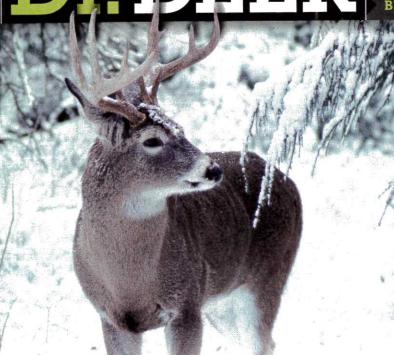




BY DR. JAMES C. KROLL



DEALING WITH EXTREMES EXTREMES

In 1973, I took a flight from West Virginia to Texas, where I had just been hired as an assistant professor of forest wildlife management at Stephen F. Austin State University.

My flight path extended southwest, taking me right down the Mississippi River for a large portion of the trip. Ironically, that was perhaps the last time the river flooded to the epic proportions we saw in 2011. The Mississippi looked more like one of the Great Lakes than a river!

"What on earth happened to the deer?" I wondered, peering down on

the water. Thirty-eight years later, I now know the answer to that question

In nearly 40 years of researching whitetails, I have learned they are perhaps the most adaptable big game animal in the world, with a range that extends from the tropical forests far to the south of our border to the very edge of the tundra in Canada's northern territories. Ask most biologists about whitetails and you commonly will hear that the species can get along just about anywhere.

Whether it's prodigious snowfall, severe drought or flooding, climatic extremes can have a drastic impact on the health and behavior of whitetails, but a sound management strategy can help mitigate the impact. PHOTO BY LARRY HOLIENCIN/WINDIGOIMAGES.COM.

"Why, there is no need to supplement the diet of whitetails," one biologist wrote. "They can do just fine on native habitat."

I would not disagree, but there is a big difference between "getting by" and thriving. They certainly are adaptable and can manage to hang on in the harshest of conditions. I recently filmed an episode of Winchester Ammunition Dr. Deer about the whitetail deer of the Florida Keys, perhaps the most endangered race of whitetails on earth. Their habitat is limited, as the name implies, to the Florida Keys.

Exactly how these whitetails ended up in the Keys is up for debate, but regardless of how they got there, there is no question that these deer have adapted to their habitat and climate. Water, heat and nutrition are the limiting factors, so they have modified their habits and diet to accommodate their surroundings.

A Key deer would look like a young fawn next to the whitetails I have hunted in extreme northern Canada. Whereas body size is a disadvantage to deer in the steamy Florida Keys, northern deer need extra layers of insulation against the bitter cold.

The point here is that the whitetail deer is an expert at overcoming adversity and adapting to extremes in climate and habitat. In this two-part series, I will discuss what I have learned over the years

about managing whitetail herds within the challenging confines of climatic and habitat conditions to produce quality bucks.

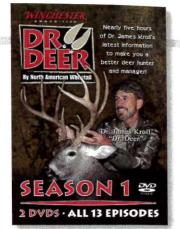
WHAT ARE THE EXTREMES?

Whitetails need the following: food, cover, water and space. This is a very broad generalization, since it does not take into account the arrangement of these requisites on the landscape or the temporal needs of deer. Many years ago, a scientist name Liebig formulated a scientific law that has essentially stood the test of scientific scrutiny. If you identify the factors limiting any animal population, the one in least supply will be the limiting factor, according to Liebig.

Working over the range of the whitetail, I discovered long ago what may be the limiting factor in one area may have no effect in another. The trick always is to figure out what the limiting factor is for each location.

Although I hesitate to over-simplify deer management, in most cases,

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the limiting factor is one of the following: rainfall, extreme weather conditions and soil fertility. The fact that Key Deer were walking around neighborhoods on Big Pine Key is enough evidence that the presence of man has little effect.

There is no doubt the climate is changing. Whether or not you think the change has been caused by man or is part of the normal climatic cycles that have occurred for millennia really is not relevant. In the last two years, we have seen the coldest winters on record, the heaviest snowfall,

the hottest summers on record and significant flooding. These changes are reality, and if we are to have quality whitetails and quality whitetail hunting in the future, we must learn to adapt our management to mitigate these conditions. In essence, we want our deer to do far better than simply survive; we want them to thrive!

In this column and next month's edition, we'll take a look at ways you can deal with extreme conditions ranging from deep snows or floods to drought or unfertile soil.

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DEALING WITH COLD

Whitetails are remarkably adapted to cold. Low temperatures seldom are the culprit in winter mortality; snow deserves the blame for most winter deaths. Whitetails "try" to reach late fall with as much stored fat as possible. They actively seek foods high in carbohydrates (and some fat) to accomplish the task, their systems converting the energy stored in carbohydrates to fat via rumen organisms.

Acorns and other fruits, plus nutritious weeds are critical to this task. Fall weeds germinate in the fall, grow while conditions are still suitable, then become dormant until spring. These plants are most nutritious in the fall. Obviously, it is the fall plants and fruits that supply the resources to store winter fat. Without these critical plants and fruits, deer are hard pressed to make it through the winter.

Significant snow cover then becomes a serious concern. If native fall weeds are under too much snow, or if there is a fruit crop failure, deer are left with the woody stems of browse plants to survive on once their fat reserves are depleted.

At Turtle Lake Hunting Club near Hillman, Michigan, we use a twopronged approach to managing for extremes. Snowfall there sometimes

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builds to several feet, covering a great deal of good food. Our first approach is to schedule timber harvest operations until mid-winter, when there is a minimum of soil disturbance from heavy equipment.

Logging puts nutritious tree tops

on the ground, which is highly attractive and beneficial to our deer. Later, the same timber stands produce nutritious weeds and browse the coming growing season.

We also do what we call "banking" of planted forages. We recommend protecting about half your forage with electric fencing, then opening these plots later in the year. If we receive adequate snow over the plots before opening the fences, there will be a significant buildup of green forage beneath the snow. Deer paw down to these foods. We even blade our roads so deer can move around from plot to plot and timber harvest to timber harvest even in deep snow.

In areas where feeding still is legal, there is nothing that beats a sound feeding program, as long as it is coupled with sound native forage and herd management. I recommend one free-choice feeder per 100 acres, providing a high-energy pelleted ration or even corn. As with banked forage plots, you should make it easy for your deer to move about the property.

PROSHOP



