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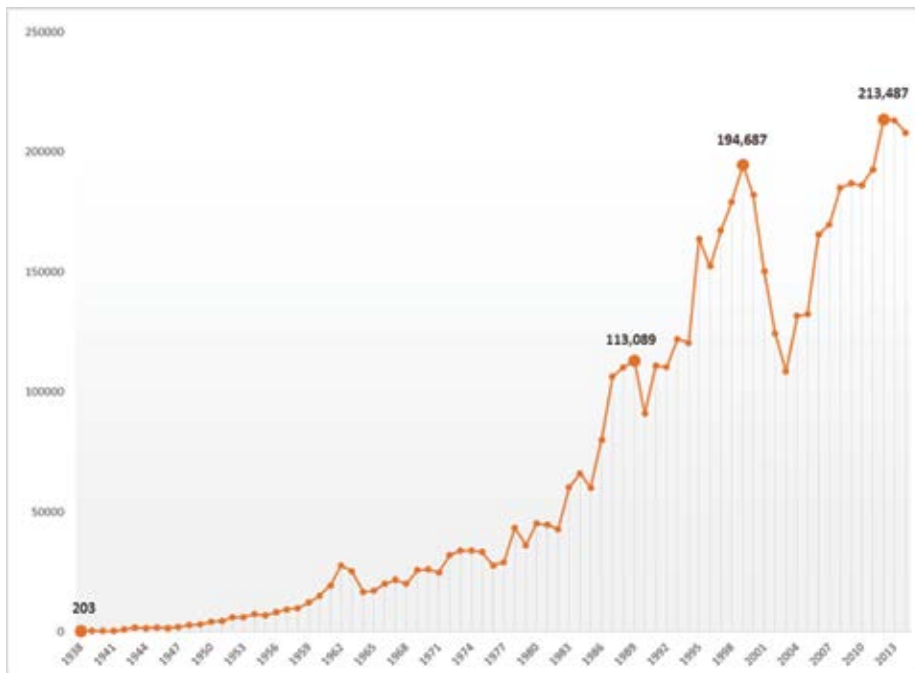
ARKANSAS'S WHITETAIL DEER: *A 100-Year Journey*

Arkansans have been on a 100-year journey that started March 11, 1915, and culminated with the 2015 centennial birthday of the Arkansas Game and Fish Commission (AGFC). In the last 100 years, Arkansans have enjoyed conservation success stories like the re-establishment of eastern wild turkeys, elk, and black bear. Many species, including the whitetail deer were facing grim futures in Arkansas until the AGFC was formed in 1915.

Like much of the United States at that time, Arkansas was dealing with market and unregulated hunting. Further exploitation of natural resources and habitat loss occurred as railroads, logging camps, and the clearing of land increased. Stories circulated of two hunters killing 50-60 deer in a two-week period, just to find out who could kill the most deer the quickest. When the smoke cleared in the 1930s, less than 500 whitetail deer remained statewide. The new AGFC faced many challenges.

ABOVE: This non-typical whitetail, scoring 201-1/8 points, was taken in 1953 in Arkansas County.
LEFT: Michael A. Chapman harvested this 170-1/8 point typical whitetail in 2009 while hunting in Newton County.





Arkansas has maintained mandatory game checking since 1938, which has provided important long-term trend information on harvest rates. In 2009 the Arkansas Game and Fish Commission (AGFC) discontinued the use of physical deer checkstations and implemented phone and online checking methods. Quality control tests have indicated a 99.5% accuracy rate on the collected harvest data. Since then smartphone applications have also been incorporated and are gaining popularity as the preferred method of checking deer.

CHANGE IN MISSION

From 1915 until the late 1980s, one of the AGFC's missions was to grow deer numbers. Whitetail deer bag limits and season frameworks remained conservative and included either a non-existent or highly restrictive doe harvest. All deer hunting regulations passed during this time were focused on the goals of herd growth and expansion.

The deer management conversation began to change in the mid-to-late 1980s. It was clear that the benefits of wise conservation efforts implemented during the previous 60 years had been successful. But there was a new challenge: Now that we have deer, what do we do with them?

In some areas of the state, wildlife biologists began to notice deer herds that demonstrated signs of nearing carrying capacity and exhibited increasingly skewed buck-to-doe ratios. Collected harvest and biological data supported these observations. In 1987, data showed that 63 percent of bucks harvested in the state were yearlings

(typically spike bucks). Of the overall average of 72,000 deer harvested during this time, more than 75 percent were bucks. The buck age structure and harvest leaned heavily on the young. An obvious change in management was needed.

