



Aging Antelope *It's All in the Teeth*

By William Jensen
Photos by Craig Bihrlle

Game and Fish biologists sometimes run antelope checking stations to gather information about harvested animals. One of the more common questions from hunters is: "...so how old is my goat?"

If you've ever brought your antelope to a field check station, a biologist probably aged it for you by looking at its teeth, and told you some basic things about how they did it. But you probably still had questions about how the animal's age was determined, and wondered if you couldn't do it yourself. This guide will help successful hunters estimate pronghorn ages.

How to Age Your Pronghorn Antelope

Pronghorn in North Dakota are primarily born between late May and early July. Therefore, when most animals are harvested in October they are considered either four months, 1½ years, 2½ years, 3½ years, etc., in age. For consistency across species, however, we generally age big game animals in half-year intervals (i.e., 1½, 2½, etc.). The overall age structure of a hunted pronghorn population is younger than many people think.

Horn and body size can give some indication of a buck's age,

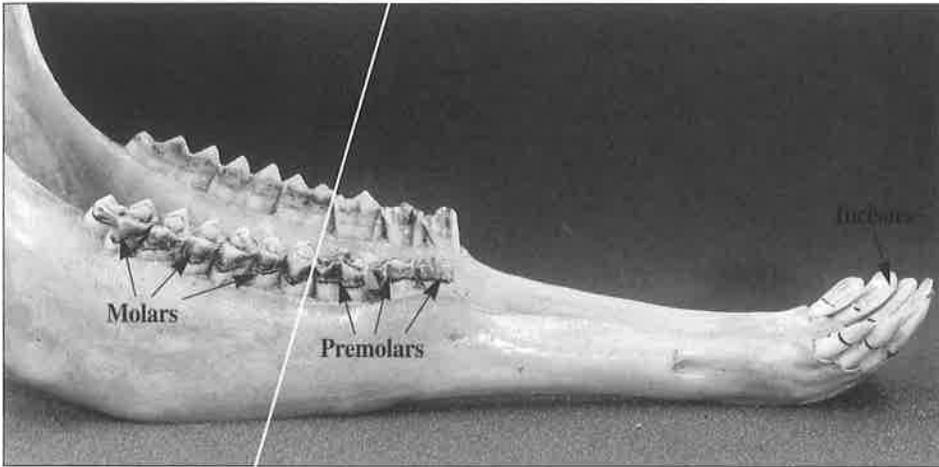
but physical characteristics are often misleading and provide little help in aging does. Horn size in bucks and physical development in both genders is greatly affected by diet, which may account for differences between animals of the same age taken from different locations.

Telling Teeth

The science of aging pronghorn is based on tooth development and wear.

Like humans, pronghorn replace their "baby teeth" with permanent teeth at a relatively set rate. As surely as a 6-year-old child will soon get her two front teeth, a 16-month-old buck will be in the process of gaining its central two incisors.

By the time an antelope is 3½ years old, all permanent teeth are in. At this stage, estimating age is based largely on rate of tooth wear. Diet and soil types may accelerate tooth wear, but generally, estimating adult pronghorn age is straight-forward until they reach 5½. Beyond that, estimating age by tooth wear is less reliable.



Your basic pronghorn jaw. Incisors in the front, molars and premolars in the back, and a big space in between.

Tooth Identification Basics

Pronghorn have two groups of teeth. The front teeth, or incisors, are used for collecting food. The back teeth or cheek teeth – molars and premolars – are used to chew and grind food. Between the incisors and molars is an open space along the jaw that has no teeth.

(Note: In all photos, black line indicates the gum line.)



Front teeth of a four-month-old pronghorn (fawn). Teeth appear proportional to each other, like adult teeth, but are much smaller. Cheek teeth development is a more reliable age indicator.



Front teeth of a 2½ year old pronghorn. Central four permanent incisors are in place. Outer incisors and canines are small and being pushed out or shed.



Front teeth all permanently in place. Pronghorn is at least 3½-4½ years old.

