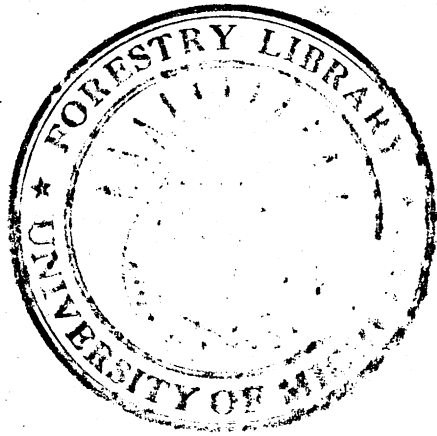


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A history of the
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A HISTORY OF THE RING-NECKED PHEASANT
IN MICHIGAN

By John E. Wilson

This thesis is submitted to the faculty of the
School of Forestry and Conservation of the
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fillment of the requirements for the
degree of master of forestry.
Ann Arbor, Michigan, June 1948

PREFACE

The constant demand by sportsmen for an increase in pheasant numbers, since its introduction into Michigan, reflects its popularity as a game bird. In terms of human pleasure it is difficult to ascertain its value upon the Michigan scene. The pheasant has certainly added in terms of beauty and interest to the rural areas and thousands of dollars are spent annually, afield in quest of the "ring-neck." It is doubtful that any native species could have survived in huntable numbers in southern Michigan, as it evolved into an agricultural region.

Under the present stabilized land use practices in the State, the pheasant should continue to supply a large share of the game bag. Peak populations brought about by a set of ideal environmental conditions may occasionally result in excessive numbers. Trends such as this, suggestive of cyclic phenomena, do not seem indicative of the normal population in the State. As land values in southern Michigan seemingly do not warrant management for pheasants alone, we must be satisfied with the greatest possible return under the best type of integral land use in this region.

Acknowledgments

The author wishes to express his appreciation to Dr. Warren W. Chase, Professor of Wildlife Management, University of Michigan, for encouragement and criticism generously offered in the writing of this paper; to Mr. Tinker, Conservation Education Division, Lansing, Michigan; to the research staff of the Detroit News for making available their clipping files. I also wish to thank the members of the Michigan Game Division that authenticated and made available much of the material used by the author. Appreciation is expressed to Miss V. Foster, librarian at the School of Forestry and Conservation, for helping to make available much of the background literature.

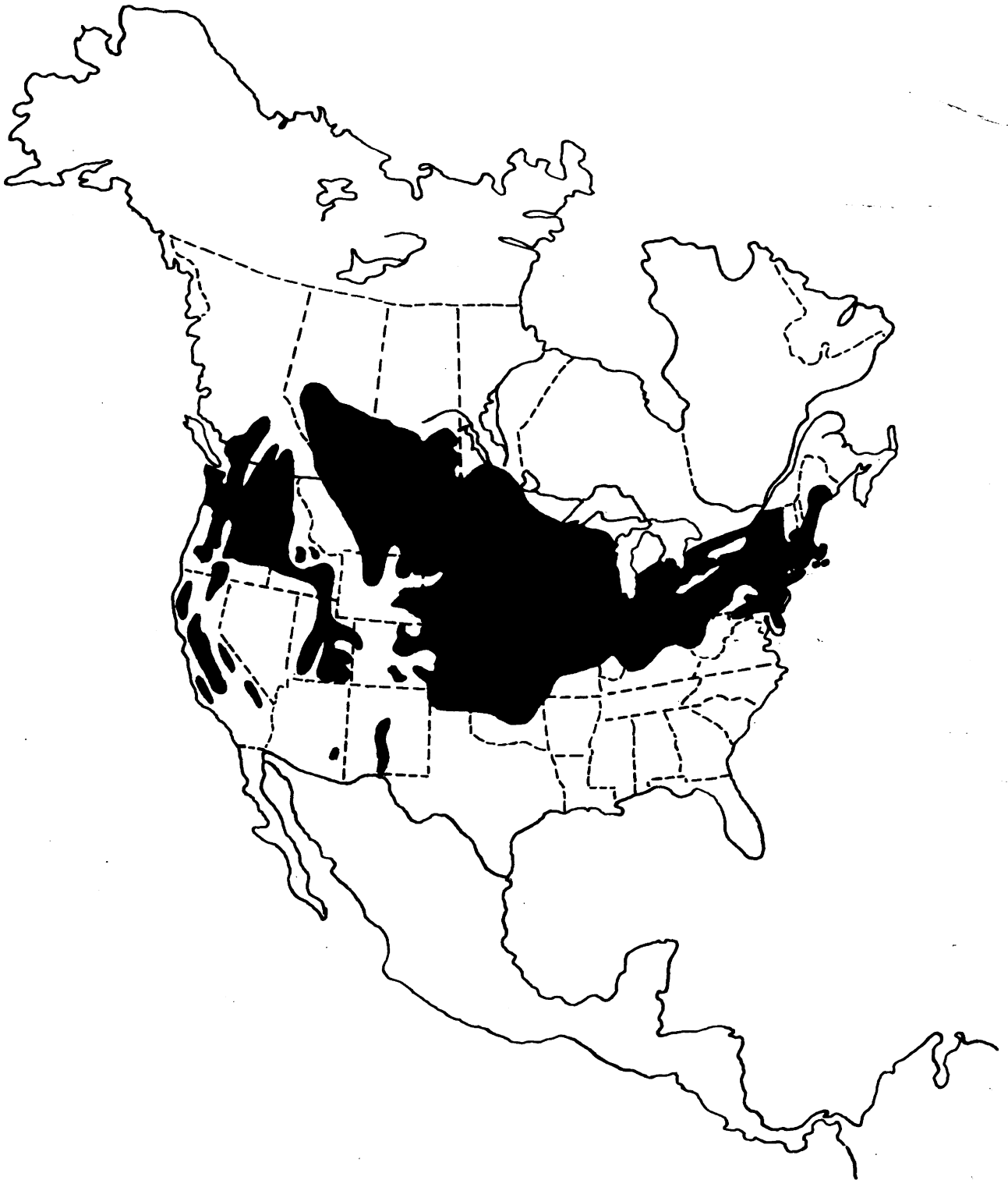
Introduction: The Pheasant in the United States

