

REPORT OF 1937 HUNTING SEASON IN ALLEGAN COUNTY*Allen*

Continuous field work was done throughout the hunting season. The Farm Security project area and rich farm land west of Allegan was worked most intensively, but trips were made into the farming country in all directions from Allegan so that this report is reliable for the county as a whole. In general, the hunters of this vicinity have enjoyed a very profitable season. This is well illustrated by figures obtained by Conservation Officer Harry Plotts at a checking station in Pullman on the first day of the upland bird season. A total of 305 cars were stopped and 688 hunters contacted. At the time they were checked these hunters had bagged 533 cock pheasants, 166 rabbits, 75 squirrels, 5 ducks, 3 partridges, 2 woodcocks, and 1 goose. Little more convincing proof could be adduced that Allegan County produces an abundance of game.

DUCKS AND GEESE

At the time the season opened blue-winged teal, black ducks, mallards and wood ducks were the most common species in the region. One flock of 50 wood ducks was seen on the Kalamazoo River a few days before shooting began and this species mixed with other ducks to such an extent that many were shot either by mistake or through ignorance. During the first week of the season wood ducks largely left the region. This fact was a much greater protection to these birds than the prohibition of shooting, which was very ineffective.

In spite of the fact that there was no conspicuous flight of birds previous to the opening, a fairly good kill of ducks was reported for the first day. The commonest method of hunting was "jump shooting" in the small woodland spring-holes, stream bottoms, and marshes. Hunters were commonly met who had bagged from 1 to 3 ducks. In three hours of hunting on the Daily bayou of the Ottawa tract two of us got 5 black ducks. During this time about 100 ducks were seen.

Ducks began to raft up on Lake Allegan (a newly created sanctuary) on the first day of the season. Flocks increased here until on some nights early in

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November from 1500 to 2000 birds used the lake as a resting place. I was assured by local people that there were few as compared with the fall of 1936. Although without a glass it was not possible to ascertain the species of all of the ducks making up the rafts, many of them were blacks and mallards. No large flocks of diving ducks have to date been seen in this vicinity. A few blue-bills, goldeneyes, redheads, and butterballs have upon occasion been observed.

In general, hunters say that the number of ducks in this region is much below that of last year. This is true also of geese. Only a few geese have been shot and only a few small flocks have been seen. In 1936 very large flocks of blues and snows used Lake Allegan and the Todd Sanctuary. During the present season only an occasional small flock has been seen on the lake and so far the birds have not been reported on the Todd Farm. The consensus of opinion among hunters of this region is that waterfowl shooting is not up to its usual yearly standard. There has been plenty of territory to hunt, however, even this year, and birds enough to provide considerable sport although I have not heard of any limits being taken.

#### PHEASANTS

In most of Allegan County pheasants are very common. Nearly all of the hunters and sportsmen that were contacted offered the opinion that the birds were very plentiful and about the same in numbers as last year. A few, probably depending upon where they hunted, considered them abundant. In reaching this conclusion about 50 sportsmen were interviewed. The facts are particularly significant in that among this group are numbered many of the most active hunters in Allegan County--men who should be in a position to know. The "oak grubs" on the Farm Security tract constitute about the only part of the county where pheasants are not present in numbers. They are common in the farm land to the south, east, and north of Allegan; and west of the scrub oak country that extends westward from Allegan occurs what appears to be one of the most dense concentrations in the state.



The kill here, as might be expected, was highest in the first few days of the season. That the kill of the first day was high is illustrated by the fact that in the 305 cars checked by Harry Plotts, 688 hunters had taken 533 pheasants. Toward the middle of the season cock birds appeared to have become more than usually wary and hunting slacked off for a few days. During the last days of the season hunters became more active and it seemed easier to get birds than immediately following the first intensive drives.

