

Antler Restrictions: The “new” fad?

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Some fads come, some fads go. Often they are repeated as time passes and experiences are forgotten. Antler restrictions [beam spread or, more commonly, antler point restrictions (APRs)] might qualify as one of these fads. Some Eastern and Southern hunting groups seem to believe this is a new means for altering sex and age ratios of deer. A few states, notably Mississippi, Arkansas and Pennsylvania, have recently adopted APRs as statewide rules. A few Midwestern states, including Michigan and Missouri, have individual counties or units designated for mandatory APRs.

Why APRs?

APRs are rarely sought in areas of light hunting pressure. Mandatory APRs are normally sought only in those areas with heavy hunting and where hunters feel that too many bucks are being shot.

Dreams of altering sex ratios or increasing the number of big-antlered males are at the foundation of demands for antler restrictions. But, most hunters have likely forgotten that forms of APRs were used in some Eastern states years ago, and that most Western states have employed APRs to attempt to increase the number of “mature” males in their herds.

After decades of use in the West, why is it that all Western states have discontinued APRs as statewide rules? Are there lessons for us in the Western experience, or must all other states relearn the downsides of APRs?

Western States

Many if not most Western states had APRs requiring, for example, a minimum of 3 points on an antler for mule deer bucks or 4 points on an antler for bull elk. The belief was that these rules would result in more “trophy-class” males. The earliest reference I’ve seen to American use of APRs for this purpose was in California.

In 1937, California imposed a 1x2 or 2x2 minimum APR in heavily hunted counties for the purpose of “preserving quality of deer.” The subsequent evaluation concluded that, “forked horn antler class restriction was ineffective in preserving quality of deer crop under heavy hunting effort.”

Colorado began a minimum 4-points on one antler restriction in 1972 for the purpose of increasing the number of trophy bull elk. Post-hunt evaluations reported the “largest number of abandoned bulls ever reported” and the second lowest ratio of branched-antlered bulls per 100 cows since 1965.

Other Western states had or developed APRs despite these findings. However after decades of use and many evaluations reporting disappointing results, ALL Western states have now discontinued APRs as statewide rules. Colorado discontinued all APRs for mule deer, but retains APRs for elk in many of its units. A few other states still have

limited areas with APRs to pacify hunters that persist in believing that APRs are a good thing.

The two paramount reasons Western states abandoned APRs: (1) unacceptable accidental-illegal kill, and (2) harvest mortality was increased (focused) on eligible mature males virtually wiping them out. They found better age structures resulted when mortality was spread across all age-classes.

There are additional reasons for discouraging mandatory APRs. One is that APRs protect only the smallest-antlered deer. While this likely doesn't impact genetics, studies in Texas and Mississippi found that APRs "may negatively impact cohort antler size in subsequent years."

Three other reasons include the fact that the resulting age structure will not be much more "natural" than unrestricted harvest, that the sustainable harvest of both bucks and does will be reduced, and that penalties must be imposed on those that accidentally shoot an ineligible bull or buck.

Western states demonstrated that the best way to create an older age structure was to limit the number of hunters. This strategy would not appeal to most of our hunters who value hunting every year, all season, and in the area of their choice.

There is one proven alternative for producing a "natural" sex and age composition by hunting. That is to simulate Nature, as the late Dr. Anthony Bubenik suggested, and shoot 40-80% of the fawns starting 15 days after the peak of parturition (fawning). This, too, seems to be an option that would not receive wide hunter support!

Sex Ratios

Another reason that hunters demand APRs is to seek to correct what they perceive as grossly distorted buck:doe ratios, like 1:7, 1:12, or worse. Hunters should know that prehunt adult sex ratios range from as low as 1.5 does/buck in the best farmland deer range to about 2 does/buck in the northern forest.

Reasons for not believing this is that roadside observations often show adult sex ratios nearer 3:1. Add in the fawns and there may be more than 6 deer seen for every antlered buck. What is seen is not what is there for a variety of reasons.

Also, unhunted "natural" sex ratios were also female biased and best guesses put them at about 1.3-1.4 does/buck. I have yet to see a biology-based reason why a sex ratio of 2:1 is damaging or undesirable.

A factor often overlooked by those that think they want an unnatural 1:1 sex ratio is that total harvest of both bucks and does would be reduced.

One does not merely stockpile bucks. If you seek a 1:1 sex ratio and shoot "adequate" numbers of does to maintain a population at an established density goal, you reduce the proportion of the winter herd that is productive does. Thus, fewer fawns will be born

into the population and total harvest of both bucks and does could be reduced by as much as 30%. Reduced fawn production may be good if herd control has been a problem.

Age Structure of Bucks

Where annual mortality (death rate) of bucks is 60% and spread equally across all age classes, the age structure will be about 60, 24, 10, 6 (yearlings, 2.5, 3.5, and 4+). This is fairly typical in much of the Midwest. Some APR advocates believe that protecting yearlings will result in 60% more bucks and a numerical age structure like 60, 60, 24, 16. However as mentioned above, the reduction of females necessary to accommodate more bucks will reduce the number of male fawns added each year. Fewer does in the population mean fewer buck fawns. Therefore, saving yearlings is not simple addition. Another factor missing in this assumption is that harvest mortality is only a portion of total mortality. In northern areas it is common for more than ¼ of deaths to be from causes other than legal harvest (roadkills, winter, poaching, predation, etc.). Thus, there is “leakage” from each age class even in the absence of legal shooting. Moreover, mortality rates seem to increase in the older age classes. Even if bucks got smarter with age (as many hunters believe), prime age bucks are more vulnerable to other mortality causes – even guns as their antlers are attractions.

Conclusion

It is not uncommon for 15-20% of the bucks to reach age 3 and older in many areas under current harvest strategies. Sex ratios are not grossly distorted as some claim. And, Minnesota continues to be one of the top four trophy-producing states.

APRs seem popular among some hunters, but I wonder if they understand the consequences of APRs. Most biologists are not enthusiastic about mandatory antler restrictions. If one is primarily concerned that deer be given the opportunity to manifest their full genetic potential, one should seek first to maintain deer populations well below maximum carrying capacity.

Hunters can do more to promote “quality deer” by getting involved in discussing and understanding appropriate population goals and by taking an active role in supporting efforts to maintain deer populations at those levels.