The ring-necked pheasant is one of the most recent additions to the fauna of North America, yet southern Michigan has enjoyed this species as a game bird for over twenty-five years. The pheasant's successful establishment in the northern states from New York to Washington has made it a principal game species in much of this region. (Fig. 1) At the turn of the century it was thought that no bird could replace the bobwhite and the ruffed grouse in the estimation of the American sportsman.

The pheasant's close proximity to intensive land use practices in Europe and Asia has made it adaptable to environmental changes brought about by man's activities in the New World. Species indigenous to North America had little chance for a similar adaptive metamorphosis. Native game species were reduced noticeably by a hunting and pioneering type of economy and the fallacy of inexhaustibility that existed was soon cast aside. Man cradled in Europe and Asia naturally turned in that direction as a possible source of game for acclimation into the United States.

Perhaps custom as well as a need for game species in America's coverts brought about the earliest

RING-NECKED PHEASANT RANGE - NORTH AMERICA



F.C. WALCOTT '41

Fig. 1

Importations of Pheasants into the United States
1903 to 1939 inclusive

(Report of the Chief of the Biological Survey)

<u>Year</u>	<u>Pheasants</u>	<u>Eggs</u>	<u>Year</u>	<u>Pheasant</u>	<u>Eggs</u>
1903	1,565	2000	1921	----	----
1904	661	2858	1922	----	----
1905	1,147	2270	1923	----	----
1906	1,528	5564	1924	100	----
1907	5,248	5910	1925	----	1200
1908	4,415	----	1926	----	1000
1909	2,996	----	1927	----	300
1910	7,200	----	1928*	----	1500
1911	13,399	----	1929	8,061	----
1912	15,412	----	1930	----	----
1913	9,417	----	1931	----	----
1914	4,148	----	1932	----	----
1915	15,841	----	1933	----	----
1916	-----	----	1934	900	----
1917	832	----	1935	203	----
1918	----	----	1936	567	----
1919	----	----	1937	1,420	----
1920	----	----	1938	1,937	----
			1939	396	----

* Imports for stocking purposes had practically ceased by 1928. Stock imported after this date was primarily for Aviary use.

Fig. 2

introductions. The early settlers brought many of these customs and pleasures of the Old World to the American colonies.