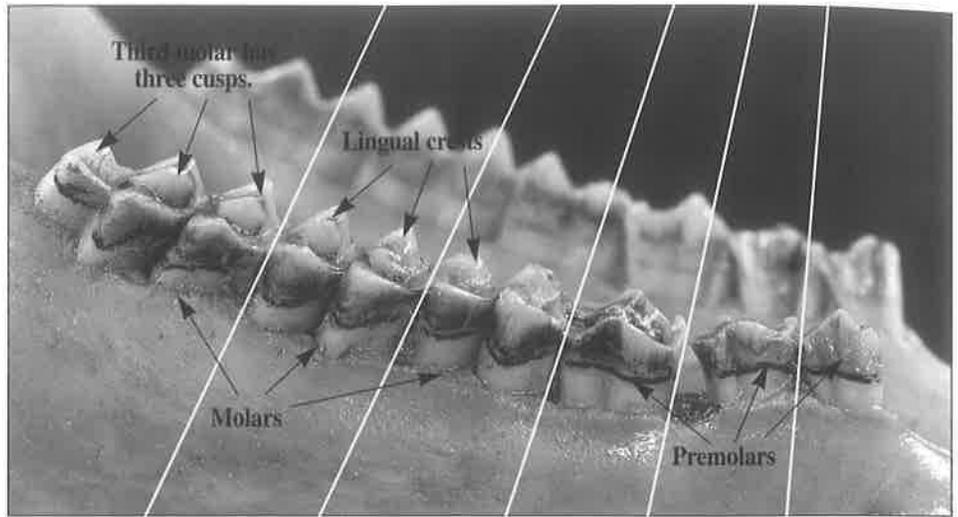
Front Teeth (Incisors): When a pronghorn is 14-16 months old, the central two front teeth (incisors) are replaced. The rest of the front teeth – lateral incisors and canine teeth – are all replaced by age 4½. Unlike horses, pronghorn do not have upper incisors.

Cheek Teeth

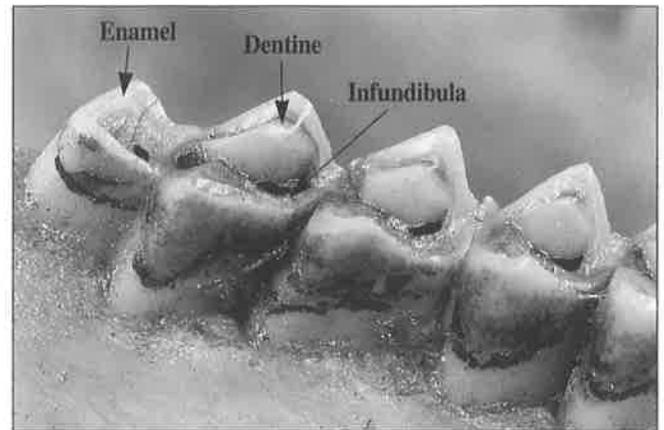
Premolars: The first three teeth on each side of the jaw are called premolars. Pronghorn grow two sets of premolars. The first set appears in fawns and lasts until the animal is about 2½ years old, when permanent adult premolars push out baby premolar teeth. An important characteristic of the first set of premolars is that the third premolar has three cusps or crowns. When the permanent teeth come in, all premolars have just two cusps.

Molars: The four, fifth, and sixth cheek teeth are molars. Pronghorn grow one set of molars. Generally, four-month-old pronghorn have only one molar when they enter the fall hunting season. Therefore, four-month-old animals usually have only four cheek teeth. By 1½ years of age – the second fall – the second and third molars have erupted through the gum, though the last cusp of the third molar is still below the gum line. All three molars are fully erupted by 2½ years; however, permanent premolars do not erupt until 3½ years.

The vast majority of pronghorn in North Dakota are 3½ years old or younger. To determine the age of animals in older age classes requires a closer look at tooth wear.



Cheek teeth of a 4½ year old pronghorn. Premolars and molars are indicated. Each permanent premolar and molar has two cusps or crowns, except the third molar, which has three cusps. The cusps on the lower jaw form a ridge of sharp points on the side nearest the tongue, called lingual crests.



