

## **ANTLER RESTRICTIONS, DO THEY WORK?**

*Dr. James C. Kroll, August, 2008 North American Whitetail Magazine*

### **Making Sense Out of the Size Limit Enactments**

In several columns last year, I mentioned the fact that in 1993 North American Whitetail publisher Steve Vaughn supported a revolutionary new study in Dooly County, Georgia, designed to produce a higher incidence of trophy-class bucks. Steve's financial support funded Micah Goldstein, a University of Georgia graduate student who monitored the program. Further support also kept the public abreast of what was going on through North American Whitetail and through state and regional magazines like Georgia Sportsman, produced by Game & Fish Publications (then owner of this magazine). The program was a grass-roots effort, initiated by landowners and sportsmen who were tired of not being able to produce mature bucks. As a result of public support, the Georgia DNR decided to initiate a three-year pilot project. For a Dooly County buck to be legal, it had to have at least a 15-inch outside spread. A relaxed enforcement policy was maintained initially as hunters learned to recognize legal bucks. The goal was set to see if setting a size limit on bucks would increase age structure and antler quality in Dooly County. A secondary goal was to measure and monitor public acceptance of the program. If it worked, it could be tried in other counties as well. The results were successful on all counts. The rate of public acceptance reached as high as 90 percent, something unheard of in a political arena where a new policy is being tried for the first time.

### **Following The Leader**

Encouraged by the success in Dooly County, the number of "trophy only" counties in Georgia was expanded. Individuals in other states began pushing for similar trial programs and pilot programs developed in counties or deer management units in Louisiana, Michigan, New Jersey and Texas. Statewide restrictions were implemented in Mississippi, Arkansas and Pennsylvania. Restrictions ranged from outside spread to number of points on a side. In most cases the public response was very good. But eventually the fervor whipped up among size-limit proponents began to concern two distinct groups of folks.

Some hunters in Pennsylvania-where for years the over-harvest of bucks by the state's 1 million deer hunters had produced a herd essentially made up of mostly yearling bucks-began calling for the head of deer project leader Dr. Gary Alt. What right did the state have to tell hunters what they could and could not shoot, a small minority demanded? Since antler restrictions on bucks must be accompanied by increase doe harvest, this also did not sit well with another minority group of hunters who thought that doe harvest was a travesty. Eventually Dr. Gary Alt was forced to "retire" from his position (although the program he established in Pennsylvania did show amazing results and an increase in older-age-class bucks, and those results are still being seen today).

### **Common Sense V.S. Ignorance**

More recently, certain "sportsman's groups" in Arkansas began questioning statewide size limits imposed in 1998 that restricted the harvest to bucks with at least 3 points on one side. It's a familiar story, with the same old rhetoric. "We don't want the state telling us what we can kill!" was the common outcry. "If we keep shooting does, we will destroy the deer herd my father helped protect." With average hunters, these thoughts and sentiments might be written off to ignorance about modern deer management, but they take on a whole new significance when the resistance comes from biologists in state agencies and universities. Most recently, Mississippi State University professor Dr. Steve Demarais published a paper (Bronson Strickland and Larry Castle, co-authors) titled "Antler regulation effects on white-tailed deer on

Mississippi public hunting areas.” This paper proposed that the 4-point rule had actually deteriorated buck quality on state wildlife areas. The work contained two parts: One was a model developed from the Kerr study in Texas, and the other included harvest data taken before and after imposing the 4-point rule in Mississippi. This paper was just what some agencies needed as ammunition to resist efforts in their states to institute size limits. After all, why would a state want to do that when “hunter opportunity” is so important to revenue? You see, my calculations suggest that about \$1 billion is collected for licenses and permits each year by the states in which white-tails reside. So “hunter opportunity” is a very important consideration when the number of hunters affects total income. Anything that appears to threaten license sales frightens some biologists. Also, the “spirited zeal” that size-limit proponents often display tends to turn off a lot of bureaucrats. Remember, the Dooly County project was a grass-roots effort, and a lot of groundwork was done prior to its implementation.