The wealthy planters of the Eastern settlements for the most part were keen sportsmen and were nurtured on English covert shooting. Lafayette, of Revolutionary fame, sent pheasants to George Washington's estate at Mount Vernon in 1786. In 1790, Richard Bache, son-in-law of Benjamin Franklin stocked his estate near Beverly, New Jersey. It is doubtful if either of these plants were very prolific. William Upshire of Accomac County, Virginia and Pierre Loullard of Burlington County, New Jersey stocked preserves of considerable size with little more than local success.

The success of their introduction on a large scale seemed destined to be in the west. In 1881, Judge Owen N. Denny, consul general in Shanghai, China, succeeded in sending twelve males and three female ring-necked pheasants to Portland, Oregon. The birds were taken to the George Green farm, at the mouth of the Willamette River, where they were released. The birds were closely watched and the succeeding spring two of the hens brought off successful broods. The legislature passed a special act

for their protection and in 1882 the second importation of thirty birds arrived from China. These birds were liberated at Washington Butte about twelve miles east of Albany in the Willamette Valley. This colony spread to a distance of fifty miles the first year and the birds were soon abundant in three of the surrounding counties.

This same year a colony of birds released at Victoria, Vancouver Island, British Columbia was established under a five year protective law. The first open season in 1887 took a thousand birds. This, along with the illegal kill and those killed as agricultural pests soon obliterated this planting.

In 1900, Gene Simpson started a commercial pheasant farm at Corvallis, Oregon. This was a successful venture from its beginning and the next two years found its wares, namely mature pheasants and eggs shipped by railroad to points throughout the United States. Within ten years from the date of the initial planting a shooting season of two and one half months was established and fifty thousand birds were reported killed the first day. The pheasant had "arrived" on the west coast.

The first successful introduction came to the East coast in 1887, under the stewardship of Rutherford

Stuyvesant, who brought a number of birds from England and liberated them at Allamuchy, New Jersey. Stuyvesant's expansive game preserve had a well established colony of pheasants in the early nineties. In New York introductions into Central Park were of novel interest but plantings in Tuxedo Park resulted in pheasant shoots in 1890 and 1891. The real craze over these hardy exotics did not commence in force until about 1896. Plants made in North Beverly, Massachusetts in 1897 spread rapidly, indicative of the extraordinary vitality of these early introductions.

By 1907, stockings had been made in all the states except nine, of these five were in the south. Political pressure in many states resulted in only a few birds planted per county which never fairly tested the bird's ability to establish itself successfully. Dr. A. A. Allen of Cornell University in discussing sex rhythm, presents a reasonable explanation for early failures in regions where the pheasant later became established. He states, "If a species is rare, territories large, competition never severe, a lack of a synchronized breeding cycle and resulting infertile eggs are likely to occur. Final extirpation of a species on the verge of extinction such as the heath hen and the passenger pigeon might well have been accomplished because of a lack of synchronization in

the mating cycle of a few males and females left." Gordon (1934)

Rearing pheasants for stocking purposes was greatly aided in 1912 when the American Game Association set up demonstration farms and published material aiding in pheasant propagation. Many game farms were established under this type of tutorship but thousands of birds were wasted by a complete disregard of the environmental requirements of the bird.

The introduction of the pheasant into the United States was not blessed with unanimous enthusiasm. (Merriam (1889,) Dr. F. S. Mattison of Aumsville, Oregon in 1889, protested its status in a letter to the state legislature. He felt that the disappearance of the quail was the result of this great pheasant influx and this foreign bird would soon overrun the whole country. This feeling was typical of many people that had experienced introductions of the English sparrow and other noxious species, and the passing of some of our native species. Native game is a feature of high esthetic value to many people. As one writer so aptly phrased it, "The importation of exotic species for the purposes of maintaining esthetic quality is as unthinkable as the use of chrome and re-enforced concrete in the restoration of Mount Vernon."

The Pheasant in Michigan Past and Present

Michigan, as it was transformed from a lumbering economy to one based on agriculture and industry, created a niche for the pheasant within its borders. The wild turkey, passenger pigeon and the grouse have been eliminated or reduced from much of their former range in the State. To adapt southern Michigan to again suit these species and increase the numbers to supply sport for the growing numbers of hunters is economically impracticable. The introduction of the pheasant to this region has made it possible for hunters to again spend time afield in quest of upland game birds.

A stone marker, six miles north of Holland, Michigan on U. S. 31, dedicates the site where Arthur Baumgartel released the first pheasant in Michigan, March 27, 1895.

