

MICHIGAN DEPARTMENT OF CONSERVATION  
Game Division

Report No. 2177

May 12, 1958

NORTH MANITOU ISLAND DEER  
1957-1958

The private deer herd on North Manitou Island (22 square miles) continues to be maintained in an apparent healthy condition through an annual take of around 12 deer per square mile (1957-58 -- 266 deer from 22 square miles), and artificial feeding. The winter herd of 600 to 1,000 deer are held under a breeder's license and paying guest hunters are guaranteed a deer. Their hunting season runs from mid-October to mid-January, and deer of both sexes and any age are taken.

The 1957-58 kill consisted of 167 males (20 fawns, 139 adults, 8 not weighed or aged), and 99 females (11 fawns, 84 adults, 4 not weighed or aged) or 63 per cent males and 37 per cent females, a total of 266 deer.

The range seems to produce an adequate amount of food in spring, summer and fall, but winter food has been depleted for 20 years. Artificial feeding has supplemented natural winter foods since 1940. This year - December 1, 1957 to mid-April, 1958 - 50 tons of Kellogg deer food pellets plus 140 bushels of oats were fed. This food was distributed -- 100 pounds in each of 34 feed boxes -- twice a week. Deer consumed this ration steadily until mid-April when they began to leave uneaten oats in the troughs between feedings.

Logging operations, confined to the north central part of the Island were discontinued early in the winter but deer had the fall-cut tops to feed on. Available twig tips and buds were not all consumed even by the end of the winter. Even hemlock foliage was not all cleaned up.

As noted in the 1957 report this is the only known instance in Michigan where deer take artificial feed in preference to natural food. Feed troughs were scattered through the logged area making natural and artificial foods equally available.

Ground juniper, almost killed out by deer in 1949-50 continues to recover. While many of the old large clumps are dead, there are numerous new bushes -- a foot across -- developing in the areas adjacent to the old dead ones. These new bushes, however, are given a "butch" haircut at snow level each winter by deer. None are more than 18 inches high with the tops eaten off by deer like they were clipped with hedge shears. It will be interesting to watch the future development of these clipped bushes -- some may not survive. There seems to be little summer browsing on juniper, although it may occur and be hidden by new growth.

There are indications that there were more deer on the Island this winter than a year ago. The 100 pound pellet ration per trough twice a week was all consumed this winter, while in midwinter a year ago the ration was reduced 50 per cent during midwinter because deer were leaving pellets in the troughs from one feeding to the next. Also the new small clumps of ground juniper seemed browsed heavier this year than a year ago. This increased food consumption may have been due to more deer, a heavier winter, or both. Tracy Grosvenor, the former manager who retired February 1, reported that from his observations up to the time he left the Island the winter herd was below the number present at the same time a year ago. Whether up, down, or the same, from a combination of all available information, the herd seems little changed over the last few years, and is all the deer the Island will carry under present conditions. The herd should be kept at or below this level in the future.



Intensive searches of much of the wintering area by the Association crew, later joined by myself during a nine day stay on the Island resulted in locating 17 dead deer. Six of these are known to have died from hunting season wounds, the rest can be considered "winter loss". Some were small weak fawns, some apparently did not come to the troughs to feed, but all of the "winter loss" animals were examined and the condition of the bone marrow indicated "malnutrition". How many deer actually died on the Island last winter because they did not get enough food is a question. At least one and possibly three deer, whose bone marrow indicated malnutrition, died almost within sight ( $\frac{1}{4}$  mile) of feed boxes or recently cut tree tops. The dead deer were not grouped in any one area but were well scattered over the Island. The swamps at the north and south ends of Lake Manitou were not searched intensively -- only casually along adjacent roads. The "Pot Holes" were given a fair search and one dead fawn was found. Only the southern end of the big ravine country (Hatches Camp) was worked and no dead deer were found. Losses must have been light in this northwestern area or more dead deer would have been found on the sample areas looked over. Tamarack Lake and the Johnson Place were well covered as was the south end and the east side by the Spring. From the results of the searches the total number of dead deer on the Island is estimated at not more than 40, including possibly 10 from the hunting season last fall.

From past and present records, and trends, and the condition of the range and the herd, it is apparent that last year's kill was a minimum of the number that should have been taken. While no real winter loss occurred, the deer sign observed, the food consumption, and general range condition indicates that the annual kill should be increased. It is thought that at least 300 deer a year could be taken off the Island without dipping into the breeding stock. However, as a safety measure it is recommended that the kill be increased from the 266 taken last year to 280 this coming fall.

#### SUMMARY

Last fall 266 deer were taken by hunting on North Manitou Island, an average of more than 12 deer per square mile from the 22 square mile Island. The average weight of these deer was 98.3 pounds as compared with 99.7 for the previous season.

Fifty tons of pellets and 140 bushels of oats were fed to the estimated 600 to 1,000 deer during the winter.

Seventeen dead deer were found this spring -- 6 from wounds during the hunting last fall and 11 from malnutrition. Total losses are estimated at not more than 40, including possibly 10 from wounds.

Creeping juniper and ground juniper continue to recover but are browsed off at snow level.

At least 280 deer should be taken off next year.

I. H. Bartlett

IHB:bjm



NORTH MANITOU ISLAND DEER  
DEER HUNTING KILL, STARVATION, AND OTHER LOSSES

Year	Hunting Kill					Starvation* and other losses	
	Adult		Fawn		Total	Sample Count	Estimated Total
	Males	Females	Males	Females			
1937	15	1		2	18	5	10
1938	25	12	2	2	41		
1939	40	5			45	5	10
1940	55	29	8	3	95		
1941	91	40	4	4	139	8	20
1942	91	70	11	4	176	25	50
1943	89	116	39	48	292	32	50
1944	155	104	20	23	302	20	50
1945	33	9	6	2	50	4	10
1946	113	23	2		138	22	50
1947	133	58	7	4	202	164	300
1948	77	41	1	1	120	47	100
1949	117	52	5		174	25	50
1950	112	75	4	5	196	116	200
1951	78	127	10	13	228	37	70
1952	83	139	23	29	274	20**	75
1953	68	120	27	23	238	9	30
1954	152	113	13	11	289	27	100
1955	138	135	7	6	286	7	50
1956	94	116	21	14	245	43	70
1957	139	84	20	11	254***	3	20
1958						17	40
Total	1898	1469	230	205	3802	636	1355

\* Approximately 80% due to straight starvation, about 20% due to crippling during hunt and other causes.

\*\* Reported by Hadra as having been seen in vicinity of feeding stations.

\*\*\* Does not include 8 males and 4 females killed but not weighed or aged.

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# NORTH MANITOU ISLAND DEER MORTALITY

22 SQUARE MILES