Mr. James B. Balch owns two parcels of land adjacent to the Todd Sanctuary in Clyde Township. This land is posted and open only to those hunters who obtain written permission from Mr. Balch. Alex Clark, Deputy Sheriff, of Allegan was employed for the first ten days of the hunting season to patrol the area and to arrest trespassers. The Balch holdings here total 1632 acres, but the part patrolled was a 760 acre tract in Sections 18 and 8. I arranged with Mr. Balch and Mr. Clark for the latter to get a total count of the pheasant kill on this area. For the rest of the season I contacted all those who are known to have hunted the area and added this kill to the figures obtained by Mr. Clark. I believe that whatever error occurs here is small and relatively insignificant. The total kill for the season was 103 cock birds for the 760 acres. The fact that there is much interchange of pheasants between the Balch farm and the Todd Sanctuary somewhat complicates the situation here, but we have the figures for what they are worth. If we accredit the Balch farm with producing all the cocks shot there and postulate that 75 percent of the available birds were shot and 60 percent retrieved, we have a pre-hunting-season population of 172 males. If the sex ratio were perfect we would have a total population of 344 pheasants for the 760 acres, or one bird per 2.2 acres. Actually there are too many unknowns to make such a calculation, but I believe that the indicated population total is too low.

Mr. Balch has given us / carte blanche for any kind of study or activity

that we want to pursue on his 1500 acre farm. As this area is unusually favorable to pheasants I think that we should institute an intensive life history study of the pheasant on this property. There should be no difficulty in justifying a fellowship to support such a study. If the same student checked his observations here with work on an area of submarginal<sup>pheasant</sup> land, I believe that we would learn much about the environmental requirements of the species--which is, after all, what we must know before intelligent management will be possible.

#### RUFFED GROUSE

The stream bottoms and poplar slashings of the Farm Security area constitute the most extensive partridge habitat of this county. A comparatively small number of hunters shoot grouse regularly, but among those who have been well acquainted with the species in this region there seems to be a general agreement that grouse are slightly more plentiful than last year. I have twice observed five grouse together and have seen two or three several times. Most birds, however, are singles.

Over much of their habitat in this vicinity partridges are so scattered that, at least at present, they cannot be said to provide much sport. In the course of my field work I found one area where grouse shooting might be called good. It is about half a mile of stream bottom of upper Swan Creek (see appended map). The Resettlement crews have cut a foot path into the bank on each side of the creek and the stream has a basin about 300 yards in width. This is grown up to alders and dogwood and probably contained more grouse during the last few days of the season (when I discovered it) than any other locality in the region. On one trip around the path, covering about a mile, I flushed 14 birds on the day after the season closed. Only three of these would have furnished good shots, but more birds would have flushed



closer had I proceeded more carefully. A dog in this bottom put out many more birds upon which I lost count, but I should judge that there were about 40 grouse in 100 acres. Few of these could have been shot.

This species provides opportunities for extensive investigations in this region that could best be pursued incidentally to other work. Food habits work could be done by collecting stomachs from hunters, and parasite studies might be made. The experiment station will be able to carry on such investigations over a long period and thus gain enough material to be of significance. Although future conditions may alter this opinion, at present I doubt whether the species is abundant enough here to make general life history studies profitable.

#### FOX SQUIRREL

In my work in the Allegan area fox squirrel studies have been the main point of emphasis. Early in September a woods was selected for study (see map) that appeared to be fairly typical of the "oak grub" country. It is 50 acres in extent and the stand consists of second-growth oak with a slight mixture of pine, and the usual flowering dogwood and spicebush undergrowth. The woods is isolated by open land on three sides and part of the fourth. For a strip of about 300 yards it is contiguous with some small second-growth oak that appears to contain few fox squirrels.

From 10 to 20 traps have been run daily in this woods except during the hunting season. Squirrels have been marked with fish tags placed in the right ear--a method that has to date given satisfactory results. So far 12 individual animals have been handled in this woods, of which 5 were taken as a hunting season crop. I do not expect a population of more than 20 or 25 squirrels in this area and there may not be that many. This woods is near the location of the future experiment station and will be an excellent one to

use permanently for squirrel studies. I believe that we can effectively discover population fluctuations by long-time work on this area.