The desirability of the pheasant as a game species was recognized as early as 1893, by Baumgartel, a young sportsman in Holland, Michigan. Baumgartel recognized the lack of fish and game protection within the Holland area and thought that by inducing financial aid in bringing in a hardy game species to the State, sportsmen would take action looking to its protection.

Baumgartel consulted with Emerson Hough, author of "The Covered Wagon" and western representative of Forest and Stream magazine and inquired as to the desirability of the pheasant and the Hungarian partridge as game birds. Hough advised trying the pheasant first because of its size and beauty and because it could be propagated under restraint.

The pheasant was decided upon and a meeting of interested sportsmen was called at Squire Fairbanks' office in Holland, May 1, 1893. Plans were made to obtain the birds and subscriptions solicited to finance the project. It was decided to breed the birds in confinement the first year and turn the young out in October, as experience in other localities had proven most feasible.

The initial order was forwarded to Oregon, but the authorities there had ruled against the exportation of their birds. On May 1, 1893 an order was placed with Vernor De-Guise, who then operated a game farm in Mahwah, New Jersey. The Mongolian and ring-necked varieties were ordered, both thought to be hybrids, but only the latter were received. On August 4, 1893, the shipment of two pairs of ring-necked pheasants arrived. The local papers gave the project much publicity and stimulated a great deal of public interest.

The Holland City News, July 15, 1893 printed the following article which was typical of the local interest in the project.

"Arthur Baumgartel informs us that the pheasants which are to be imported here for shooting purposes and of which mention has been made here before are expected to arrive here from the east early next week. Two kinds were ordered, the ring-necked and the English. As there is no money on hand to pay expressage, etc., the sportsmen of Holland are respectfully requested to call on Mr. Baumgartel and contribute."

A law was sought that would protect the birds upon release. Isaac Marsilji, state representative from Holland, succeeded in having such a law passed in the 1893 legislature. The birds were protected by law until 1898 and there was a penalty of \$5.00 for shooting a single bird.

On January 13, 1894, the Holland Rod and Gun Club was organized to aid in propagation of the birds and furnish funds to carry on the work. Baumgartel was secretary-treasurer of the club and M. G. Manting was the first president. In this era the game wardens were a despised lot, and on occasion when they tried to arrest black bass netters at the mouth of the Grand River at Holland they were greeted with loaded shotguns. It was thought that this

attitude would gradually change and convictions of offenders would become possible with the mutual financial interest that existed in this new organization. The club posted a hundred dollar reward for information leading to the arrest of any violator of the fish and game laws, but it was never claimed although violations continued.

By July 1894, Baumgartel had succeeded in raising two hundred and fifty birds to maturity. These birds were held over that winter and the initial release was made March 27, 1895, on Harry Harrington's farm at Haarlem, north of Holland. This was the first planting in Michigan and in a letter to Dr. Otto Vander Velde, September 15, 1940, Baumgartel states,

"The first release was actually made by me personally I took a cock bird from the crate, letting it leave my hands at will, it flew swiftly across the field to some brush. All other birds were released by leaving the door of the prepared crate open and permitting them to come out after we had departed."

This was the beginning of the efforts of the Holland Rod and Gun Club to stock the fields in this vicinity with game. The club offered a reward of five dollars for information leading to the arrest and conviction of anyone shooting these pheasants, reports of which could be made to any club member.

In 1894, hard on the heels of Baumgartel's releases of birds, the Michigan Rod and Gun Club of Muskegon, imported a trio of Mongolian pheasants. This project under the leadership of Edward D. Magoon failed to propagate any birds and they were sent to Baumgartel in 1895. He had little success with these Mongolian birds and they were returned to the Muskegon club and released as mature birds.

The following year the Holland club reported excellent hatches of the club's stock, incubating the eggs under Bantam hens. Weekly reports were received from the farms upon which the birds were liberated, stating that the cocks were heard crowing every day. The farmers in the vicinity were acquainted with the project and had agreed to do all they could to protect the birds. That year the club sent eggs gratis to other Michigan sportsmen and one setting of eggs was forwarded to Arkansas.

In the fall of 1895, coveys of pheasants were reported and the pioneers were pleased at the success of their venture and the prospects of good shooting in the future. That winter John Van Lante reported that hunters had killed the entire flock of pheasants on his farm. Van Lante said he recognized the offenders but was afraid

to report them for fear of having his barn burned. He did volunteer the information that the violators were two of the contributors to the original breeding stock. Despite reverses due to such backsliding hunters and the failure to rear Mongolian stock the local sportsmen did succeed in introducing a breeding population of ring-necked pheasants to the Holland area. Baumgartel and Ben Van Raalte, grandson of the founder of the Holland settlement, liberated a large number of birds and when Baumgartel left Holland in 1899 the club's entire breeding stock was liberated.

