

any excuse
on the in-
the way of
and need-
ronage and
had to fight
largely de-
y utility of
rming com-
was rural
me coming.
the service.
t satisfying
He will do
al aid pro-
e absorbed
returns ar-
but there
ments. It
school sys-
ot the pub-
ication sys-
ichment re-
the domain

ost, had an
nds of wild-
all Cana-
ure, or in
oting those
st vitally.
which rel-
Congress,
hands over
gical Sur-
United
right to
regulating
of migra-
e says:
da raises
wild fowl
ay, and in
ive Canada
ty, but on
hand, for
have done
l to lessen
The Week-
is the first
ame law
er given
quare deal
rrowest of
an fail to
giving Can-
are deal
only Can-
th Canada
s, since we
up our old
ne that
continually
ver sow-
est sowing
lay lie in

been for
and is to-
rely error-
among
that there
areas of
t breeding
in the far
will take
the breed-
which have
ed by civi-
south and
e boundary
United
rd to this

ever again
e, as good
largely been
the divid-
nada—that
continent.
ce. I say
border to
flyway of
ssippi Val-
in large
alley in the
mean the
Mackenzie
streams.

re breeding
where the
statement

should be made carefully. One of the greatest wildfowl regions of that northern country is in the Peace River delta and Lake Athabasca. But when we reflect that within two or three years there may be a railroad built to MacMurray, which will bring the traveller within less than two hundred miles of steamboat transport to Lake Athabasca, we begin to see that we ought not to prophesy too sweepingly regarding the eternal isolation of this breeding ground.

"Again, the southern and western shores of Hudson Bay proper have been fine nesting grounds for numbers of geese and different species of duck that come into our country in the fall. You would not think there is much danger from the sportsman tourist, did you not stop to think that they are building a railroad to the western shore of Hudson Bay.

"There remain the big breeding grounds more or less vaguely supposed to exist toward the mouth of the Mackenzie River. Here, to be sure, latitude and geography conspire against the sportsman tourist. If he remained in that country long enough to get good shooting in the late summer, he might not get out that winter. But that breeding ground is far more restricted and less prolific than it is generally supposed to be.

"Another great northern breeding ground we have been accustomed to locate vaguely on the Yukon River. Towards the mouth of that river, just as in the delta of the Mackenzie River, there are good wildfowl nesting grounds; but neither of these rivers is a continuous nesting ground for wildfowl. The greater portion of the thousand miles of these waterways is, on the contrary, entirely unsuited as breeding grounds for wildfowl. These birds must have low and marshy country, and not rock shores or vast flats covered with interminable growths of spruce, cottonwood and willows.

"The truth is—or the truth as I conceive it to be after a journey to the mouth of the Mackenzie, thence west to the Yukon and south to the Pacific Ocean—that only a relatively very small portion of that great wilderness country is suitable for raising wildfowl. I do not believe the percentage of such acreage is anywhere near so large—perhaps it is not one-fifth or one-tenth as large—as the percentage of acreage naturally found in the Dakotas, Saskatchewan and Alberta.

"Certainly—though the season was at that time better advanced, so that the young birds began to show—I saw more ducks in the ponds along the Canadian Pacific Railroad in three days in August than I had seen in three months in all that far northern country."

Mr. Hough obtained as much information as he could relative to the abundance of wildfowl in the Athabasca-Mackenzie region from white men, and Indians, and all agreed that the birds were not now as numerous as they were some years ago. Speaking of the general impression which exists that the Indians kill immense numbers of birds and gather quantities of their eggs, he says: "An Indian is very lazy. If he can get anything to eat around the post, or if his nets are bringing him in fish, he is not going to bother to tramp around a marsh hunting ducks' eggs; and ducks do not there, any more than with us, make their nests in the dooryard.

"The high cost of ammunition—ten cents, twelve and a half cents and fifteen cents for a loaded shotgun shell, and a proportionately high cost for loose ammunition for muzzle-loaders, is the best reason why the Indian does not kill more ducks.