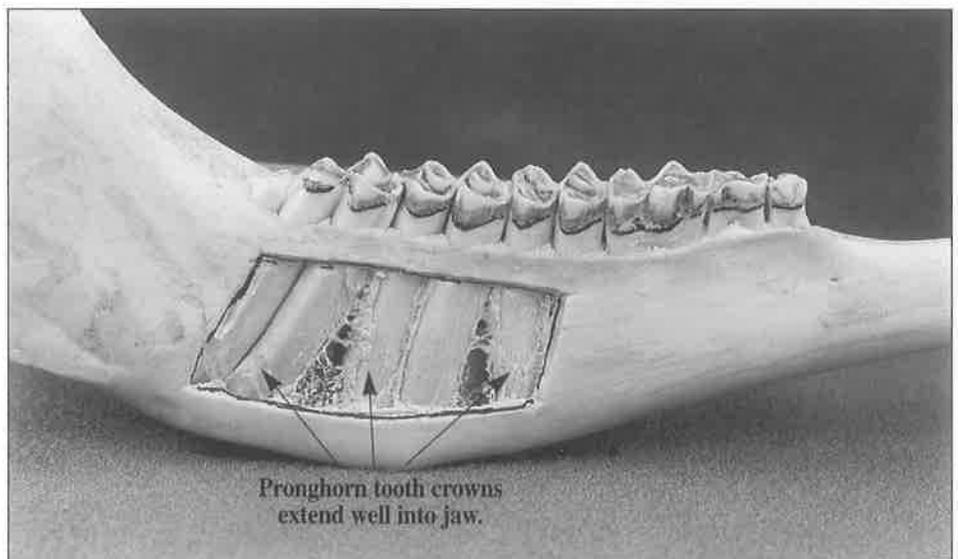
Deep pits (infundibula) are found in the cusp of molariform teeth. The white portion is enamel; the dark portion is dentine.

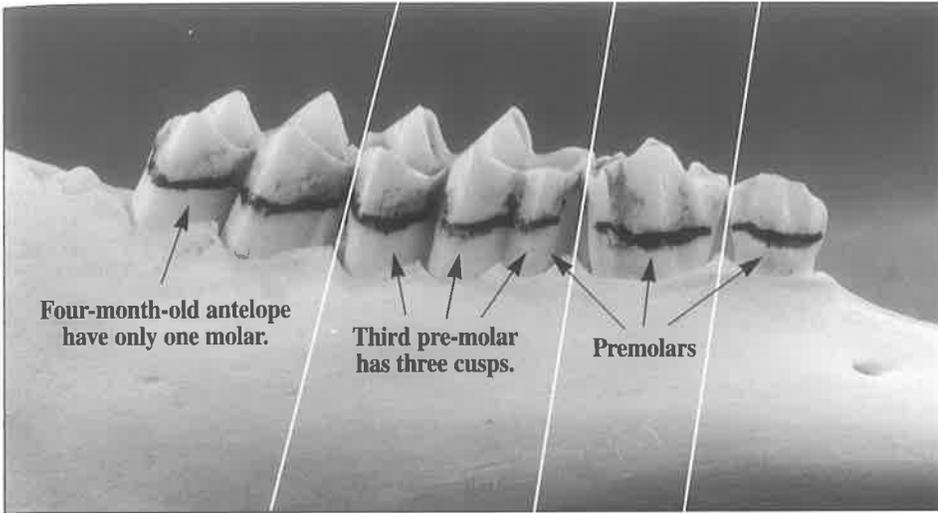
Through the Ages

While it is possible to determine whether a pronghorn is a fawn by looking at its incisors or front teeth, cheek teeth – specifically those of the lower jaw – harbor the most reliable clues.

To get a good look at cheek teeth (premolars and molars), you need to cut back the lip and cheek skin. If you plan to have the head mounted, let your taxidermist skin out the head and remove the jaw for you.

Unlike deer, permanent molars and premolars of pronghorn lack branched roots. The long crowns (see arrows) extend deep into the jaw. Because of this, antelope teeth are continually emerging; therefore, determining antelope age by tooth wear is not an exact science. Deer teeth stop growing by age 2½; aging their teeth by wear is more reliable.





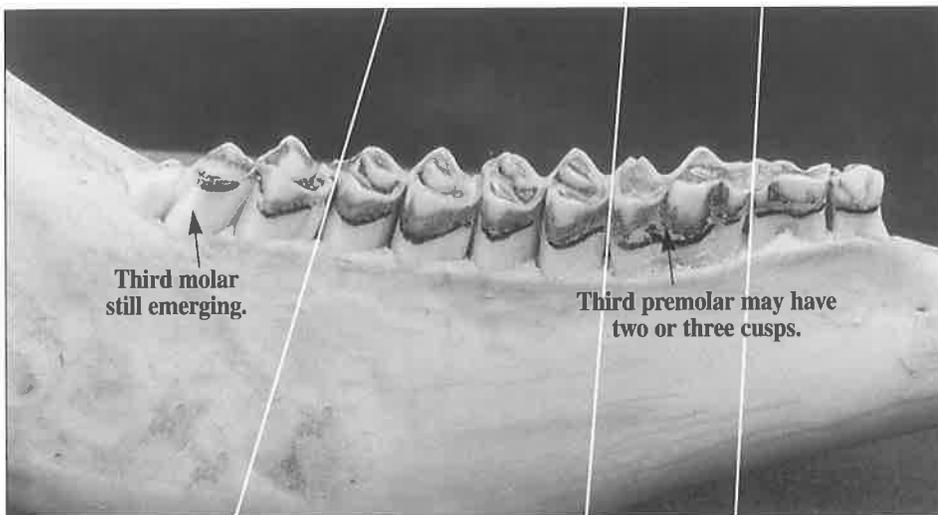
Four-month-old antelope have only one molar.