Stocking throughout the state following these initial releases were numerous with little more than a fraction of them succeeding. Little regard was made as to the location of the plantings, so consequently hundreds of birds were stocked outside their normal range as we think of it today.

In the early 1890's W. B. Mershon secured and liberated between 25 and 50 birds in the Saginaw valley, apparently these stockings failed as no birds were reported in the locality until after distribution by the State Game Farm.

L. C. Shelly of Bancroft, Michigan imported seven Mongolian birds from Shanghai, China in 1895 but no attempt was made to stock these birds.

Pheasant and Egg Distribution Mason State Game Farm
Michigan Department of Conservation 1917-46

Year	Eggs	Day Old Chicks	Birds	Total *Stocked
1917	-----	-----	-----	-----
1918	27,000	-----	2,396	6,496
1919	42,300	-----	3,800	10,150
1920	38,463	-----	4,461	10,231
1921	20,650	-----	5,222	8,322
1922	31,387	-----	6,030	10,730
1923	34,000	-----	5,500	10,600
1924	18,213	-----	2,553	5,283
1925	10,785	-----	5,293	6,933
1926	30,040	-----	5,841	10,341
1927	29,750	-----	6,321	10,771
1928	16,235	-----	3,350	5,770
1929	7,714	-----	8,753	9,803
1930	6,500	-----	8,000	8,975
1931	11,010	-----	9,182	10,832
1932	24,580	-----	6,516	10,196
1933	18,232	-----	3,259	5,989
1934	20,231	-----	6,338	9,378
1935	21,117	-----	5,615	8,775
1936	23,500	-----	3,183	6,703
1937	21,115	500	2,458	6,118
1938	21,360	5,400	2,990	10,590
1939	18,312	5,765	2,863	11,348
1940	21,313	5,673	2,194	11,067
1941	20,000	-----	-----	-----
1942	20,000	-----	-----	-----
1943	10,000	-----	-----	1,500
1944	5,000	-----	1,547	2,297
1945	10,380	-----	2,324	3,881
1946	24,630**	-----	-----	3,694

* 10-15% of eggs distributed released as mature birds.
15% used to estimate total stocking (1927-28 Biennial Report)

** 15,000 eggs purchased from commercial breeders for distribution

Fig. 3

In 1900, the Poultry and Pigeon show in Detroit listed pheasants but this was principally avian stock and they were viewed as a novelty at the show.

From 1903 to 1904 the Cleveland Cliff Iron Company imported several hundred pheasants and placed them on their property on Grand Island in Lake Superior. These birds dwindled until a few years later when only a scattered few remained.

That same year, Henry Holton of Alpena imported pheasant eggs from England. The eggs were hatched by a hen and it was reported that the birds bred in that vicinity in succeeding years.

In 1906-1907 small stockings of birds liberated by sportsmen of Clarkston in Oakland County survived in small groups until assimilated by State stockings made in that area.

The Report of the State Game, Fish and Forest Warden, 1907-08 states that pheasants planted by individuals in Shiawassee, Genesee and several other counties have nearly all been killed by poachers.

It is safe to say that not one hunter in one thousand ever saw a ring-necked pheasant until after the distribution of the birds from the State Game Farm was started in 1917.

The State Game Farm

In 1913 the first hunting law was enacted in Michigan. (Public Act 108) This law made it necessary to obtain a license to hunt small game but no provision was made for hunting pheasants at this time. Under this law the license was only required to hunt out of the county in which the licensee resided. This legislation was inadequate but paved the way for the Hunting License Law of 1917. With such a law enforced it was necessary for the State to offer the purchaser of the license something for his dollar. Small game was scarce at this time and the season was closed on prairie chickens, quail and fox and gray squirrels. Confronted with this situation the State set out to find some species that would prove attractive to the hunter and could be successfully reared in confinement. It was reported that pheasants had been successfully introduced into Washington, Oregon, New York and New Jersey and propagated reasonably successfully by game farm methods.