In the early-to mid-1990s, deer management philosophies began to shift in Arkansas. Principles that produce more balanced age classes and buck-to-doe ratios began to surface. Along with that shift came a shift in hunters' desires from harvesting a buck to harvesting a high quality buck. The timber industry and private landowners took the lead by implementing antler restrictions in an attempt to protect young bucks and improve the buck age structure.

In February 1997, the AGFC surveyed Arkansas hunters to gauge their interest in buck management. Results from that survey showed that 72 percent of respondents supported adopting a minimum antler point restriction known as the 3-Point Rule, in order to protect younger bucks. Under

the 3-Point Rule, a buck would have to possess a minimum of three points on one antler to be legal for harvest. At the request of deer hunters and wildlife biologists, the AGFC implemented the 3-Point Rule in selected areas as a trial run for the 1997 deer season.

As a follow-up to the 1997 survey, the AGFC performed a second hunter opinion survey in January 1998. This survey showed that 71 percent of respondents were willing to give up their opportunity to harvest a small-antlered buck in exchange for an increased chance to harvest a large-antlered buck in later years. However, it also showed that they were overwhelmingly opposed to reducing buck harvest days, reducing the buck bag limit from two to one, and instituting buck quota permits to do so. In addition, 85 percent identified a high quality buck as one with eight or more points and a 16-inch or greater inside spread.

With these data in mind, the AGFC responded by adopting the 3-Point Rule

statewide for the 1998 deer season. This strategy would allow for maintaining the same season structure in regard to bag limits and season length, but would ultimately restrict the number of bucks taken.

Just prior to the statewide implementation of the 3-Point Rule in 1998, Arkansas's total buck harvest peaked at nearly 110,000, but the reported statewide buck harvest for 1998 declined to 78,764. What happened? The explanation for a decrease was not linked to bag limit changes or a decrease in hunting license sales, which increased during this time. The true reason for the decrease in buck harvest was the lack of bucks with three or more points on one side of their racks available in the population.

Recall that harvest data showed yearling bucks comprised 63 percent of the buck harvest in 1987. This percentage decreased in the 1990s but fluctuated 35 percent to 50 percent, which left a very small percentage to be distributed to the adult buck

age classes. Arkansas hunters were very efficient at harvesting bucks and left very few to carryover for following years to build age structure. The 3-Point Rule had abruptly and dramatically lowered the statewide harvest of yearling bucks. In 1998, the percentage of yearling bucks reported in the statewide harvest declined to 20 percent and has decreased since. The Quality Deer Management Association's 2015 Whitetail Report ranked Arkansas as the top state with the lowest reported yearling buck harvest rate at 8 percent.

Following such a dramatic change in the buck harvest strategy, the AGFC was once again interested in hunters' opinions. In the spring of 1999, the AGFC conducted a third hunter opinion survey. The results showed tremendous support for the new management direction. Seventy-six percent of respondents stated they supported the new mandatory, statewide 3-Point Rule; 86 percent stated they wished to continue the antler-point restriction for at least another

year; and 87 percent responded that they were willing to give up their chance to shoot a small-antlered buck in exchange for increased odds of shooting larger-antler bucks in later years. A large, 86 percent portion felt that hunters complied with the rules at least some of the time, and 91 percent agreed that the regulations were at least somewhat clear and easy to understand. The new 3-Point Rule appeared to be a success, not only by improving the buck age structure but by gaining public acceptance.

MOVING FORWARD

Arkansas deer hunters desired a change in the 1990s. The opportunity to harvest any buck was not as strong as the yearning to harvest a high quality buck. In addition to exhibiting willingness to refrain from harvesting younger bucks, private landowners took a proactive approach to improving and managing wildlife habitat. They realized that high quality habitat was directly linked to helping produce high quality whitetails.

