NOTES ON THE MAMMALS OF ALGER COUNTY, MICHIGAN.

By Norman A. Wood.

In the summer of 1916 the University of Michigan sent an expedition to Alger County in northern Michigan for the purpose of adding to the data on the distribution of the animals of the state which is being accumulated by the Museum of Zoology. The University is indebted to Mr. George Shiras 3rd, for the opportunity to send out this expedition, and the field party is indebted to him for the use of his camp, for many helpful suggestions in the field, and for field notes on the animals of the region. A general account of the personnel and work of the expedition will be given in the report of the director of the Museum for 1916-1917, and it is sufficient to say here that the writer was in charge of the field work and devoted his time largely to the study of the birds and mammals.

The region selected for study is in the northwestern part
of Alger County in the Northern Peninsula (see map). It lies mostly to the south of Onota and Deerton, and is bounded roughly by Silver Lake, Howes Lake, Deerton and Deer Lake. Headquarters were established at Peter White Camp, Section 34, T. 47 N., R. 22, W., and most of the work was done in this and adjoining sections with occasional trips to different parts of the general region.

The surface is without notable relief and the soil is described\(^1\) as mostly "swampy" and "sandy till", a small amount as "sandy". The rock is near the surface but only outcrops along the rivers and lakes. The region is drained by the Whitefish River and Rock River into Lake Superior. The lakes, except Cranberry Pond, are shown on the map. Cranberry Pond is on Section 26, T. 47 N., R. 22 W.

The predominating trees are hardwoods, and the forest is principally composed of hard maple, yellow birch, beech, and hemlock (in certain areas). White pine is scattered throughout the forest, nowhere forming a pure stand, and the basswood and ironwood are present in small numbers. Spruce, balsam and arbor-vitae predominate in some of the low places forming arbor-vitae or "cedar" swamps, and these species are occasionally found in the hardwood forest on higher ground. On the forested river flats the elm and black ash predominate, and very large elms are of occasional occurrence in the hardwood forest. There is a large tamarack swamp at the west end of Howes Lake, and a small one at Cranberry Pond.

There are artificial clearings and a few farms along the railroad, and an extensive clearing extends from Onota southward nearly to Whitefish Lake. About a mile south of Deerton a meadow, about a mile long and probably the result

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of the work of beaver, occupies the lowland along the White-
fish River.

In addition to the species given in the following list, the
fisher, marten, small brown weasel (*Mustela cicognani*), New
York weasel (*Mustela noveboracensis*) and at least two bats
almost certainly occur in the region. The fisher and marten
have been so diminished in numbers by trapping, and, with
the weasels, are so shy in summer that they are seldom seen.
The residents distinguish two weasels, a large one and a small
one, which makes it probable that both of the forms above
mentioned are present. The writer observed two species of
bats, but as specimens could not be secured their identity could
not be established.

**List of Species.**

*Rangifer caribou* (Gmelin). Woodland Caribou.—Mr.
Shiras has the following record of the occurrence of the
caribou near the region studied. Jack Le Pete, a former guide
of Mr. Shiras, reported to him that in 1865 he shot 6 caribou
near Sand River, 6 miles west of Peter White Camp, in Mar-
quette County.

*Alces americanus* (Jardine). Eastern Moose.—Mr. Shiras
informed the writer that in August, 1878, he saw a cow moose
at Little Lake, several miles south of Peter White Camp and
outside of the region covered. The writer obtained a small
set of moose antlers at N. M. Kauffman's camp on Silver Lake
which were taken from an entire skeleton found on the edge
of the lake about 1892.

*Odocoileus americanus borealis* (Miller). Northern Vir-
ginia Deer.—The deer are protected about Peter White Camp
and are very tame, coming to the grounds about the camp in
numbers. The writer saw more than twenty deer in this region
during the field work. They are attracted by the natural salt
licks that occur at several places about Whitefish Lake, and it is in this region that the remarkable flash-light photographs of the species have been taken by Mr. Shiras.

