into a bloody ooze! The survivors end up with scars in their rumen (first "stomach") and sloughed hooves from the interruption in digestion. The victims often are found around ponds and streams, presumably because they are trying to cool their fevered bodies.

Whitetails do not acquire the diseases by direct contact. Rather, a biting gnat spreads the disease from deer to deer. Although there are some 463 known species of gnats in North America, the most common culprit is *Culicoides varipennis* (several other species have been implicated). These gnats, also known as no-see-ums and sand gnats, emerge from mud in late summer to early fall. However, extreme droughts encourage the gnats at other times of the year. Since gnats are bloodsucking flies, their soiled mouthparts carry the virus to the next victim.

At this date, there are two strains of EHD and five strains of BT known to affect deer. In addition, there are many variants to some strains. The EHDV-2 virus is the most commonly occurring strain of EHD, and BT-10, BT-11 and BT-12 viruses are most common for BT. No one really knows how the virus over-winters, since gnats generally die back after the first frost, but it has been hypothesized that some individuals manage to over-winter. I also feel that it may be possible for livestock such as cattle and sheep to serve as carriers.

At least 32 states have reported outbreaks of the virus, but it almost is endemic to the Southeastern U.S., where mild winters and fluctuating climatic conditions are conducive to gnat populations. (The disease originally was discovered in the 1950s in New Jersey and Michigan,



PHOTO | MIKE BIGGS

Although the diseases Dr. Deer talks about are significant, the real lesson here is that hunters need to do their part to control deer numbers.

whitetail hunters would like a point restriction on bucks, this has proved to be detrimental in some regions of North America. It causes a "high-grading" effect and is said to eliminate some of the best yearling bucks from the gene pool.

Antler width restrictions are also tough to enforce and are particularly hard on young hunters. Don thinks that Maryland should restrict hunters to one buck for all weapons. However, he feels that if future regulations do allow the taking of two bucks, then two does should also have to be harvested before the second buck.

"Either of these rule changes would help the herd and greatly increase the chances of tagging a record-book buck in Maryland," Don attests.

Don's wife, Robin, took her first whitetail with a firearm in 1974 from a platform blind. Don said she seemed very calm after the shot. However, as soon as he said, "Let's go get your deer," he had to grab her at the last second to prevent her from walking off the 15-foot platform. As he pulled her back, he smiled and said, "Honey, use the ladder."

Robin has since taken bison, elk, black bears, white-tailed and axis deer, kangaroos, and many small-game species. In 1997, she took her first buck by bow, a 10-pointer that would have made P&Y if not for a broken point. Robin's best firearm buck grossed 163 inches and netted 155 2/8. This beats Don's best Maryland buck by 6/8 of an inch. He's taken bigger bucks in Saskatchewan, but Robin says, "That doesn't count!"

As a fellow whitetail enthusiast and outdoor writer, it was inspiring for me to meet Don Travis and hunt with him in Illinois during the late 1990s. He has since purchased a western Illinois farm with his good friends Chuck Crouse and Marty Hall. Their tract is only a couple of miles from my farm, and I feel very fortunate to have such good neighbors.

In 1995, Chuck arrowed a 195 1/8-inch 18-pointer in Cecil County, Maryland. The 6th edition of Pope & Young's record book shows this as the state's best ever non-typical by bow.

Maryland's best typical to date was taken by Kevin Miller in Kent County during the 2002 season. This great 6x6 netted 194 0/8 inches. If the bar on buck harvest is raised in Maryland . . . watch out! This state could be the sleeper state that produces a new world record.

Don also hunts whitetails in Canada and Illinois on a regular basis. It would be fitting if he tagged his first B&C whitetail in his home state of Maryland, but it could happen in a number of places. Personally, I can't think of anyone else more deserving!

(**Author's Note:** Don Travis is always willing to give advice to new hunters when they visit his taxidermy shop. He has a degree from Penn State in wildlife management and has worked for many years as a wildlife technician at Remington Farms in Maryland. Don has been on the Wasp Archery pro staff for 30 years and credits much of his success to Hammer and JackHammer broadheads.

Special thanks for data in this feature go to Jack Reneau of the Boone and Crockett Club and Glenn Hisey of the Pope & Young Club. Visit the clubs' Web sites at boone-crockett.org and pope-young.org, respectively.)



where several hundred deer died. EHD/BT also has been reported in western Canada in recent years.)

There is no significant reporting system for the disease in Texas, but my personal experience in the state leads me to believe firmly the disease is quite prevalent in much of central and south Texas.