In the early 2000s, the

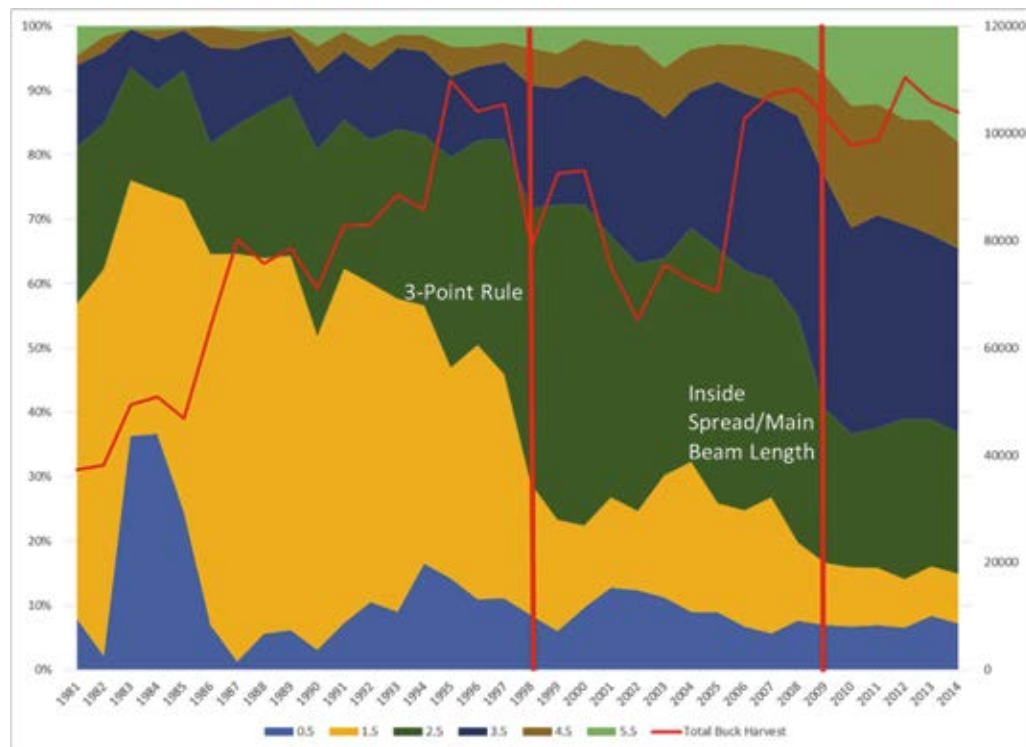
AGFC responded to landowners' requests to help manage their properties and local deer herds by forming a private lands deer management program called the Deer Management Assistance Program. DMAP helped bridge the gap between landowners who control nearly 85 percent of the habitat in Arkansas, and wildlife biologists. Working relationships were formed, land stewardship improved, and wildlife benefited from these efforts. Today there are nearly 750 deer management clubs enrolled in DMAP, which encompasses almost 1.5 million acres and engages about 10,000 deer hunters.

This surge in private land management set the stage for an additional step regarding deer management in Arkansas. Educated hunters became better deer managers and they soon realized that antler-point restrictions were not the best methods of managing for older age-class bucks. Discussions about how to better use antler characteristics to tailor a buck harvest to more precise age classes began. Many hunters were

willing to make a judgment call regarding the length of a buck's main beam and inside spread from a deer stand. As a result, the AGFC responded in 2009 by implementing a variety of antler restrictions based on a buck's main beam length and/or inside spread. These new antler restrictions were tailored for a select number of deer zones and state wildlife management areas, and they proved successful. Harvest in these areas quickly shifted toward 3.5-year-old and older bucks, and over time has dramatically expanded the representation of older age classes.