At the Kellogg Farm it was found that autopsies to determine the condition of the sexual organs was one of the best ways of studying the breeding of animals. The testicles of males are subject to seasonal fluctuations, and heat periods and pregnancy can be detected by an examination of the uterus of the females. In late August a female fox squirrel from the Allegan area was found to be in heat. Since then none has been in this condition. Fourteen autopsies have shown that the animals are sexually inactive at present. They will probably continue so until December. One or two animals are being autopsied each week and measurements of the organs of the males are being taken to establish a standard by which to compare the stages of the gonads later on.

All autopsied animals are being utilized to the fullest possible extent. Ectoparasites (fleas and lice) are being sent to Dr. F. H. Wilson at Tulane University, a specialist in this field of entomology. The viscera are being preserved for examination by Whitlock and Gower. The skins are being examined fresh for evidences of moult and made up as study specimens for future comparisons. The skulls will provide material for the study of age differences.

Weights, measurements, and all other autopsy data are being kept on a card with a number that pertains only to one animal and which appears on all specimens from that animal. The study to date has been much impaired by a lack of proper weighing equipment. It is very desirable to have more accurate weights on the whole animals, and the size of some organs may best be expressed in terms of mass rather than linear measurement.

In connection with the fox squirrel study a very striking and possibly significant condition has come to light. At the Kellogg Farm 71 squirrels were weighed and the heaviest animals weighed 2 pounds, 1 ounce. An Allegan



sportsman told me of shooting a huge fox squirrel that he said would weigh nearly three pounds. He continued hunting in the same area and got one which he weighed in a butcher shop. The animal scaled 2 pounds, 10 ounces, and I saw it after it was cleaned. It certainly was the largest squirrel I had ever seen. Mr. D. W. Nash, who shot the squirrel, promised to give me any other specimens comparable to this that he got when he learned how unusual they were. He reported seeing several more very fat animals in the same habitat. A few days later he turned one over to me that weighed 2 pounds, 6.5 ounces, which I autopsied and made up for the collection. The animal was enormously fat as compared with squirrels taken in the oak groves.

The habitat from which these large squirrels come is the bottom land around upper Swan Creek in an area of mixed beech, oak, pine, poplar, and alder. I shot one here myself that weighed 2 pounds 4 ounces and was very fat. The location is shown on the attached map. At least three more squirrels have been seen here all of which have appeared very large. A normal appearing squirrel has not been seen in this habitat. The squirrels in the oak scrub weigh from 1 pound 6 ounces to 2 pounds, in every way comparable to those taken in Kalamazoo County. It is only in this one locality that an animal has been taken that weighed over 2 pounds, and of the four specimens that were handled all were of exceptional size. Some squirrels from the oak woods have appeared almost emaciated, and none has been excessively fat. What causes the animals to grow so large in this one habitat is an excellent problem that is well worthy of our attention. Evidently there are some factors here that favor squirrels in an exceptional manner. It may be significant that no grey or red squirrels have been found associated with them, while in other creek bottoms on the area grey and black squirrels are often found and red squirrels are nearly always present.

It is difficult to see how a better area could have been selected for

our squirrel investigations than the Allegan tract. There is a great extent and diversity of habitat and all five kinds of southern Michigan arboreal squirrels are found here (fox, grey, black, red, and flying). We have an excellent opportunity and I feel certain that we can make it good.

In general, it may be said that squirrel hunting in this region was very good and that there is no suggestion of a shortage. Nearly everyone with whom I have discussed the matter has expressed this view.

#### OTHER SPECIES

The rabbit season has just got under way around Allegan and will be reported on later. The new traps that we are getting will enable us to make a thorough check on this species. In this connection it is desirable to have additional help in these investigations as soon as possible. Raccoons are very plentiful in the river bottom and as much work will be done during the season as time and help allow. Arrangements have been made to obtain figures on the total yield of fur from the Balch Farm, which should give us a good approximation of the wildlife production on this area.

Many local people are becoming interested in our studies and have offered their cooperation. We have already profited by this attitude and there is an unlimited field for progress in the future. Observations during this hunting season indicate that there are at least parts of our program that most of the interested public will understand. I believe that we must stress specific interests to certain groups and with this indulgence round out our program to serve all our needs.

Durward L. Allen

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