*Sciurus carolinensis leucotis* (Gapper). Northeastern Gray Squirrel.—The writer did not find this species in the region but was told by residents that a few were taken by deer hunters who camped about two miles west of Peter White Camp in 1915. The species is probably nowhere common in the region as the supply of food (which is principally beech nuts) is very uncertain.

*Sciurus hudsonicus loquax* (Bangs). Southeastern Red Squirrel.—The red squirrel is common and was generally found in the cone bearing trees.

*Eutamias quadrivittatus neglectus* (Allen). Lake Superior Chipmunk.—This chipmunk is not as common as the large one and is found in the clearings throughout the area. Young were observed on July 25 and 27. (Plate III, fig. 1.)

*Tamias striatus griseus* (Mearns). Northeastern Chipmunk.—This large species is quite common in the forest and is found in clearings at Peter White Camp.

*Marmota monax canadensis* (Erxleben). Canada Woodchuck.—The woodchuck is not rare in the region and occurs in the heavy forest, pasture lands and clearings.

*Sciuropterus sabrinus macros* (Mearns). Canada Flying Squirrel.—The writer did not find the flying squirrel but was told by the residents that they are occasionally observed in the forest. It is referred to this sub-species as the specimens from northern Michigan in the Museum collections have been so identified by the U. S. Biological Survey.

*Castor canadensis michiganensis* (Bailey). Woods Beaver.—While formerly quite common the beaver is now scarce in the region. A few were found about Whitefish Lake and
along the Whitefish River as far as Peter White Camp. A small dam was built across the river during June and July, but it was an ineffective one. Fresh cuttings were found all along the edge of Whitefish Lake and adjacent stretches of the river. The trees cut were small ash. (Plate I, fig. 2.)

*Mus musculus* (Linnaeus). House Mouse.—The house mouse occurred about the buildings at Peter White Camp but not in as large numbers as did the Michigan mouse.

*Peromyscus maniculatus gracilis* (LeConte). Michigan Mouse.—This mouse was found to be the most abundant mammal of the region. It occurred in large numbers about camp and was taken in all of the habitats in which trapping was done. It was so abundant as to interfere with the trapping of other small rodents.

*Evotomys gapperi* (Vigors). Red-backed Mouse.—The red-backed mouse is apparently rare in the region and only one specimen was taken. This specimen was found in a root cellar built partly underground near Peter White Camp.

*Microtus pennsylvanicus* (Ord). Meadow Vole.—The vole was not common, but a few were observed in the meadows and two were taken in dead grass at the edge of the river near Peter White Camp.

*Ondatra zibethica* (Linnaeus). Northern Muskrat.—This muskrat is quite common about the lakes and streams in the area studied. It was often seen and heaps of opened clam shells were frequently found.

*Zapus hudsonius* (Zimm.). Northern Jumping Mouse.—This species was not found by the writer but was reported by residents as occasionally seen.

*Erethizon dorsatum* (Linnaeus). Canada Porcupine.—The porcupine is still a common species in the region and it was often seen, especially about the salt licks. Two were caught
in steel traps set for skunks and baited with fish and meat. Many individuals were observed along the edge of Whitefish Lake, where they feed on water plants, and it was at the edge of this lake that the albino lived for several years of which Mr. Shiras secured a successful flashlight photograph. (Nat. Geog. Mag., xxii, pp. 574-582.) (Plate III, fig. 2.)

*Lepus americanus phaeonotus* (Allen). Minnesota Varying Hare.—The writer saw but two hares, one of which was caught in a steel trap baited with meat for skunks. Residents reported this species as common in the cedar swamps in winter.

*Lynx canadensis* (Kerr). Canada Lynx.—According to Mr. Shiras there are still a few Canada lynx in the region.