Third pre-molar has three cusps.

Premolars

Four Months

Four months: The nose or muzzle of the fawn appears short or stubby, when compared to older pronghorn. Generally, only four cheek teeth show.

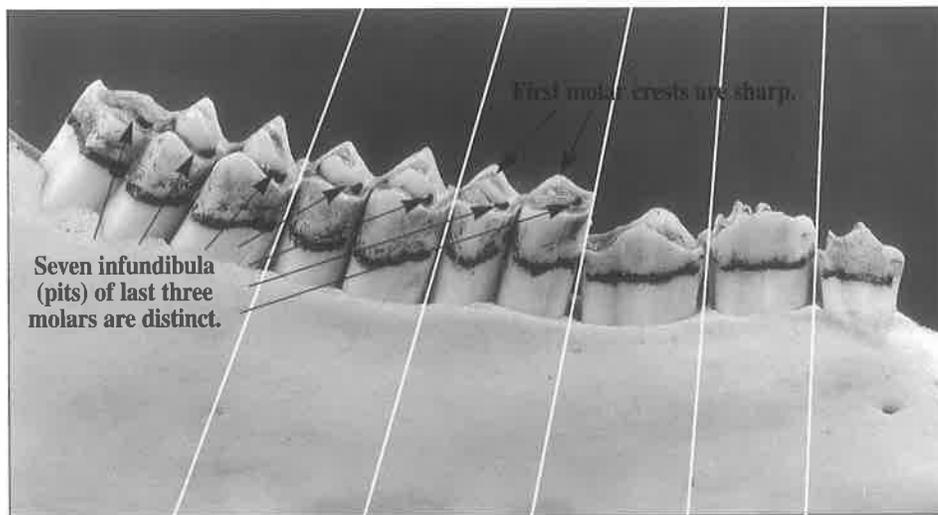


Third molar still emerging.

Third premolar may have two or three cusps.

1 1/2 Years

1 1/2 years: Central two permanent front teeth are in. Six cheek teeth are visible in the lower jaw. The third premolar may still have three cusps, or the permanent third premolar may now be in (two cusps). Third molar may still be erupting through the gum. Lingual crest of molars have sharp points.



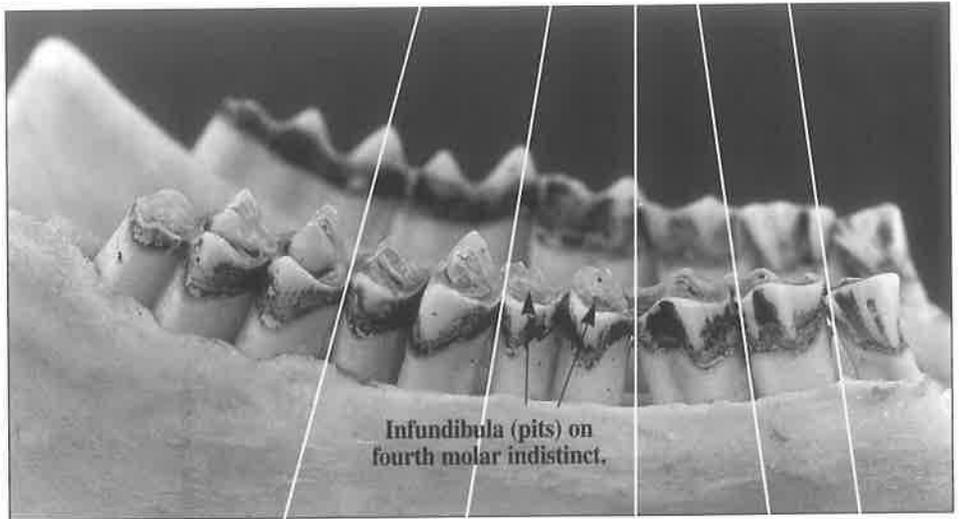
Seven infundibula (pits) of last three molars are distinct.

First molar crests are sharp.

