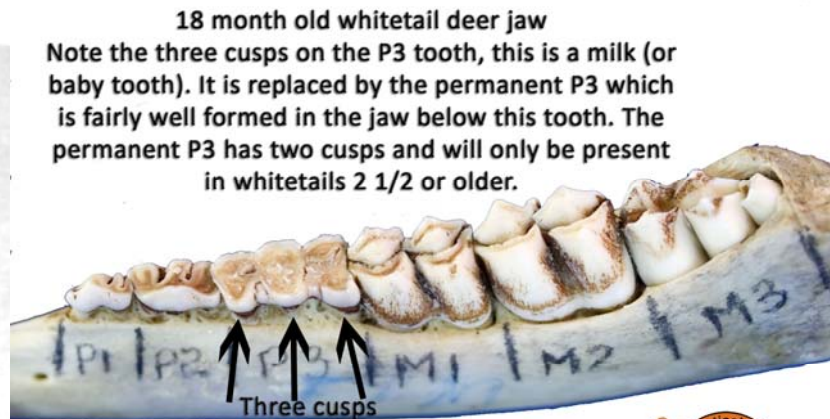


## What are the different ways to age whitetail deer?

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There are currently 4 ways to estimate the age of a harvested whitetail deer and in the order of most accurate to least accurate here they are:

- 1) 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.
- 2) 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 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:
  - a. If the jaw has 4 or 5 teeth the deer is 6 months of age (It was born the previous spring).
  - b. 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.

- c. 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.
- 3) 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 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%. 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.
- 4) 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 ;
- a) ....this widely used technique is very inaccurate for classifying adult deer.... (Ken Gee, Wildlife Biologist, Noble Foundation Wildlife Unit 1996 study)
- b) Ages assigned by ... wear criteria were not reliable..... (Kenneth Hamlin Journal of Wildlife Management 64(2):441
- c) ....we conclude that tooth replacement & wear should be used for deer  $\leq 2-1/2$  years old, while cementum annuli should be used for deer  $\geq 3-1/2$  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 many current wildlife biology students. Other information that can help in accurately estimating (eliminating as many errors as possible) 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.).