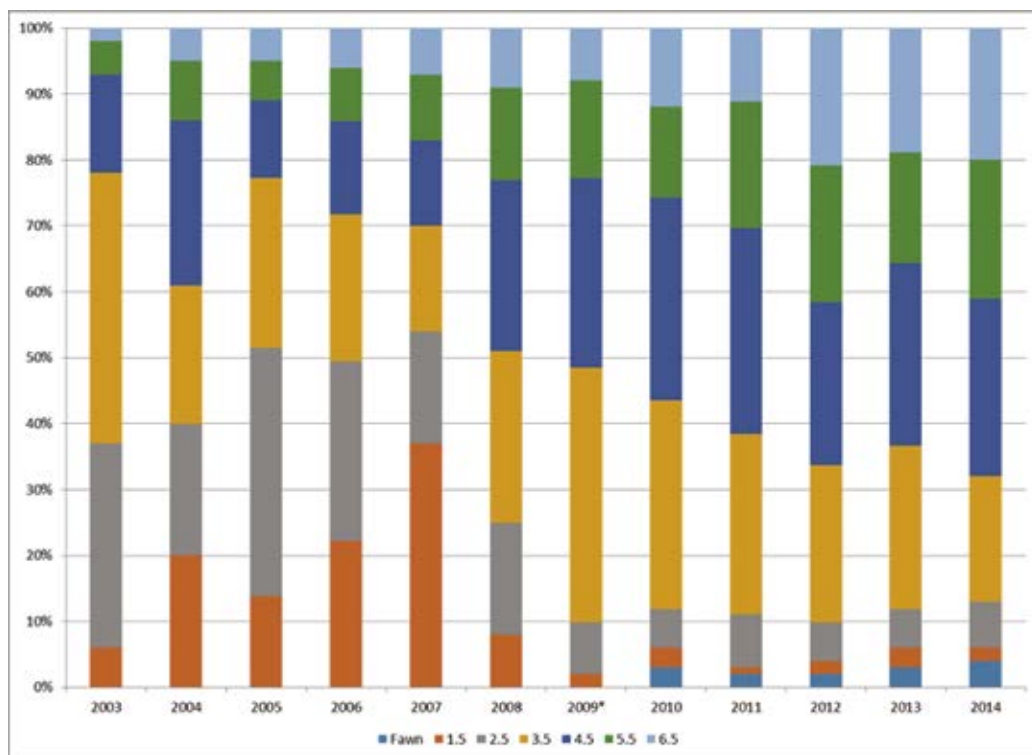
ABOVE: In 2007, this non-typical whitetail, scoring 197-6/8 points, was taken by Ronald G. Harp in Benton County.



LEFT: Age structure of Arkansas's whitetail buck harvest (1981-2014). The mandatory statewide 3-Point Rule was first implemented for the 1998 season and the inside spread/main beam length restrictions implemented for the 2009 deer season in three select deer zones and on certain state-owned wildlife management areas.

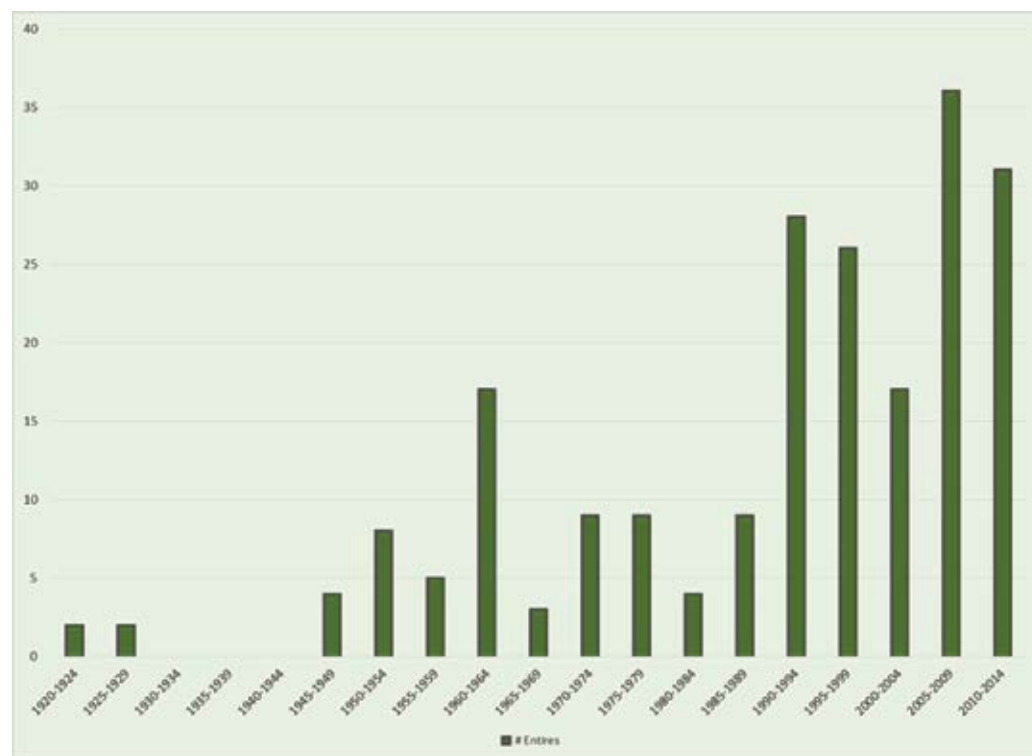
Not only has Arkansas's buck age-class distribution improved with the implementation of antler restrictions, but the number of entries of whitetail deer into the Boone and Crockett Club has increased (right). Granted, the number of entries from Arkansas doesn't compare to some of the heavyweight northern states that dominate the record books, but Arkansas is proud to have a seat at the table and prouder of the progress the state has taken.

