



Kip's Korner



Aging Bucks June 2011

Big bucks are old and small bucks are young, right? Absolutely - not. Like humans, some bucks grow exceptionally large bodies, even at a young age, while others can be relatively small at maturity. With the increased practice of allowing bucks to reach older age classes, and an increased interest in determining the exact age of harvested bucks, we have a great opportunity to learn more about age-specific body characteristics and overall antler and body growth patterns.

In general, bucks increase in body size and antler growth annually. However this doesn't mean every 3-year-old is larger than every 2-year-old, or that every 4-year-old has larger antlers than every 3-year-old. Body size and antler growth are largely impacted by age and the amount and quality of available forage, but some bucks are genetically small in stature (think Tom Cruise) while some are genetically large (think Shaquille O'Neal). It doesn't matter how long Tom Cruise lives or how much high-quality food he eats, he'll never be as big as Shaq.

Deer are similar, and while most follow average body and antler growth patterns,

here are examples of four bucks that did not. Each was legally taken during hunting season, with harvest data accurately collected, and age estimated via tooth replacement and wear (TRW) and cementum annuli analysis (CAA).

Buck 1

This buck was harvested in northern Georgia in 2006. He weighed 188 pounds live weight and his body characteristics (neck girth, should musculature, leg length relative to body size, etc.) suggested he was 2.5 years old. His weight was consistent with other 2.5-year-old bucks from the property, and multiple experienced biologists estimated his age at 2.5 years based on TRW. The anomaly was he scored 153 gross Boone and Crockett (B&C) inches! This was substantially higher than average 2.5-year-olds for this area (and most mature bucks) and led some to suggest, based solely on his antlers that he was at least 3.5 years. How many times have a buck's antlers biased your age estimate? I'm guessing at least a few. Large antlers inherently make many hunters overestimate a buck's age. While not an exact science, using body characteristics rather than antler characteristics is a much better method for estimating the relative age of bucks on the hoof. This buck's weight and body characteristics suggested 2.5 years, his tooth wear suggested 2.5 years, but his antlers suggested at least 3.5 years. So, how old was he? Cementum annuli analysis estimated he was 2.5 years with a high confidence score. In this example, the buck expressed average body growth but "Shaquille O'Neal" antler growth. Importantly, his body characteristics accurately reflected his (likely) true age.

Buck 2

This buck was harvested in western New York in 2006. He weighed 250 pounds live weight and his body characteristics suggested he was at least 3.5 years old. His weight was consistent with mature bucks for the area, he grossed 140 B&C inches, and was the largest buck ever taken on the intensively managed property. Amazingly, his jawbone suggested he was only 2.5-3.5 years old! You can easily imagine hearty laughs shared at the TRW ager's expense and dismissal of the estimated age. However, CAA confirmed it to be a young deer and estimated his age at 2.5 years with a high confidence score. While CAA may not be 100 percent accurate, it's highly likely this buck was much closer to 2.5 or 3.5 than 4.5 or 5.5 years. He exhibited "Shaquille O'Neal" body AND antler growth. Were genetics at play here? Sure, genetics played a role, but the management program on the property deserves the credit as it provided the habitat necessary for this buck to reach his body size and antler score. A buck can have all of the genetic potential in the world, but he won't express it if the habitat is poor.

Buck 3

This buck was harvested in north-central Pennsylvania in 2008. He weighed 142 pounds live and 119 pounds dressed. This weight was consistent with a big yearling or small 2.5-year-old for the area. The 8-point had an 18-inch spread but only scored about 110 gross B&C inches; an antler score also consistent with 2.5-year-olds for the area. He measured 6.75 inches from the corner of his eye to the tip of his nose; for comparison, yearling bucks average 7 inches for this measurement. Amazingly, his relative body characteristics suggested he was fully mature. The

buck was very healthy; he was simply small in stature. He looked as though you took a normal-sized deer and compressed him both vertically and horizontally. The property he was harvested on was part of a QDM cooperative, but the area received tremendous hunting pressure and numerous deer-vehicle accidents annually. The oldest buck ever taken on the property was 4.5 years old, and it was perceived nearly impossible for a buck to reach full maturity in this area. There was much discussion among the camp members about whether the buck was a big yearling, small 2.5-year-old, or possibly a 3.5-year-old based on his "mature" body characteristics. This is an important point; his body characteristics suggested maturity but each hunter's estimated age was far younger due to the buck's weight and antler size. So, how old was he? Estimated age was 7.5 years based on TRW and 8.5 years from CAA! Rather than "Tom Cruise" he was more of a "Little Jimmy Dickens". Even though the buck had a relatively low antler score and was small in stature, his body characteristics were consistent with his estimated age. When estimating the age of bucks on the hoof, always look past their antlers and even their overall body size. Look for the age-specific body characteristics regardless of what a buck weighs or carries on his head.

Buck 4

Our last example is of a buck shot in 2010 on the same property as Buck #3. This buck was shot post-rut and weighed 218 pounds live weight. He dressed out 175 pounds, and in contrast to Buck #3, this buck was estimated by both TRW and CAA to be only 3.5 years old. Bucks 1.5 to 8.5-years-old had been shot on the property, and this was the heaviest one ever taken. He was structurally large, healthy, and his body characteristics suggested he was 3.5-4.5 years old. He had "Shaq-like" body growth, but did he express similar antler growth? No, he was a mainframe 8-point with an 18-inch spread and average mass, but he had short tines so he only scored 110 B&C inches, which is less than the average 3.5-year-old for the area. His weight suggested greater than 3.5 years, his antlers suggested less than 3.5 years, and his body characteristics suggested 3.5-4.5 years. Once again, the body characteristics more accurately estimated his true age than either his weight or antler score.

Aging on the Hoof

I share these examples to remind hunters and managers of the wide range of body and antler growth patterns that bucks produce across the age classes. Average body weights and antler scores are useful for management purposes, but they can be misleading if used to estimate the age of a specific buck. As stated earlier, using body characteristics to estimate age is not an exact science, but it's the preferred method, and this is especially true when observing live deer or trail-camera photos that provide a profile view of bucks at the start of the breeding season.

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