### **Will Size Limits Work?**

The results obtained from the Dooly County project were positive for both antler and age-class improvement. Yet Dr. Demarais and his research partners assert the opposite results in Mississippi. How can such a contradiction exist? First of all, the size limitation imposed in Georgia was a 15 inch outside spread, while the Mississippi regulation involved point restrictions only. Our research here at the Institute for White-tailed Deer Management & Research at Stephen F. Austin State University in Nacogdoches tends to support the use of a spread limit. A 14 inch spread limit in East Texas would protect almost all yearling bucks, about 70 percent of 2 year-olds and about 20 percent of 3 year-olds. On the other hand, points have little to do with age! However, since the Demarais study looked at the effects of imposing a point limitation, the concern seemed to be that this allowed “inferior” yearling bucks with spike antlers to reproduce. Of course, it was assumed that spiked yearlings are genetically inferior, but this premise has not been proved. To the contrary, our recently published report in *The Journal of Wildlife Management* showed no predictability between a buck’s first set of antlers and what he will have at maturity. (See the October, November and December 2006 issues for the complete three-part series about our landmark antler study.)

### **Other Considerations**

Furthermore, size limits should always be tied to adequate doe harvest, as mentioned. Without population control, no size limit, irrespective of strategy, will ever be successful! My experience has shown that without at least a 20 percent recruitment rate, absolute protection of yearling bucks will not mathematically lead to significant increases in mature bucks. Remember, recruitment is the percentage of fawns that reach 1 year of age. Recruitment is tied to population density. In the Mississippi study, the harvest rate reported for the wildlife management areas was only 2.3 does per 1,000 acres. (More does that that die normally from accidents each year!) Mississippi has traditionally carried extremely high densities, and I’d be very surprised if the densities had not increased during the 10-year period of the study (1991-2001). The Mississippi study also concluded that a “points limitation” is only a “stop-gap” measure-one used now although something else may prove to work better. But what, exactly is that?

### **A Strategy That Works**

The first question to ask is why should we protect yearling bucks? To answer that question, three important facts must be considered. First, the average age of hunters is increasing annually. Second, the number of hunters is decreasing (as much as 10 percent in the last five years). And last, deer populations are increasing. Hunting has not been controlling the deer herds in North America. One reason that hunting is not controlling deer herds can be attributed

to the disproportionate sex and age harvest. (We're not shooting nearly enough does!) The average hunter wants to have more deer and be able to shoot a buck every season. Just ask Dr. Gary Alt, right? Yet these are two diametrically opposed goals. For far too long, we have overprotected the very population segment that needs the least amount of protection-females. Bucks are the ones that need protecting, but why? Correct me if I'm wrong, but bucks do not have fawns! The more balanced the sex structure of a herd, the easier it is to control population growth. I support the concept of a natural deer herd, one that has a natural age distribution and a natural sex distribution. One can argue what the word "natural" really means, but we can say with some confidence that prehistoric deer herds in times before man had fairly balanced age and sex ratios.

My 35 years of experience suggest to me that deer herds "want" to have a sex ratio of one buck to two does. Simple math supports this claim. It's a fact that with deer, as with humans, the males tend to live shorter lives than the females. Even in our research pens, we see does living more than 20 years, while bucks under those same nurtured conditions rarely live to be 10 years old. This tells me that we will always have to harvest more does than bucks. I am amazed by many folks, some who are even biologists, who claim that it is impossible to have sex ratios skewed more than 1 to 4. What they neglect to consider is low recruitment and differential survival of bucks and does. Unfortunately, most states report sex ratios by including buck fawns that have not been recruited. If we place a spread limit on bucks and at the same time apply adequate doe harvest, the result will be a herd that at least operates near natural conditions. In most herds, that limit should be an outside spread of around 14 to 15 inches. In most geographic races, this roughly correlates with the width of the ears. Of course, there are special exemptions. Some races of deer have wider ear widths, others shorter ears.

#### It's Not Trophy Management!

I'm growing weary of hearing some hunters criticize size limits as just a way to produce trophy bucks. Of course, one benefit certainly is better bucks, but the real purpose of size limits is to produce natural deer herds and to increase the quality of the hunting experience. Studies show the non-hunting public will support recreational hunting only if hunters are an important component in wildlife management. The fact that we are not controlling deer herds does not bode well for our sport. Even if having size limits on bucks were a management-neutral activity, I'd still support this practice. If nothing else, it shows we care about our favorite game animal. and I must agree with one of Dr. Demarais' conclusions about the Mississippi study. We both share the hop that there will come a day when hunters impose their own limits on what they shoot.

There is hope. My experience shows peer group pressure will change more human behavior than any laws or regulations. We recently adopted a size limit of 14 inches in East Texas. One day I dropped by a local taxidermist's shop to talk with hunters about the new regulations. "We don't have any problem with them," one fellow volunteered. "But we really don't need them!" I asked him what he meant. "In this area, a guy shooting a yearling buck is not very popular," he answered. Yes, there is hope!