BUCKS



Horace Gore photo

Big OI' bucks are not always OI'. This good 9-pointer from Webb County was thought to be older, but was only 3 1/2 years old.

By Jim Heffelfinger

mesquite campfire in the South Texas brush country seems to radiate not only warmth but also a mystical power which induces those nearby to talk at length about antlered creatures of unnatural proportions. Big bucks with individual characteristics acquire names: Ol' Droptine, Ol' Blue, Ol' Moss Back, Ol' Double Dog-catchers. We so often hear talk about "Big Ol' Bucks," but are they really "Ol?" Regardless of our personal preferences and field judging skills, most of us know a big buck when we see it, but can we really tell an old one?

There is no doubt that antler size is related to the age of the buck, but other factors also play an important role. Consistent readers of this magazine are, by now, familiar with the 3 main factors which contribute to antler development: Age, Genetics, and Nutrition.

Age is perhaps the easiest factor to control because it requires that you do nothing - literally. Not shooting bucks on a large enough block of land will allow some of those bucks to survive to the older age classes, thereby increasing the average age of bucks in your population.

Genetics is the hardest factor to account for in a deer management plan. It is a complicated topic that we are just beginning to learn more about. We have no time-proven methods of improving the genetics of a deer herd, only several ideas which sound logical based on what we know. Supplementing the gene pool and culling 'inferior' bucks fall into this category; they might work, but are impossible to measure as to their success or failure. As a result, most deer biologists consider the genetics portion of the equation as something you shouldn't even start to think about until you have the other 2 accounted for to the best of your ability.

Nutrition is the factor that takes the most work to improve. Food plots, discing, brush clearing, population reduction, supplemental feed, and mineral supplementation are all options for improving the nutritional plane. This factor accounts for most of the active management in a deer program and rightly so, for it is crucial to the development of quality deer. The high-fence would fall more accurately in this nutritional category because its primary purpose is not to keep "good genes" in but rather allow a reduction in deer density to improve nutrition. Many deer hunters from other parts of the country sneer because South Texas ranches "fence deer in." We should educate them that it's a process of fencing deer out to allow proper management within the boundaries. The secondary benefit of keeping rutting, roaming bucks on the property increases in importance on smaller properties.

It is hard to say whether age or good nutrition is more important because you won't have a quality program without both. Some individuals seem to put on an incredible set of antlers during horribly dry years, and yet, some red deer stags in Scotland do not grow antlers at all because of the low poor nutritional base they are subsisting on. In fact, some European literature suggests that the 3-fold size difference in red deer subspecies over there may be due entirely to nutritional differences.

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Relative age category	Antler Characteristics	Body Characteristics
Young	Thin bases and beams Bases smooth with less burrs Nontypical points uncommon	Thin neck Body configuration like a doe Skin on neck taught Smooth, sleek coat No sagging belly
Prime	Good mass in bases and beams Heavy burring on bases and above Nontypical points on some	Thick neck which blends into brisket Muscular shoulders "Blocky" head
Old	Very heavy bases and beams Heavy burring on bases Shortened and thick tines Fewer tines in basic antler form Nontypical points common	Thick neck Heavy, muscular body Coat frequently rough in places Movements sluggish and stiff Obvious pot-belly Sagging skin under chin

Table 1. General characteristics which can aid in determining the approximate age of bucks.

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Is the age factor really as easy as "doing nothing?" Not quite. All long-term management plans allow some buck harvest and so you need to establish rules about which bucks will be removed. Depending on your management goals, allowing bucks to age may mean letting each individual buck reach his full genetic potential, or maybe just letting more bucks reach their 3rd birthday. On either case, decisions must be made. The huge bucks cause no hesitations; nor do the small bucks when viewed through the scope of a son or daughter. It is all others that require some conscious thought about the future composition of the deer herd and your management goals.

How to tell a good "up-and-comer' from an 'over-the-hiller' is the crux of the matter. Ideally, if you are managing intensively, you would like to let bucks walk if they will be bigger next year and remove any bucks that are not going to be any bigger and are just hanging around consuming resources. This obviously requires a little fortune-telling, but we have clues to help us guess if a buck will be better or worse the following year.

Antler development peaks in whitetails at roughly 5-7 years old. I've seen 3 1/2 year old Boone & Crocketts and captive deer that peak at 10 1/2 years old, but on the average most bucks are going downhill by 8 years. The key then is recognizing (and leaving) the young bucks that look shootable already from the mature bucks that may be at their peak of antler development.

There are antler and body characteristics which provide clues to a buck's age besides his teeth (Table 1). Young bucks simply look young, they have sleek smooth coats, thin/doe-like body musculature, tight skin under their chin, no potbelly, and generally thin spindly antlers with little burring at bases. Old bucks look just like we do when we age: sagging skin under the chin, potbelly, rough around the edges, even the facial features change - just plain ugly. Mature, primeaged bucks look the part: smooth coats, heavy shoulder musculature, good and heavy antler development, and are generally "athletic" and blocky in appearance. Each time a deer appears in a scope a hunter has to make the decision of whether to remove that buck.

Many people use these characters, whether consciously or unconsciously, to select which bucks to let walk each season. These characteristics do illustrate general age trends, but how accurate are they in reality? We frequently hear of

huge bucks which are relatively young deer. When I was the Manager of Wildlife Operations on the Rio Paisano Ranch in Kleberg County, coowner Mary Grace Horlock shot a 178-2/8 point Boone & Crockett buck which possessed the dentition of a 3 1/2 to 4 1/2 year old (see Jan/Feb 1990 issue). One can only guess what a buck like this would have looked like at 6 1/2 years. I started seeing enough situations like this and began to wonder how accurate we really were at determining the age of live deer on the hoof.

