

# Aging Deer, It's Importance and Implications

By Henry Chidgey CoFounder DeerAge.com (Wildlife Analytical Labs)

Those of us who chase the magnificent, illusive whitetail care about the age of our trophy or potential trophy because we know that in order to harvest a beautiful, heavy-horned monarch, we must let him get old enough to reach his full potential. If you are growing tomatoes or raising sweet corn, you know you don't pick them before they are ripe. Why would we do any different with a living, breathing piece of God's creation as wonderful as a whitetail buck?

There may be some of you who are thinking, "All I want is venison." Fine, then harvest a doe. Thankfully that is probably the biggest problem we have as wildlife stewards in most places today, harvesting an adequate number of does, sometimes because of the carrying capacity constraints for the local habitat, but here in the Heartland, most likely because of the need to improve the ratio of bucks to does.

I like to look at whitetail deer management and stewardship as a three-legged stool, each leg important in supporting the stool. The three legs are nutrition, genetics and age. In terms of these, we can most easily influence or control the age. It doesn't cost you any money; it only requires learning and discipline.

I'll go out on a limb here a little bit and assert that for 99.5 percent of us who chase the magnificent, illusive whitetail buck, that any buck that we harvest that's five and a half to six and a half years old will meet our specification of what is considered to be a trophy.

If you're hunting with a bow and arrow, it will almost always book as a Pope & Young trophy. If you're hunting with a firearm, it is less likely that it will book as a Boone & Crockett buck, but I think the real measure of whether or not it's a trophy to you and me is how we feel when we look at it hanging on the wall in our home or office.

When we look at the antlers on a mature, five-and-a-half to six-and-a-half-year-old whitetail buck deer, the character and mass are really something that's breathtaking. But in order to get a chance to harvest these mature (or ripe) bucks, you must pass on them when they are younger.

"But," you say, "okay. I hear what you're saying. But how do I tell how old that buck is before I pull the trigger or lose the arrow?" Great question, because now I'm going to share with you a simple, easy system to get really good at aging live deer –especially if you accurately determine the age of every buck you or your friends harvest and compare that data to what you estimated before squeezing the trigger or letting the arrow fly.

The first thing to do is look at the body of the deer, not the antlers. When you see a buck that has a body that looks like a doe, but has antlers, you know you're looking at a one-and-a-half to two-and-a-half-year-old buck deer. There are some other things to look for to distinguish between these two ages, but we're going to let him walk anyway, so I'm not going to go into those details right now.

The next type of buck we're going to think about in this live deer aging system is that of a three-and-a-half to four-and-a-half-year-old. A three-and-a-half-year-old buck has a large chest and shoulder area, but his rump, waist, and hips are smaller than the front. A four-and-a-half-year-old is getting heavier in both his front and hindquarters, but his neck still doesn't flow in smoothly into the bottom of his brisket, or chest. Four-and-a-half-year-olds are starting to behave and look like a bull of the woods, but the neck not intersecting smoothly into the bottom of the brisket and lack of sway or droop in the back and belly give them away as not quite yet ripe.

Now, for the animal that we spend all that time in the woods in order to see and hopefully we have the skills to successfully harvest. I'm talking about that most magnificent creature, a mature buck, five-and-a-half to six-and-a-half-

year-old whitetail monarch. He looks a lot like a mature bull – heavy front and hindquarters, usually has an attitude, his neck seems to be attached to the bottom of his brisket, he has a sway in his back and belly, and he is a very effective predator avoiding machine. The evidence that he is an effective predator avoidance machine is that he got this old. Most of his siblings did not!

