

ANTLERS or HORNS!

By Dr. Vince Crichton

Nice horns eh doc! Such words immediately evoke a polite but stern “lecture” as to the difference between antlers and horns to those making such profound proclamation. The basic difference is antlers are shed annually whereas horns are permanent structures and never shed.

All ungulates (moose, elk, deer, and caribou) have antlers whereas goats, sheep and cattle have horns. I am always amazed as to how many of the general public is not aware that antlers are cast annually and a new set grown – thus the need for more education!

A few years back while returning from a successful deer hunt with my wife and 2 friends, we stopped at a hunter check station operated by Natural Resource Officers and one of my biologist colleagues. The officer asked my wife if they had a deer in the vehicle. She answered yes and he subsequently asked if it had horns. Her immediate response was predictable and she gave my lecture as to the difference between antlers and horns – when I was told this I jokingly told her I hope you did not say who your

husband was!! Many of the wildlife/hunting programs on television have narrators/guides/hunters who do not know the difference. I find this most irritating as hunters we must be informed and use the correct terminology if we are to garner the respect we deserve.

Antler growth follows the same annual cycle except in cases where the pedicle has been damaged. What is the pedicle? It is the location on top of the skull’s frontal bone where antler growth is initiated. Growth starts here and the developing antlers are covered by a soft furry tissue referred to as velvet. Beneath the velvet is a maze of nerves and blood vessels essential to the development of the soft bony-like material that eventually hardens into solid bone.

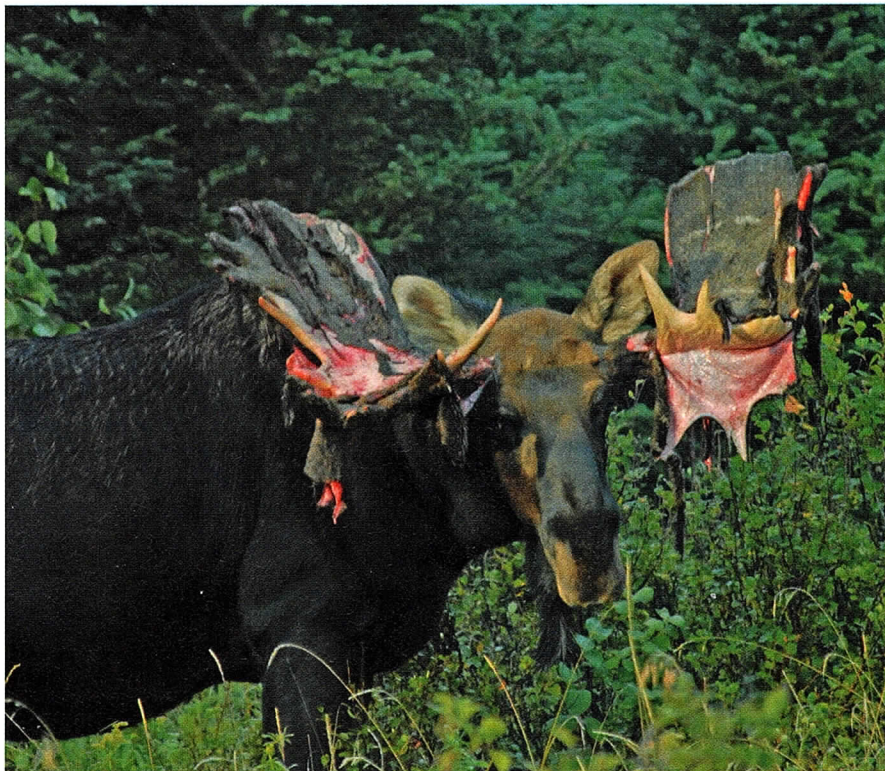
Antlers, during the development phase are tender, easily broken, and sensitive to the touch and can bleed profusely when injured or if a point was broken off. Occasionally during the development period antlers can become damaged but growth will continue and the broken site will heal but it will be noticeable by a defined bump on the tyne when fully developed. Misshapen antlers may have resulted from an injury which distorted the symmetry and

arrangement of the bone forming cells (osteoblasts) in the developing antler. This is different than non-typical deer antlers for example.

