

A CASE OF UNHINDERED GROWTH OF THE INCISOR TEETH OF THE WOODCHUCK.

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Late in the fall of 1921, long after the normal woodchucks had gone into retirement for the winter the groundhog whose head is shown herewith was caught near Oxford in a trap set for skunks. The trapper killed the woodchuck with a club, breaking two of the teeth in the process, one of which he picked up. The pelt being valueless he cut off the peculiar looking head and threw the body away making the observation that the animal was much undersized and excessively thin.

The head was brought in, mounted by a local taxidermist, and put upon exhibition in an office window. I take this opportunity to thank the exhibitor, Mr. Chas. Wright, for permission to photograph the mount.

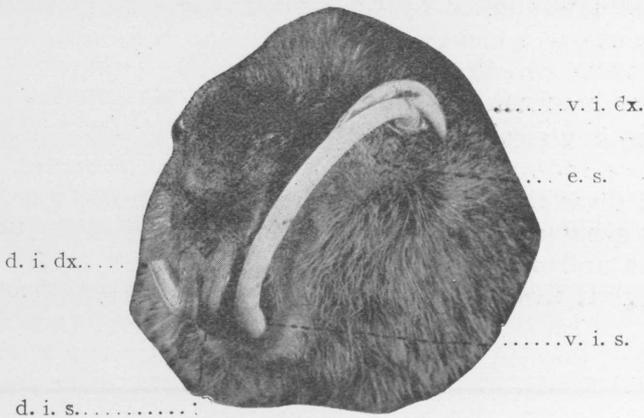
There is no evidence as to what happened to deform the animals, but the results are clear. In some way the incisor teeth of the woodchuck's lower jaw became deflected to the animal's left side and the incisors of the upper jaw turned enough to the right so that the two sets passed each other and no longer could be kept worn down by gnawing.

The left lower incisor grew in a regular curve up to the eye, ploughed through the eye and blinded it. It can be seen that the direction of growth was changed into a section of a larger circle as the end of the tooth slid backward along the frontal bone. The continuous curving growth of the tooth was not to be resisted by bone, however, and so the point of the tooth perforated the skull a short distance behind the eye socket and is said by the preparator to have penetrated the brain also.

This perforation of the skull and brain must have been some time before the animal's death, for the last visible part of the tooth is sheathed with a connective tissue envelop probably continuous with the periosteum of the skull through which the tooth passed. How far into the brain the tooth penetrated can never be determined. The whole socket of the eye was a suppurating mass when the animal was killed.

The right lower incisor was crowded between the left lower incisor and the bones of the left side of the face. It shows the effect of pressure and also that it was rubbed between its mate and the skin of the face. The hair on the face is worn very close along the line of this tooth also. Unfortunately since it was broken across when the animal was killed, no more accurate information can be had as to its position. The photograph shows it ending freely over the part of the left lower tooth which disappears into the head.

The stump of the right upper incisor is shown on the animal's right. The tooth is curving sharply and if the part broken off could be found it might show that the point was nearly as high as those of the teeth on the lower jaw.



- d. i. dx.—Right upper incisor (broken off).
- d. i. s.—Left upper incisor which passes down the animal's throat.
- e. s.—Left eye socket through which the lower incisor plowed.
- v. i. dx.—Right lower incisor (broken off but placed about as it must have been in life).
- v. i. s.—Left lower incisor penetrating the skull and brain.

The left upper incisor turns directly down and back into the mouth and, according to the man who mounted the head, extended down the throat for more than an inch.

This case is a fine example of the way rodent chisel teeth with persistent pulps (or with continuous growing germs) act when for any reason the wearing of the teeth is hindered. The fate that follows is inexorable and starvation is its logical end.

How did the animal get any nourishment at all? The bodies of the upper and lower incisors firmly fixed side by side seem to

make entrance of food into the mouth from the front absolutely impossible. There is, however, a small section of the mouth opening to the left side just behind the origins of the lower teeth which looks as though it could have been used. The hair around this corner of the mouth looks rubbed and worn thin. Possibly by turning the head to one side and by manipulating with the tongue as effectively as it could act under the permanent tongue depressor (the left upper incisor) some leaves and other small fractions of plant tissue could be forced far enough into the mouth to be caught and ground up by the back teeth.

Whatever explanation one makes concerning the method of feeding, the animal certainly obtained enough food to keep alive, for it was killed by the trapper. And from the date of capture, nearly a month after the normal woodchucks had disappeared, we can be just as sure that the creature had been unable to hibernate because incapable of accumulating fat.

There is no means of learning the age of the animal, but since these rodent teeth grow rapidly it was probably a young one and these tusk-like teeth the unworn accumulation of one season's growth. It seems impossible to imagine a half blind, deformed and infected animal ever having been able to store fat enough to live over even one hibernation period.