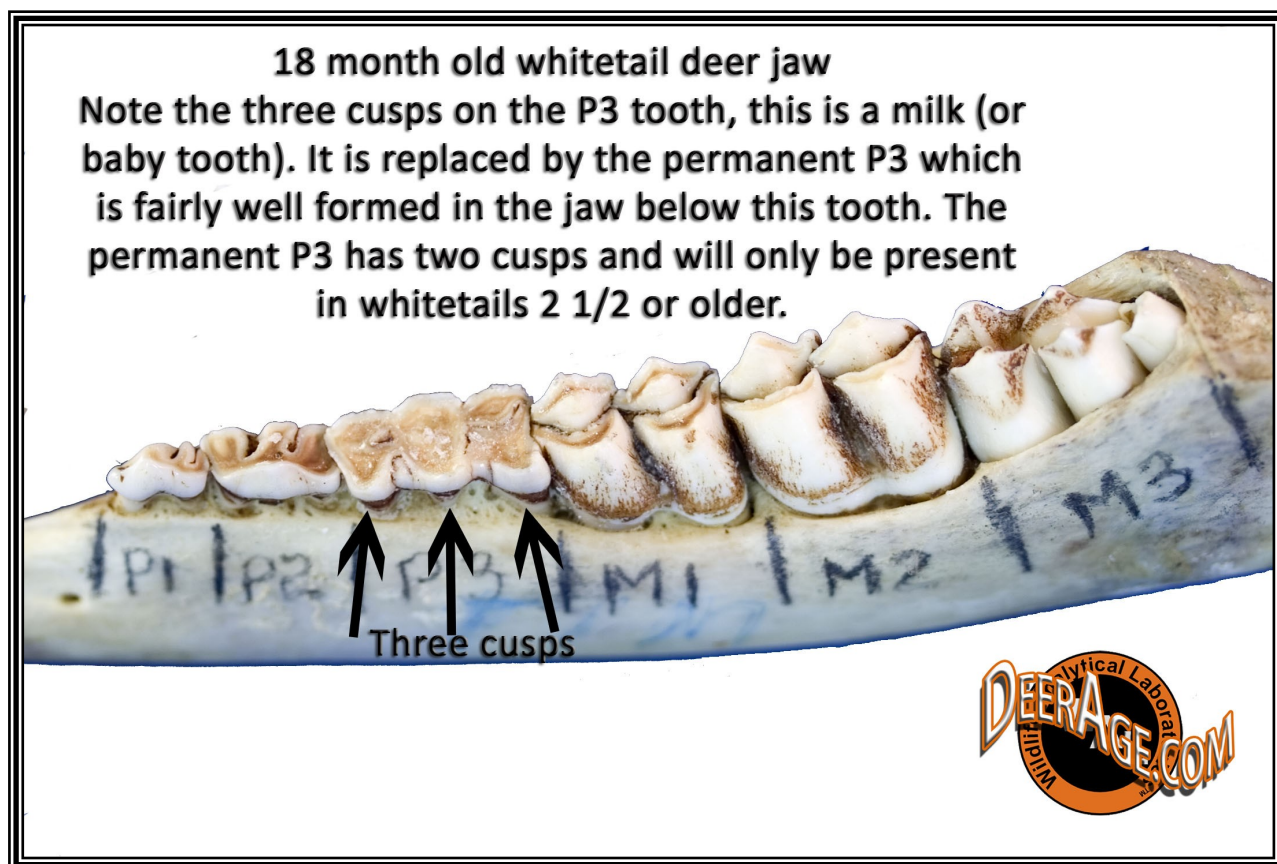
Let's go now to the next step- Once you have harvested your buck how do you accurately determine his age so you can do a better job next time in live estimating of age? There are currently four ways to estimate the age of a harvested whitetail deer and in the order of most accurate to least accurate here they are:

Tag the deer Attach an ear tag or some other object to the deer in the first few months after it is born. Accuracy level near 100%, only depends on reliability of process implemented and record keeping.

Tooth eruption A whitetail's teeth come into its mouth in a very predictable way in the first two years of its life. The most accurate way to estimate age on whitetail deer up until they reach 2.5 years old is by eruption. What this means is that we can tell by the number of teeth in the side of the jaw, for sure, whether the deer is about six months old, eighteen months old, or 2 ½ years old or older. I do not recommend you use cementum annuli for deer less than 2 ½ because eruption is almost as accurate as if we watched them be born. The way to do this is:

If the jaw has 4 or 5 teeth the deer is 6 months of age (It was born the previous spring).