When I was a graduate student at Texas A&M-Kingsville working with Sam Beasom and Charlie DeYoung, part of our research involved repeated helicopter surveys of deer populations which contained up to 60 individually identifiable deer (marked with ear tags and collars). As we observed a buck from the helicopter, we recorded whether we thought he was young (3 1/2 years or less) or mature (older than 3 1/2). After 3 years of these surveys we compared the age category (young or mature) we placed the marked bucks in with their ages estimated by tooth wear when we captured them (plus any time elapsed since their capture).

The percentage of bucks placed in the cor-

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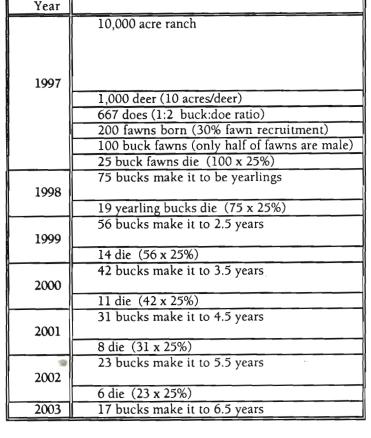


Table 2. Example of the non-hunting loss of a buck cohort from birth to 6.5 years in South Texas.



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Big Ol' Bucks

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rect age category on any individual flight ranged from 63-100%. This may not seem too bad, but with only 2 age categories, flipping a coin would put you at 50%. With a few obvious yearlings and a few obviously old bucks you quickly find yourself within this range of accuracy. Most flights had accuracy levels better than 90%, but this type of information is best suited as trend data to be looked at over a series of years rather than as an absolute assessment of the age structure based on single helicopter flight.

Shortly after that work, Dr. DeYoung published a scientific paper titled "The inefficiency of trophy white-tailed deer harvest." This paper used antler measurement and age data from two ranches in South Texas to determine if deer could be accurately placed in age categories based on antler dimensions alone. The data showed very clearly that bucks 3 1/2 years old could not be distinguished consistently from 4 1/2 or 5 1/2 year olds based on antler size.

As already mentioned, there are additional body characteristics which improve the accuracy of aging deer "on the hoof", but these relative clues are very subjective and take years afield to master. The ability to discern older bucks from their younger cohorts also seems to deteriorate at the end of the deer season. This is not to say it is not important to use age criteria when deciding whether or not to take a buck. On the contrary, it is crucial to a successful plan to manage for trophy deer, but we must be aware of the inaccuracies of our age clues and the role genetics and nutrition play.

My growing concern about the accuracy of aging deer on the hoof was punctuated by a buck that was taken on the Rio Paisano by Jeryl Williams during the fall of 1989. I had seen this buck frequently near the center of the ranch and considered him an over-the-hiller. He had heavy bases, heavy beams, and 9 fat points - none over 7 inches. With his blocky head and body, I had him pegged for an over-aged buck that may or may not have ever been a good one. He did have one redeeming value and that was his 21 plus inch inside spread. I neglected to tell any of the hunters about him because I thought his days as a \$3,500 buck were over. I instructed Jeryl's guide, Houston taxidermist Dale Bigger, to take him to a blind in the extreme southwestern corner of the ranch. Later that morning they pulled up with that wide, short-tined old timer in the truck (and looked surprised when I asked why they were hunting the center of the ranch). It seems that Jeryl had his heart set on a wide South Texas rack and this one fit the bill. I was glad to see that old codger removed from the ranch until I looked in his mouth and saw he was 3 1/2 years old!

The primary reason for leaving a young buck with a lot of potential in the population is not necessarily to let him contribute his genes but simply because he will be bigger next year. Regardless of whether we can tell general ages well enough to make informed harvest decisions, there is another important factor at play besides whether that animal will be bigger next year — that is whether that animal will be around next year.

Research by Steve Demarias, DeYoung, Beasom, and myself have shown bucks have a high (20-29%) annual natural mortality rate in South Texas. This annual loss to non-hunting factors was pretty consistent across all age classes. This means that out of every 100 buck fawns born, only about 17 will make it to the peak antler growth age of 6 1/2, even with no hunting (Table 2). Managers and lease holders must decide at what level of intensity they want to manage their deer herd. Because of the extensive overlap in antler characteristics between 3 1/2, 4 1/2, and 5 1/2 year old bucks, it may make more sense in some cases to shoot decent bucks at 3 1/2 years old before they die naturally. If hunters are happy with 3 1/2 year old bucks, in makes little sense to let them walk and hunt for 25% less of them the next year.

However, if you decide to manage your lease for the maximum antler size possible, it will be important to let young bucks with good potential go unharvested so that they have a chance to realize their full genetic potential. That may make for tough decisions at times because in the real world you have very little time to assess a buck's potential for future greatness, sometimes only a few seconds that it takes a buck to walk across the sendero. You may find yourself faced with a decision in the fading light of dusk — looking through a scope at a tall-tined deer that has beams out past his ears and at least one drop tine. Quick, how old is he?

As old as he's gonna get!

Editors note: Jim Heffelfinger completed a Masters Degree working under Drs. Sam Beasom and Charles DeYoung at Texas A&M-Kingsville. His research involved coyote predation on trophy bucks in South Texas. He then worked on the Rio Paisano Ranch as Manager of Wildlife Operations. He now works for the Arizona Game & Fish Department as the Tucson Regional Game Specialist. Email: Cervidnut@aol.com.



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