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POPULATION AND HUNTING TAKE OF WHITETAIL DEER  
ON THE HURON NATIONAL FOREST, 1934 - 1936

INCLUSIVE

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The increased demand for big game hunting in and around the Huron National Forest as well as in the other portions of Michigan, makes it imperative that the facts on population and yearly hunting take be known. With this knowledge the game manager is better able to make his plans for a maximum stocked range with the deer herd utilizing the area to the best advantage of all factors concerned. The annual increase above the maximum stocked range should be removed so that the herd will not pyramid to the point where it does great damage to the cover which forms its habitat, followed by the inevitable decimation when that point is reached.

It is, then, necessary to know the population of the area, the sex ratio of adults, and the annual increase. The population and the sex ratio can be obtained by taking a census on representative areas throughout the forest. The third point, or determining the annual increase, is somewhat more difficult and requires research of a more technical character. However, a fairly accurate index of the annual increase is obtained by the yearly census.

The utilization of the deer has a twofold objective; the furnishing of sport and game to the hunters, and a scenic attraction to tourists and recreationists who have no desire to hunt. It is desirable

to know the annual hunting take so as to determine whether or not the herd is having its numbers depleted below normal.

To determine <sup>P</sup>opulations the census drive is used. Other indices of population estimates used, but which were found wanting, were the deer inventory patrol and checks by forest officers on their travels within the forests. This was shown by experiences throughout their use in the various forests of Region 9.

The driving method was started in 1934 on the Huron, shortly after the close of the hunting season of that year. Since then the drives have been changed to the last two weeks in October for the following reasons:

1. Leaves are off the trees and allow the counters and drivers a better opportunity to observe the game.
2. It is far enough in advance of the season to allow the game to settle down before the hunting season begins.

Briefly the method used is as follows:

A representative area of one or two sections is chosen which has a mixture of forest types comparable to that found in other parts of the forest, bounded on at least three sides by either a clearing, road or river. On these cleared areas men designated as "counters" are stationed to tally the game that is flushed out. Each counter is placed so that he can see all of the space between himself and the man next to him. They remain absolutely quiet and do not leave their posts until the drive is a half mile beyond them.

The drivers are stationed along a line not more than two chains apart, but one chain is better if enough men are available. The drivers are kept in a straight line by foremen who follow compass lines ahead of the drivers and by crew leaders who work back and forth along the



line in the rear. Each driver has a slip of paper on which he enters only that game which passes back through the line and between himself and the driver next to him. The drive is started at a prearranged signal at a given time. The driving line then proceeds through the area until it reaches the clearing on which it is to stop. The sheets are then collected and summarized.

The data secured is the following:

1. Total number of deer on the area.
2. Sex ratio of mature animals (excluding fawns)
3. Number of fawns.

TABLE I

Deer Census Results

Year	Deer per Section	Sex Ratio		Census Area in acres	Forest Acreage in acres
		Female	Male		
1935	28.4	76.7	23.3	2560	553,143
1936	40.8	71.4	28.6	6400	553,143

Hunting Take

Knowing the hunting take off a certain area is one of the first steps in initiating management of the species concerned as an indication of the number of animals that can be removed each year without seriously depleting the herd. It is also valuable in knowing how many hunters are needed to remove a certain number of deer, which is determined from the number of days to kill a deer and the success ratio.

This project was initiated in 1934 and has been done each year since that time during the deer season. The data is gathered by C.C.C. enrollees who are stationed at the forest boundaries at checking stations on the main highways such as M-65, M-33, etc. These stations are operated

24 hours a day, the men working in either 8 or 12 hour shifts.

Each car is stopped going into the forest and the hunters are asked to use care in the woods, are given directions and information on roads, campgrounds, refuges and hunting conditions, when asked for. The hunters are also asked to cooperate in the study by stopping and reporting their success when they leave the area either before or at the close of the hunting season.

At the end of the season, or when the hunter is leaving the area permanently the checkers obtain information which is summarized for the whole forest as follows:

1. Total kill - total number of deer taken off the forest, including the known illegal kill from figures obtained from the game wardens of the Conservation Department.
2. Total number of days hunted from which is determined the success ratio. The success ratio is determined by dividing the number of hunters by the number of deer taken out. The days to kill a deer is also determined from the figures, and total deer kill.
3. Total acres hunted over is the gross area of the forest as the total area is available to the hunters due to the numerous roads in the area.
4. Percent hunting take is determined when the hunting take figures are compared with the total population as obtained from the fall census.

The following table shows the figures obtained in the three years the project has been operated:

(see next page)



TABLE II

Year	Total Take	% hunting take	Success ratio	Days to kill deer	Total A. hunted	Total hunters
1934	1599	x	4.4	x	520 M	7,086
1935	1608	7.06	5.1	19.5	547 M	8,290
1936	2230	8.4	6.6	25.0	550 M	14,083

#### Conclusion

While this activity may not be the final answer to obtain the information on deer kill, it is a start and will undoubtedly be improved as time goes on. It will be possible to obtain much valuable information on weights of deer, calipering horns for determination of age, and for locating disease when outside evidences are discernible, such as the hoof worm.

The checking stations are a deterrent to the bringing out of illegal deer, when the hunters know they are going to be stopped.

The figures obtained indicate the approximate hunting pressure that can be expected the following year, and whether this pressure will remove more deer than is good for the welfare of the herd. Also obtained is data that enables us to know how many hunters it will take to remove a set number of deer.

Briefly, our objective in carrying out these projects is to have accurate information on hand at all times concerning management of this valuable resource. The aim is to have game kept at its maximum capacity compatible with all other uses of the land, and in such a condition that it remains free from disease. Better hunting over a longer period of time will be assured the public through the application of the principles obtained through these projects.