"It is the white man who is to be dreaded. In old times, when the natives of this continent lived altogether on wild game, they never wiped out a single species. They had no cold storage and no endless market; and they were lazy and lived from hand to mouth; they did not waste and did not kill for the sake of killing.

"For twenty-five years the writer has been more or less of a student—for fifteen years more or less of a student in a professional way—of the game supply of America. The decrease of every species in every locality is, when one stops to consider it, an accurate and studious cause for actual consternation. Without the slightest wish to be sensational the definite conclusion of one man who, for a good part of his life, has been paid to know about this sort of thing is that we did not get this Weeks-McLean law one minute too soon.

"Let us hope that the American people have learned their lesson. And let us hope that they simply will conclude that it is time to do a little sowing if we are going to reap this crop any longer. The Weeks-McLean law does not abolish shooting; it simply sets a national harvest-time for a valuable crop.

"Now is the time when Canada ought to swing into line in game protection, forgetting all sorts of jealousy and rivalry. Both Saskatchewan and Alberta ought to join us in abolishing spring shooting and market hunting."

THE HORSE.

The Age of a Horse as Evidenced by the Teeth.

All pure-bred registered stock is, of course, recorded under its proper and correct age, but there are many transactions where the birth of the animal is associated with some event in the family history, and that is as authentic a statement as an interested party may obtain. A judge



Fig. 1.—Incisors of a colt at one year old.

in the show-ring often finds it useful to be able to ascertain a horse's age by some means or other, and the teeth usually furnish this information. There is a limit, however, to the evidence furnished by the teeth. Some wise horsemen can tell the age of a horse up to 25 or 30 years, but our leading veterinary practitioners taboo the idea of any accuracy being connected with a statement based on the appearance of the teeth after the animal is ten years old. In addition to this the teeth are modified by the conditions of the country in which they are being produced, and the character of the soil or pasturage upon which they graze. The period of the falling out of the milk teeth, the appearance of the permanent ones, their levelling and the successive forms which the tables present as they wear away, vary slightly, but furnish a basis upon which to form a judgment.

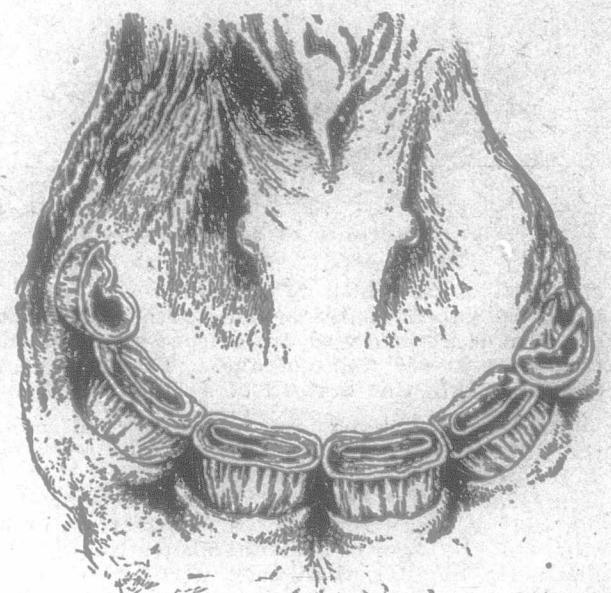


Fig. 2.—Incisors of a horse at two years old.

Ordinarily the horse has 40 teeth and the mare 36. This number does not allow for the first pre-molar which is sometimes present making the molars or back teeth, seven in number, above and below, on each side. When the first pre-molar appears it is known as the wolf tooth, and is the subject of much complaint among the horsemen. It generally disappears at the shedding of the molars, and it appears as a testimonial of evolutionary stages in equine dentition. The canines or tusks are present, as a rule, only in males, and fully developed in the stallion. The incisors or front teeth are the same in both male and female, numbering six above and six below. Taking one side of both jaws in the male and not allowing for the occasional appearance of a first pre-molar, the horse's dental formula is: incisors, 3-3; canines, 1-1; molars, 6-6.