More recently, reports of invasions by EHD/BT into areas traditionally devoid of the disease are becoming common. For instance, in 1993 there was a substantial die-off due to EHD in Hardy and Hampshire counties, West Virginia. More than 200 dead animals were discovered, mostly in Hardy County. Pennsylvania officials reported a serious outbreak in 2002. At least 120 dead deer were reported from Washington, Greene, Gilmore, Franklin and Richhill counties.

Also in 2002, Ohio authorities reported, "A deadly deer disease spreading in southeastern Ohio is pushing the death toll to an estimated 800 to 1,000 animals this week, and it could go much higher in the next month." This outbreak occurred in Meigs County, north of the Ohio River. The most interesting thing about the Ohio outbreak was that it occurred in September, and officials did not expect freezing temperatures for at least a month!

Whether you believe in "global warming" or not, we are indeed undergoing a warming period throughout North America. With warmer temperatures and drier conditions, gnat populations are encouraged. I believe that is what allowed the 1950s outbreaks in the Northeast. I remember well that decade, when intense drought and heat waves dominated much of the country.

Now, more than 50 years later, we again are seeing these trends. The problem is that deer populations in the 1950s were substantially lower than in the 21st century! We probably have the highest deer population in the history of this continent, with an estimated 35 million animals. As I noted in Part 1, most deer diseases are "density-dependent," meaning their impact is directly related to the density of deer in any area. The higher the density, the greater the chances are for spreading a disease. You can rest assured that if the bird flu ever bridges into humans, it will not be in Oshkosh, Wisconsin!

The ultimate mortality rate inflicted by these diseases is highly variable. In a blood serum study done in Mississippi during 2002-2003, positive results ranged from 0 to 83 percent, with an average of 27 percent. That does not mean that 27 percent of Mississippi deer died from the diseases. Rather, it means that this proportion of deer had contracted a form of the diseases. Although susceptibility may be as high as 100 percent, not all deer contracting EHD or BT die from the infection.

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Some strains and variants are more virulent than others. Hunters often kill deer that show signs of having survived the disease. The most common sign is a distinct disruption line across the hooves, indicating a period of sickness. Although most hunters never look at the lining of the rumen, I commonly find deer with substantial scarring in their rumen lining — again, indicating the animal survived the sickness. Published mortality rates during a specific outbreak range from 5 to 70 percent. Even at the lower figure, that may be a substantial number of deer. Yet, why do they seem to go unnoticed?

The answer is simple. Since the disease attacks during the late summer or early fall, most hunters are not in the woods to find the carcasses of its victims. You'd be surprised how fast an animal the size of a deer "disappears" in the woods. In the South, a deer can be completely gone in three or four days. Since deer in the South do not normally die in groups, as they do in Northern yards, a significant die-off can occur without anyone knowing it.

There is no cure for the disease. In spite of there being an inoculation against BT for sheep, there is no reliable way to inoculate deer. Oddly enough, however, you want the disease to be present in limited form at least every other year because this produces a resistance in the survivors.

That's why the Northeastern and Midwestern states are so hard-hit during outbreaks. EHD and BT only venture sporadically into those regions, not giving resident deer much chance to develop resistance. As climate change progresses, we may see hemorrhagic diseases more prevalent in these states.

EHD and BT are indeed significant mortality agents over much of the whitetail's range. Yet as with CWD, the sheer numbers and genetic resilience of whitetails guarantee that our favorite game animal will be around for many years to come. In fact, they probably will outlast humans! Then why did I write about theses diseases in the first place? The primary purpose was to put them into perspective. Gloom-and-doom reports concerning CWD come into a different light when you consider the devastating potential of EHD and BT.

I remember a passage in the Bible about the people of Israel singing that Saul had killed thousands, but David had killed tens of thousands. EHD and BT are the "Davids" of the deer world. There is no doubt that both of these deer diseases are significant. However, even when combined annually with the numbers of deer dying from automobile collisions, hunter harvests pale in comparison. That's why we should all do our best to support proper harvest in order to hold populations at safe numbers. It's the right thing to do! ■



Ron's Alberta heavyweight has 29 points and over 65 inches in non-typical growth. The buck had been seen in a trail camera photo, and when Ron was given the opportunity to hunt the area, he jumped at the chance!

PHOTO | COURTESY OF RON CLOUS

PEACE RIVER RENDEZVOUS

RON CLOUS' THIRD TRIP TO ALBERTA IN AS MANY YEARS PRODUCED A WORLD-CLASS NON-TYPICAL, ALONG WITH SOME INDELIBLE MEMORIES.