2 1/2 Years

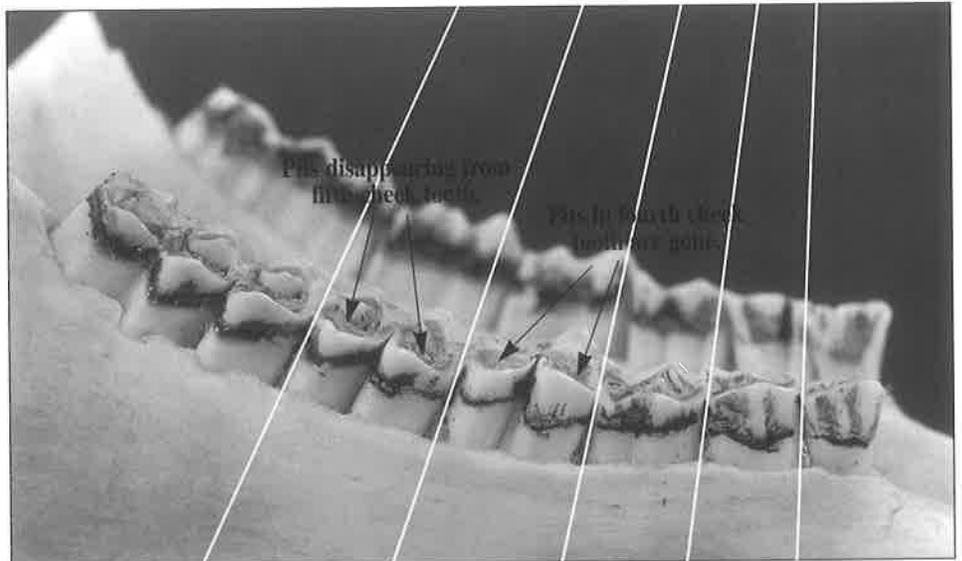
2 1/2 years: Most animals have permanent middle four incisors. Look closely at the fourth cheek tooth (first molar). The cusps are sharp and show little wear. The seven pits, or infundibula, of the last three molars are still distinct (one pit per cusp of each tooth), but are becoming reduced on the fourth cheek tooth (first molar).

3½ years: Middle six permanent incisors, and permanent premolars are all present. Infundibula of the molars are all visible but only form small pits on fourth cheek tooth (first molar).



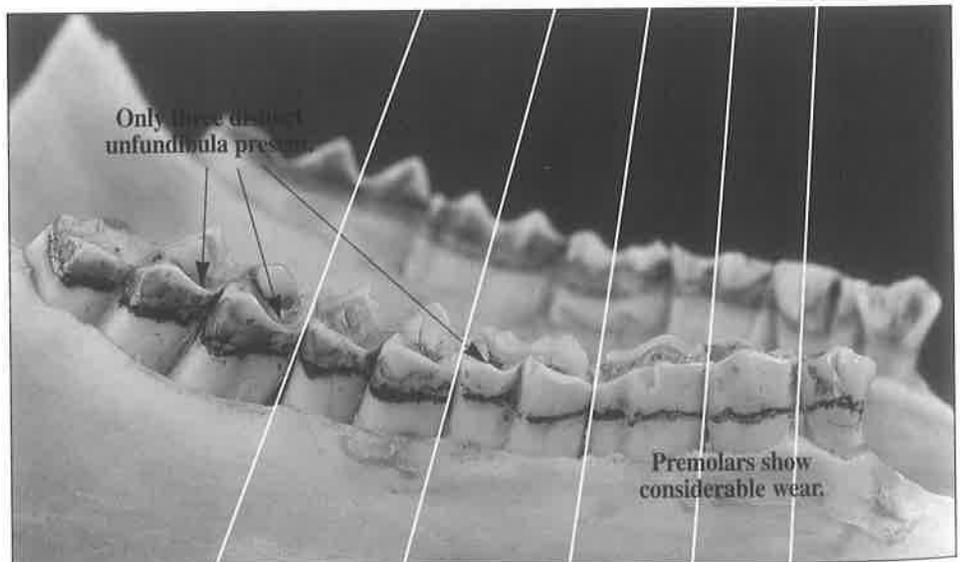
3½ Years

4½ years: Eight front (incisorform) teeth present. Usually only four infundibulum (pits) visible in last three cheek teeth (molars). Infundibulum of fourth cheek tooth (first molar) are gone.



4½ Years

5½ years and older: In most hunted pronghorn populations, less than five percent of the animals are more than five years old. Accurately aging these animals by tooth wear is usually more guesstimation than science. In general, pronghorn close to 5½ years will show considerable wear on the premolars. Usually only three infundibulum will be present in last three cheek teeth (molars).



5½ Years+

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