By mid July, antlers are about 75% developed and from this point onward hardening takes place and the velvet eventually shed. Mature bull elk shed velvet earlier than moose and I have seen fully developed and cleaned elk antlers by early August. However, with moose, caribou and deer it is later. Moose commence shedding velvet around September 5th with mature bulls shedding it earlier than younger animals.

Velvet shedding is a complicated process just as the development is. The bone near the base of the antler becomes dense eventually cutting off the blood supply to the growing antlers. At the time of shedding, the velvet can be pulled off similar to peeling a banana. I have handled caribou in early September and it is most difficult to hold on to antlers as the velvet readily comes off in one’s hands. Velvet is shed by rubbing against saplings and or trees and in most cases is eaten by the bull/buck. I have filmed moose doing this and shedding can take place in a few hours – on one occasion I watched a bull moose for 3 hours as he went from antlers in full velvet at 8am to it being virtually all shed by 11am He ate all of it by manipulating the antler so he could grab the velvet with his mouth or by picking it off the trees he was vigorously beating. The only velvet not eaten is the velvet that falls on the ground and overlooked by the owner.

Osteoblasts are cells that make the bone whereas osteoclasts are bone-destroying cells. The latter invade the base of the antler at the pedicle destroying the hard bone and eventually the antler is cast. Some animals will cast both at the same time but usually they are cast separately within a few days of each other. I have grabbed antlers on dead animals that broke away from the skull as soon as I grabbed them. In some instances however, the remaining antler is an annoyance and the animal will vigorously bang the retained antler against a hard object causing it to be shed. This however can have serious consequences. If the antler is still firmly attached, part of the skull bone



(frontal bone) is broken and comes off leaving an opening to the cranial cavity which is an entry point for foreign organisms and subsequent infections which in some cases I have seen is terminal (I have a paper currently being published describing this event). If the animal survives, the pedicle may have been damaged so severely that the antler on the affected side will not grow the following year – I have seen this with moose.

Once the velvet is shed the antler has a reddish colour which eventually turns to the typical brownish colour as the antler is rubbed against trees bringing them in contact with resins, gum and dirt.


The only time antlers are used is during the rutting period which generally speaking peaks in September for moose and elk, early October for caribou and November for deer. During this period they are used to intimidate or threaten rivals in order to gain superiority, which with any luck may lead to breeding of females and the opportunity to pass genes to the next generation.

Antler shedding/casting takes place with moose in early December with

about 10% of the bulls (usually older ones) having done so by about the end of the first week, followed by younger animals. Now, this is the general rule but I have seen bulls with large antlers in late January when flying moose surveys. Antler shedding in deer also occurs in early December as with caribou. Elk are different with the antlers still present well into March on mature bulls. I have seen and photographed old antlers on young elk in early May which is atypical.

Now, there is an interesting anomaly that can occur with some animals. If accidental castration occurs or if testosterone levels are significantly reduced, males will shed their hard antlers and grow another set which generally speaking are never shed. They are called peruke antlers and with moose, I have heard such animals referred to as devil moose. Such antlers are covered with velvet early on but over time it disappears and the antler in some cases have a coral-like appearance.

So, in conclusion, those appendages on the head of our male (and in some cases females) ungulates are antlers not horns!!



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MENTORED HUNTING TIPS

Safety first – Treat every firearm as if it is loaded. Safety is the primary concern while hunting.

Have fun – Be positive. Success is in the hunt itself, not just pulling the trigger.

Patience – First-time hunters need your encouragement. Mentoring is about ensuring a positive experience.

Listen and Talk – Address concerns and talk to new hunters about their connection with nature and respect for habitat and wildlife.

No Pressure – Sometimes the best shot is no shot.

Practice shooting – Builds confidence and accuracy in the novice hunter.

For details contact Manitoba Wildlife Federation: mwf.mb.ca

Pass the love and knowledge of hunting on to others.
Become a mentor!

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