The development of the teeth, the displacement of the temporary or milk teeth by the permanent ones, and the subsequent changes in size, shape and appearance are the clues to the horse's age, which furnish proof to a very marked and reliable extent. In youth the tooth is widest from side

to side, at advanced age it is widest from back to front and quite angular in shape; as age advances the groove formed by the root of the tooth appears and about half way down is well marked, but age then becomes an opinion and not a matter of fact.

At birth the foal has four temporary incisors, two top and two at the bottom, not quite through the gums, but the sharp edges are discernable under the mucous membrane. The three temporary molars are usually under the gum at the time of birth. By the end of the second week the central incisors will be fairly in the mouth, and at about one month he has four teeth top and bottom. In six or eight weeks, the lateral teeth and also the temporary molars are well up. The corner teeth are through and constantly grow for the next eight months, when the colt is ready to be weaned from its mother.

At nine months old the colt will have the corner incisors in the mouth, with their extreme edges in wear. At this period the fourth molar, which is a permanent tooth from the first, appears through the gum, and at the completion of the first year it is level with the temporary molars but its surface is not worn. This recent appearance of the tooth is important as evidence of the age of one year. Figure 1 shows the shell-like character of the corner tooth, and the state of the tables of the other incisors in the one-year-old colt. The resemblance is marked between the one and five-year-old, but in the lat-



Fig. 3.—Incisors of a horse at three years old.

ter the teeth are yellow and discolored, while the teeth of the year-old colt are pearly white. Some readers may smile at the idea of mistaking animals of these two ages, but the amateur should look twice before expressing his opinion too confidently regarding the ages of animals where one and five or two and six-year-old females are concerned, as the tusks are not present in the females to indicate that the animal is over four years of age. Shortly after eighteen months the fifth molar begins to appear through the gum, and at the expiration of two years it is level with its neighbors. At this stage it will be noticed in figure 2 that all the incisors are worn and the crowns are level, with the exception of a small portion of the inner side of the corner tooth, which shows the effect of wear, but only to a slight extent. Between two and three years of age the central temporary incisors of the horse are changed for permanent teeth, and are sufficiently different from the tem-

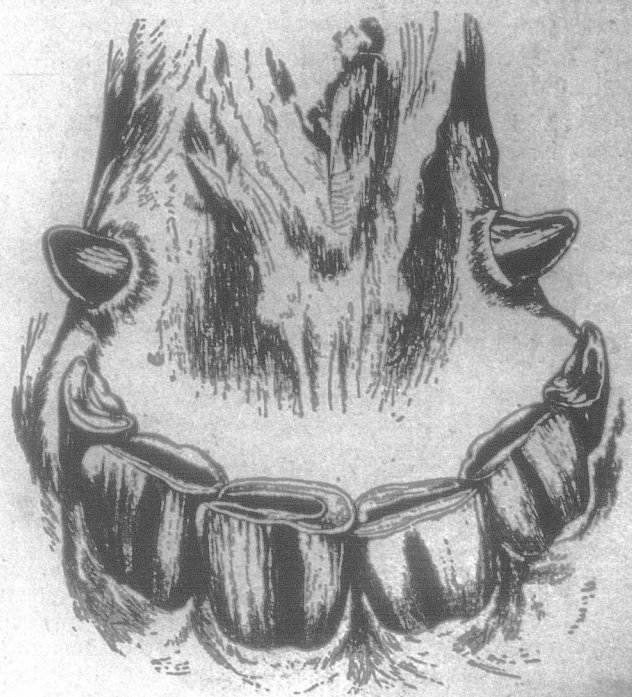


Fig. 4.—Incisors of a horse at four years old.