In 1915, O. P. Chapin of Bayport in co-operation with the Conservation Department released hatched birds at Wildfowl Bay in experimental tests with a setting hen. The birds were released in Huron, Sanilac and Tuscola

Counties, but the success of these plantings was not known as other stockings in this area soon took place.

At the request of the State Game, Fish and Fire Commission in 1916, under the direction of John Baird, the Public Domain Commission authorized the purchase of the Teal Farm, one hundred and ninety-six acres of land, suitable for artificial game propagation. The selection of this land situated four miles southeast of Mason in Ingham County was recommended by Mr. E. A. Quarles of the American Game Protective Association and Harry Rodgers, superintendent of the New York State Game Farm. The farm was ideal as it was easily accessible to Lansing and contained sufficient water to permit waterfowl husbandry and extensive enough to permit field rotation of penned areas.

Breeding stock was difficult to secure but an initial purchase of thirty cocks and sixty-five hens was made. In the spring of 1917 about two hundred birds were purchased, most of them coming from the Oregon State farm and the balance from California. These birds cost about three dollars and twenty-five cents each and a few eggs bought from private licensed breeders cost twenty-five dollars per hundred. The next few years were of an experimental nature and few birds were produced or liberated. In

these formative years the necessary breeding stock and equipment was established. The following year two hundred male birds were exchanged for stock from the Turtle Lake game farm and the E. H. Jewett game farm at Pontiac, Michigan.

Harry Grace, an Englishman, from the Evans game farm in Illinois was in charge of the farm but remained only about three months. He was followed by August Prose, a very excellent German breeder, but unfortunately due to international conditions it was necessary to replace him. Roy V. Hunt was appointed supervisor and in the spring of 1919 the services of Donald Lamont, an experienced game breeder from New Jersey, were obtained and a distribution program was inaugurated. (Fig. 4) Light breeds of domestic hens were used to hatch and brood the eggs at the farm and this involved a great deal of attention and labor. Mr. Hunt in recalling this early period tells of the many hours spent travelling over the country-side buying setting hens from anyone who offered them for sale. In 1931, three brooders were secured by the State Game Farm and during 1932 experience with them was obtained. Experiments at the Poultry laboratory at Michigan State College in brooder and feeding methods were carried out and soon after the brooder method was used exclusively at the game

Initial Distribution by Counties of Eggs and Mature Birds
Mason State Game Farm 1917-1918