*Lynx rufus* (Gueldenstaedt). Bay Lynx.—This lynx also persists in small numbers, according to residents.

*Canis occidentalis* (Richardson). Timber Wolf.—The timber wolf still exists in numbers notwithstanding the bounty. According to Mr. Shiras they kill hundreds of deer each year in Alger County alone. A number have been trapped near Peter White Camp, and one of these—a ninety pound specimen—taken on July 29, 1907, was photographed by Mr. Shiras. (Plate II, fig 2, and Nat. Geog. Mag., Vol. XIX, p. 423.) The bounty on this species should be increased.

*Canis latrans* (Say). Coyote.—This species has, according to Mr. Shiras, come into the region within a few years. They are heard more often than seen. The writer saw tracks at the head of Whitefish Lake on July 8 and heard one there on the evening of July 23.

*Vulpes fulva* (Desmarest). Red Fox.—The fox is apparently not common. A few have been seen and taken by the residents.

*Ursus americanus* (Pallas). Northern Black Bear.—Although the writer saw signs of bear at various places the
species is apparently not common and was so reported by residents.

*Procyon lotor* (Linnaeus). Raccoon.—No raccoons were observed by the writer, and the tracks were seen but once. Mr. Shiras reported that the species is becoming more common, and he has secured flash-light pictures of several which came to the growing corn in the clearing at Camp White at different times. (Plate II, Fig. 1, and Nat. Geog. Mag., XXII, pp. 584-595.)

*Mephitis hudsonica* (Richardson). Northern Plains Skunk.—This species is a common one in the area. The writer caught two in steel traps baited with fish and meat. Of these two the male (Plate IV, middle figure) has the normal coloration, and the female (Plate IV, right figure) differs from it in having shortened dorsal stripes and a white-tipped tail—variations not infrequently found in specimens from northern Michigan.

*Mustela vison* (Schreber). Northern Mink.—This species is rather common and many are trapped each season. The writer saw one individual at the edge of Whitefish Lake on June 11. (Plate I, Fig. 1.)

*Lutra canadensis* (Schreber). Canada Otter.—The otter is not rare in the region and several are taken each year by trappers. The writer found tracks in the mud at the edge of the river a mile below camp on July 1.

*Sorex personatus* (Geoffrey St. Hilaire). Masked Shrew.—Two specimens of this shrew were found by the writer. One was trapped in a root cellar at Camp White, on July 16, the other was caught by a house cat near Deerton on July 19.

*Blarinia brevicauda* (Say). Short-tailed Shrew.—This species was not common in the region and only a half dozen were taken in traps set through June and July. One was cap-
tured in the root cellar at Peter White Camp, the others in the hardwood forest.

*Condylura cristata* (Linnaeus). Star-nosed Mole.—Apparently a rather rare species in the region; found in black soil along the edge of streams and lakes. The writer saw fresh mounds at Silver Lake on July 29, and Mr. Shiras found one dead at Peter White Camp in 1915. The only specimen obtained by the writer was taken near a house at Deerton.
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PLATE I.

Figure 1. Mink on the shore of Shiras Lake. Flash-light photograph by George Shiras 3rd.

Figure 2. Beaver repairing dam, Marquette County. Flashlight photograph by George Shiras 3rd.
PLATE II.

Figure 1. Raccoons at Whitefish Lake. Flash-light photograph by George Shiras 3rd.

Figure 2. Timber wolf trapped near Whitefish Lake: an adult male weighing 90 pounds. Photograph by George Shiras 3rd.
Figure 1. Lake Superior Chipmunk, western Ontario. Photograph by George Shiras 3rd.

Figure 2. Stumps used as artificial deer-licks and gnawed by porcupines. Photograph by Wilbur MacAlpine.
PLATE IV.

Northern plains skunks from northern Michigan. The middle of the three specimens shown has the normal coloration, the outer two differ in the length of the dorsal stripes and in having more or less of the tip of the tail white.