

MICHIGAN DEPARTMENT OF CONSERVATION
Game Division

Report #2121
April 12, 1957

Bobcat Predations on Deer in Chippewa County, 1957

This is a composite of reports prepared by Joseph Vogt and Albert Erickson on their investigations of alleged bobcat predations on deer in the NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 12, T 44N, R 1W of Chippewa County.

Vogt was contacted on March 27, 1957, by Conservation Officer Joseph Hill of Pickford regarding some dead deer found in a deeryard timber cutting. Vogt accompanied Hill in a search of the cutting which lies about five miles north of Pickford in the Keldon Deeryard. They found nine dead deer within an area of about five acres. Detailed description of these animals will follow.

The dead deer were originally found and reported to Hill by Mr. Dean Brown of Sterlingville and Mr. William Hower of Pickford who were cutting conifers on the forty.

Vogt notified the Lansing office by telephone of the apparent predation. Erickson drove up from Lansing on March 29 and met Vogt to investigate the incident and bring the deer back to the Laboratory for additional examination.

Two of the nine deer were separated from the rest of the group and evidently had been dead considerably longer. One was a 3-year-old doe with most of the flesh eaten away. The bone marrow was solid. The other was a 4-year-old doe nearly cleaned of flesh and showing fatty but shrunken bone marrow. One hind leg of this doe was off at the hock, possibly from a hunting season wound. The stub had healed over. The cause of the death of these two animals could not be determined.

The remaining seven deer, four bucks, two doe fawns, and an adult doe, were grouped in a two-acre area of current cutting. All were predation victims. The snow was crusted and there were no tracks or other signs on the ground to show the manner in which predation occurred or to identify the animal responsible, consequently all determinations were made from examination ^{of the carcasses}. The autopsies showed a marked similarity of the carcasses in nearly all of the kills characterized by massive hemorrhages in the throat area and claw marks along the back and in the hip and shoulder regions. The predator or predators restricted his or their feeding to the flesh of the hams and the anal region. Vogt and Erickson concluded after examining the carcasses that the group of seven deer were killed by a member of the cat family, either a bobcat or a lynx.

Possibly there were predisposing conditions that led to this unusual case where several deer were preyed upon by a cat. The deer were concentrated by the timber cutting within a yarding area and the slash forming loose brush heaps throughout the area may have helped the predator. Six of the seven deer were fawns, five ranging in weight from about 32 to 46 pounds which is considerably less than for well-developed fawns in good flesh. The bone marrow of two fawns was gelatinous, indicating the fawns were approaching starvation. The bone marrow of the other deer showed low to high fat content. The sixth fawn weighing 58 pounds and the adult doe were in good physical condition. Predation for the most part involved deer of lesser size and poorer physical condition.

There is evidence that dogs have been active within the area. Conservation Officer Hill stated that a dog was recently killed by a car as it chased a deer across the road several hundred yards from the area where the dead deer were found. Erickson thought some of the wounds on a foreleg of a buck fawn and on a rear leg and an inner foreleg of the adult doe were not typical of the others in that the skin was not punctured and the flesh was somewhat pulpy as though it had been chewed by teeth duller than those cats are supposed to have.

Description of Individual Deer

#1 - 9 mo.-old buck

Rear end of brisket broken and hemorrhaged. Massive hemorrhage in throat area. Claw marks in shoulder and along spine. Major hemorrhage on back in region of hips and shoulders. Bruise on right shoulder. No marks on legs. Flesh of right hind ham, rump and anal region eaten. Death caused by neck wounds. Dead - 1-6 days. Had been run over by logging tractor after death. Physical condition fair, bone marrow partly gelatinous, fat content about 10%. Estimate 4-5 lbs. of flesh eaten. Weight 28 lbs. Estimated live weight 33 lbs.

Notes by Fay - No visceral fat, bone marrow gelatinous and containing about 10% fat, deer appeared to be on the verge of starvation. Third cervical vertebra fractured, spinal cord hemorrhagic at site of fracture.

#2 - 9 mo.-old buck

Neck broken. Massive hemorrhage in the throat area. Claw marks on back and rear spine area. Severely chewed in rear of upper neck region. Hips and shoulders severely hemorrhaged. Right shoulder chewed between upper shoulder and elbow. No marks on legs. Crows had eaten the viscera. Rump and hams eaten. Estimate 10 lbs. eaten. Physical condition fair to poor. Bone marrow solid with high fat content. Weight 31 lbs. Estimated live weight 41 lbs. Death caused by broken neck and neck wounds. Dead 1-6 days.

Notes by Fay - Although a small fawn, it was in a fair state of nutrition as indicated by the bone marrow (fat content about 70%). Second cervical vertebra and spinal cord severed, processes of the lumbar vertebrae were broken as from a crushing bite.

#3 - 5 yr.-old doe

Carried 2 embryos, each 10½" long, 1 male and 1 female. Massive hemorrhage back of neck and side of throat. Claw marks through neck and shoulder muscles. Numerous punctures through skin of neck. Back of shoulder severely clawed to middle of back, a gap of no marks, then more claw marks in the hip region. Inner right foreleg showed internal hemorrhage midway between shoulder and knee, atypical of cat work,

suggests dogs. Left rear upper leg severely chewed with no skin punctures; suggests dogs. It is possible, however, that these wounds were caused by the cat. Tip of brisket and lower ribs severely chewed over 6" x 3" area; skin bruised and hard but not punctured. Anal region and right ham eaten. Estimate 5 lbs. of flesh eaten. Physical condition good, bone marrow good. Dead 6-7 days. Weight 104 pounds. Estimated live weight 120 lbs. Death probably caused by throat and neck wounds.