Any respectable deer biologist will say that as much stock should be placed in the female portion of a deer herd as the male portion. Let's face it: If a deer manager is not capable of suggesting bag limits designed to ensure the replacement of what was removed during the previous deer season, then chances are he or she may be working their way out of a job. Data luckily suggest that Arkansas's doe are very productive, almost to the point of being too productive.



ABOVE: Age structure of buck harvest for three Arkansas deer zones (16, 16A, & 17) for 2003-2014. *Denotes implementation of minimum inside spread/main beam length antler restrictions.

BELOW: Number of official Boone and Crockett Club entries from Arkansas (1920-2014).



ABOVE: Charles L. Marcum took this non-typical whitetail in Lonoke County, in 2014. This buck scores 218-7/8 points.

Because of high lactation rates and fetal counts for yearling and adult does, the AGFC adopted more liberalized doe bag limits and a specialized season framework (which includes a five-day antlerless modern gun hunt before the statewide modern gun season) to ensure that deer herds are balanced with habitat and each other. Biologists believed that balancing sex ratios went hand-in-hand with addressing the buck age-class structure. Arkansas doe data exhibit an age structure that leans toward the adult segment. In 1981, 59 percent of females harvested were 2.5-year-old or older, compared to 72 percent reported in 2014. Considering the age-class structure of Arkansas's does, the collected biological and observation indices which denote their reproductive capability and subsequent fawn recruitment, Arkansas's deer population is showing signs of expansion rather than suppression.

TRAJECTORY

We believe Arkansas has come a long way in deer management since March 11, 1915. Whitetail deer hunters and managers in Arkansas have traveled a path together that has witnessed the exploitation of a resource, its comeback, and now the desire to improve upon it. Hunter attitudes and opinions have changed greatly since the AGFC conducted its first hunter opinion survey in 1997.

In a survey conducted by Responsive Management in July 2014, 78 percent of respondents stated they were satisfied with the quality of bucks in the areas they hunt. A strong, 84 percent of respondents said they were willing to pass up harvesting a small-antlered buck with hope of harvesting him in upcoming years. Regarding the 3-Point Rule, 64 percent prefer the antler-point restriction, although 62 percent stated they felt comfortable with judging a buck's inside spread and main beam length in the field.

What does the future hold for deer management in Arkansas? Most hunters are

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satisfied with the level of deer management and the quality of animals they are harvesting. However, today's society is ever-changing and quickly becoming more focused on instant gratification. Technology has improved how we as managers can collect and analyze data, but it is also being used to promote impractical management expectations. Arkansas deer hunters have enjoyed three consecutive years of exceptional deer harvest of more than 208,000 (2012-14). The 2012 season set Arkansas's record harvest at 213,487. Hunters are harvesting as many bucks now as they did before the 3-Point Rule, and a large portion of those are older age-classed bucks.

In addition, hunters have harvested does and bucks at exactly a 1-1 ratio for the last two seasons. How high can the bar go?

The AGFC is concerned about the future trajectory of deer management. How does it convey and promote sound management principles and fulfill hunter requests? To provide transparency in management and firmly communicate a management path, the AGFC's Deer Team has developed a Strategic Whitetail Deer Management Plan. With a solid plan, we hope these management principles can be conveyed. And as we continue down our management path, we strive to ensure that we are recruiting and retaining hunters to help us achieve management goals and objectives outlined in that plan. How can we manage a deer population without hunters?

We also want to ensure that our foundation in The North American Model for Wildlife Conservation is respected by standing against the commercialization and privatization of whitetail deer and other wildlife resources, and by basing our management decisions on data and sound management principles.

We are very proud of Arkansas hunters who have traveled this path with us and realize the value of our wildlife resources. We hope you enjoy our story and that you plan a path that will bring you to enjoy The Natural State. ■

BELOW: Age structure of Arkansas's whitetail doe harvest (1981-2014).