If the jaw has 6 teeth we know for sure it is at least 18 months old. If the third tooth from the front has three cusps it is for sure an 18 month old deer. You can remove the flesh and see the permanent teeth underneath the milk or baby teeth (though this is not necessary to be certain, you just need to see the three cusps and six total teeth). This age class is most often misjudged as being a very old deer. The reason is that the third tooth from the front almost always is heavily worn (though it is a baby or milk

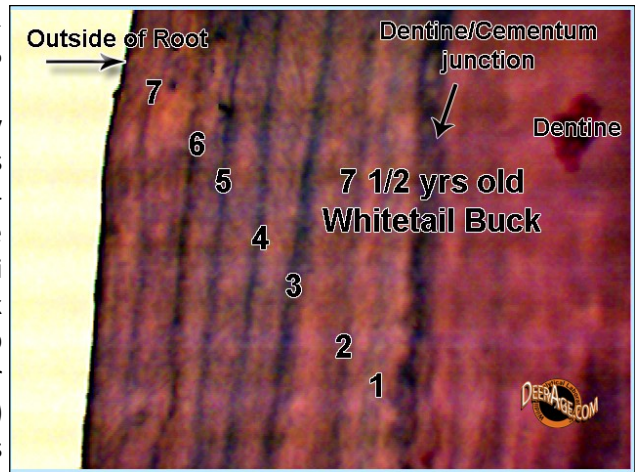


tooth). However, once a hunter, wildlife steward understands and learns about this eruption schedule it is easily identified from then on.

If the jaw has 6 teeth and the third tooth from the front has two cusps, the deer is 2 ½ years or older. If all the teeth are very sharp (no wear at all) it is a 2 ½ year old. If there is any wear you are then relatively confident the deer is 3 ½ or older. If you want to know more about the age other than “it is 3 ½ or older” the only way is to have a lab like ours prepare and count the cementum annuli rings on the root of the center incisors or M1 molar (the fourth tooth from the front, third tooth from the rear of a mature whitetails jaw.) Attempting to age deer by the amount of wear on the teeth, as you already know, is no more than guessing. Sort of like looking at a vehicle tire and guessing when it was new or how many miles it has gone.

**Cementum annuli** Every year that a whitetail deer or any other mammal has a tooth in its jaw, there is a layer of cementum deposited around the root of the tooth, underneath the gum line. So this tooth root is very similar to a tree in terms of aging capability. A tree has annual growth rings; a tooth has annual cementum rings (annuli).

Accuracy level is about 85.1% with almost all of the misses by 1 year. Molar wear in the same study had accuracy of 42.9% with misses of more than 1 year common (Hamlin study). Wildlife Biologist Ken Gee’s study showed cementum accuracy of 85% vs. molar wear from 25-55%. In order to have this analysis accomplished you need to remove the two center incisors and send them to a lab that is experienced in doing the histological analysis. We offer this forensic cementum annuli analysis for about \$20 and the removal of the incisors is quick and easy once you know how. Buy our **Prepaid Forensic Lab Test & Deer Aging Kit** from your local retailer or go to our website at [www.DeerAge.com](http://www.DeerAge.com) or call us to learn more (512) 756-1989. Cementum annuli should not be used for deer less than 2 ½ because tooth eruption is much more accurate, is easily learned, and costs little in terms of time and money.



**Molar Wear** The most widely used technique today. It was first described in 1949 and since then NO study has concluded it is very accurate. Typical accuracy results for deer actually 3 ½ years or older is less than 50% with large variances from actual age and this is when done by professionals trained according to the 1949 study. Kind of like trying to age a tire on your truck by how much tread is left on the tire. Typical comments by wildlife biologists concerning molar wear that have done studies about aging whitetails since 1949 ;

....this widely used technique is very inaccurate for classifying adult deer.... (Ken Gee, Wildlife Biologist, Noble Foundation Wildlife Unit 1996 study)

Ages assigned by ... wear criteria were not reliable..... (Kenneth Hamlin Journal of Wildlife Management 64(2):441

....we conclude that tooth replacement & wear should be used for deer  $\leq 2\text{-}1/2$  years old, while cementum annuli should be used for deer  $\geq 3\text{-}1/2$  years old. (Mickey W. Hellickson, Ph.D. King Ranch Chief Wildlife Biologist 2007)

Curiously this molar wear aging is still part of the course curriculum taught to current wildlife biology students.

Other information that can help in accurately estimating age includes body weight, antler mass, look of the animal (similar to live aging techniques). Trail cam data history has also been found to be helpful. Please consider all of what is said here in the context that deer are harvested in the fall, in increments of approximately six months after they are born (1 ½, 2 ½ ....6 ½, etc.).

So, is managing and knowing the age of your whitetail buck harvest important? I assert it is absolutely critical if you want to have the opportunity to harvest quality bucks. And it is another demonstration of your respect of this magnificent creature. Hopefully you now know a little bit more information to help you in your commitment to be a wildlife steward.