Notes by Fay - Fair amount of visceral fat, bone marrow fat between 70 and 90%, some processes on cervical vertebrae broken, blood in spinal canal, cord intact.

#4 - 9 mo.-old buck

Massive hemorrhage along most of the neck area. Left shoulder and spine hemorrhaged to the forepart of the rump. Numerous skin punctures along back. Wound along right side. Wound below left shoulder. Large wound through the muscle in the left central part of the back. Right ham and anal region eaten. Estimate 3-4 lbs. of flesh eaten. No marks on hind legs. Physical condition fair, bone marrow fairly good. Dead 1-6 days. Death caused by neck wounds. Weight 43 lbs. Estimated live weight 46 lbs.

Notes by Fay - Trace of visceral fat, bone marrow fat about 50%, marrow orange in color, 3rd cervical vertebra fractured, spinal cord at site hemorrhagic but intact.

#5 - 9 mo.-old doe

This animal killed in hardwood slash area away from other cat-kills; probably 150-200 yards from most of the other dead deer. Right side of neck severely hemorrhaged. Neck broken. Wound just below right ear. Hemorrhages on both shoulders and hips, hide punctured with small holes at these points. No marks on legs. Skin of neck perforated by claws. Estimate 2-3 lbs. of flesh eaten. In poor physical condition; a man's hand could encircle neck. Bone marrow partly gelatinous, fat content 10%. Left rump and anal region eaten. Weight 41 lbs. Estimated live weight 43 lbs. Dead 1-6 days. Death caused by broken neck and neck wounds.

Notes by Fay - Fat content of femur marrow about 10%, tooth puncture wounds through trachea, processes of cervical and lumbar vertebrae fractured, spinal cord intact.

#6 - 9 mo. old buck

Small bite in left upper neck just below head. Neck relatively undamaged. Right shoulder hemorrhaged. This animal only lightly

wounded, seemingly not enough to cause death. Possibility of shock as a death factor. No marks on legs. Good physical condition, some skin fat, bone marrow good. Right ham and anal region eaten. Estimated 5 lbs. of flesh eaten. Dead 1-6 days. Weight 58 lbs. Estimated live weight 63 lbs.

Notes by Fay - Multiple bruises on thoracic wall indicate the deer received greater physical blows than Erickson's notes indicate.

#7 - 2-yr.-old doe

Small claw wound on left top skull. Right side of neck bitten through windpipe, severely hemorrhaged. Claw marks and massive hemorrhage back of shoulders. No marks on legs. Tip of brisket severely crushed. Skin perforated by numerous claw marks, along spine. Tail bitten off. Dead 1-6 days. Wound on right chest. Physical condition poor, bone marrow fairly good. Anal region and hams eaten. Estimated 6 lbs. of flesh eaten. Crows had eaten on the right shoulder and along the spine. Death caused by neck wounds. Weight 38 lbs. Estimated live weight 44 lbs.

Notes by Fay - No visceral fat, bone marrow fat 50% or less, processes of cervical, dorsal processes of thoracic, and lateral processes of lumbar vertebrae broken but the bodies of the vertebrae intact, trachea punctured with tooth marks.

#8 - 3-yr.-old doe

Mostly eaten. Bone marrow solid and fatty, slightly discolored. Cause of death unknown. This deer about 100 yards away from the deer found in the cutting, in a dense balsam stand. Dead 2-3 weeks.

#9 - 4 yr.-old doe

Mostly eaten. Bone marrow shrunken but of good fat content. Cause of death unknown. Left hind leg missing at knee, probably hunting season wound. This deer in the hardwood slash area, within 100 yards of deer #5.

COMMENTS BY FAY

Erickson brought the deer identified by Numbers 1 through 7 to the Game Division Laboratory where I examined them for additional information. Postmortem changes obscured some of the lesions described by Vogt and Erickson who skinned out the carcasses and examined them while they were relatively fresh. My comments are restricted to findings not already described or those which ought to be emphasized.

With the exception of deer Number 6 the seven deer had characteristic neck wounds that could well have been fatal. The deer were bitten across the

mid-portion or the anterior part of the neck in such a manner that the spinous processes and in some instances the bodies of the vertebrae were broken. In all cases the flesh about the bite wounds was infiltrated with blood showing that the deer were alive when the wounds were made, Although some of the wounds were in the vicinity of the jugular vein and hemorrhaging was quite evident, I don't believe that the loss of blood was the primary cause of death. It is more likely the deer were paralyzed and killed by the pressure put on the neck vertebrae and the spinal cord. The vertebrae of the fawns were soft and could be sliced quite easily with a sharp autopsy knife, consequently it is doubtful that the preying animal would have had to be exceptionally large to kill the deer.

Gross examination of the carcasses did not reveal an unusually heavy state of parasitism or other pathological conditions outside of malnutrition that "debilitated" the deer.

LEF:cb
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