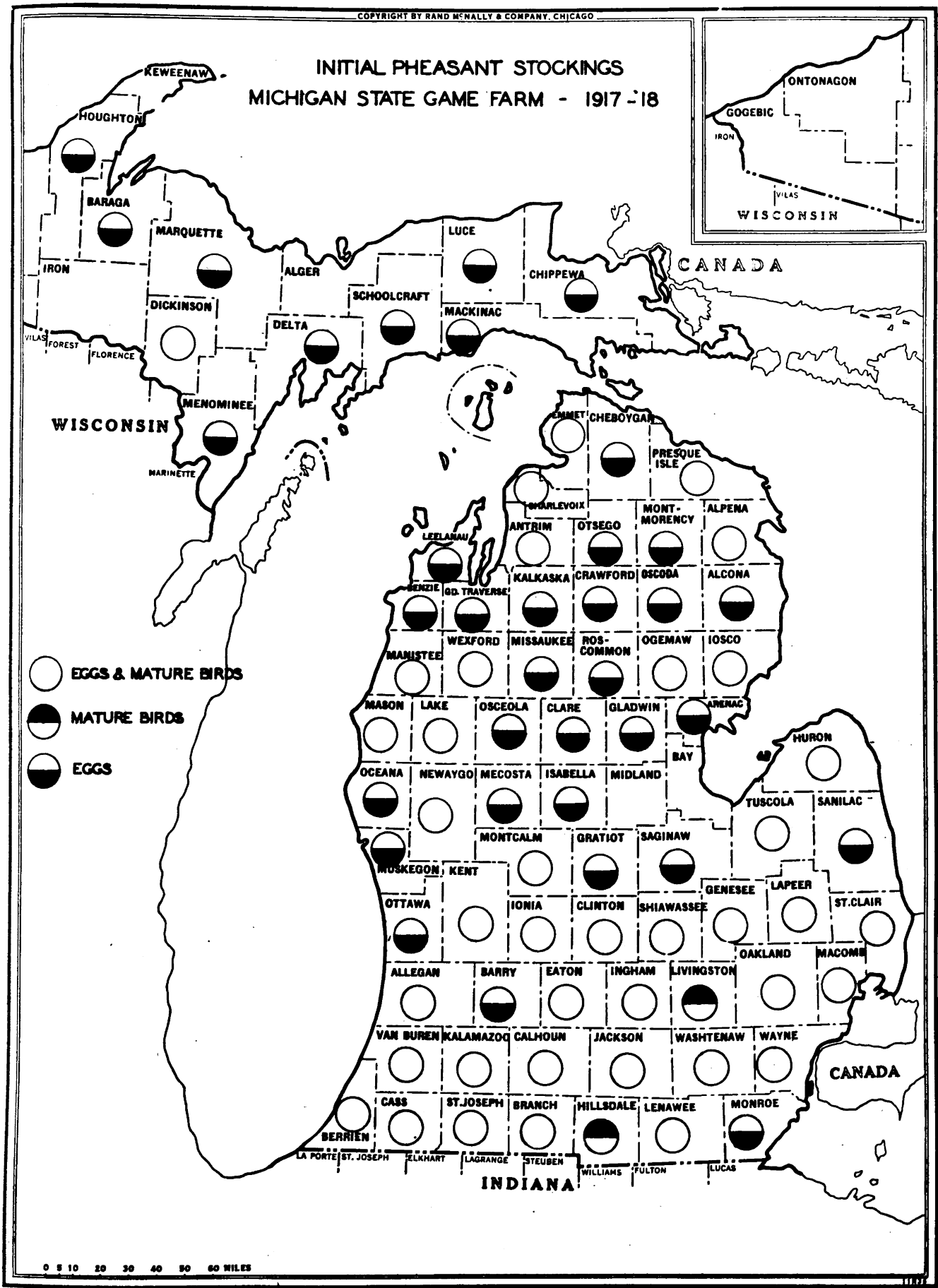
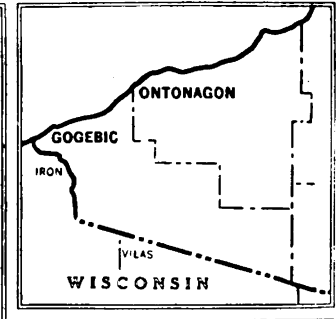
County	Eggs	Birds	County	Eggs	Birds
Arenac	120		Lelanau	270	
Alcona	30		Luce	30	
Antrim	510	15	Livingston		45
Allegan	270	45	Lenawee	75	44
Alpena	745	30	Lapeer	495	90
Baraga	90		Marquette	90	
Branch	30	45	Missaukee	60	
Barry	480		Macomb	45	45
Benzie	240		Montmorency	225	
Berrian	480	45	Montcalm	75	24
Chippewa	375		Manistee	225	69
Clinton	60	10	Mecosta	405	
Crawford	2315		Monroe	360	
Charlevoix	435	15	Muskegon	345	
Claire	300		Mason	435	87
Cheboygan	345	15	Menominee	105	
Calhoun	1050	60	Mackinaw	195	
Cass	495	72	Newaygo	960	45
Delta	135		Ogemaw	195	60
Dickinson	60	10	Otsego	105	15
Emmet	870	105	Ottawa	150	
Eaton	210	45	Oakland	750	27
Grand Traverse	555		Oceana	435	
Gladwin	60		Osceola	195	
Genesee	375	39	Oscoda	115	
Gratiot	30		Presque Isle	315	60
Houghton	105		St Joseph	240	45
Huron	130	130	Saginaw	360	
Hillsdale		45	Roscommon	45	
Ionia	150	39	Shiawassee	1380	45
Isabella	60		Sanilac	60	
Iosca	15	27	St Clair	525	45
Ingham	1275	279*	Schoolcraft	195	
Kent	405	120	Tuscola	105	75
Kalamazoo	835	53	Van Buren	510	54
Kalkaska	135		Wayne	2665	30
Jackson	555	45	Washtenaw	30	88
Lake	345	39	Wexford	135	45
			Totals	27,500	2,396

* Ingham County 200 estimated escapes at Game Farm

Fig. 4

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INITIAL PHEASANT STOCKINGS
MICHIGAN STATE GAME FARM - 1917-'18



- EGGS & MATURE BIRDS
- ◐ MATURE BIRDS
- ◑ EGGS

0 5 10 20 30 40 50 60 MILES

Fig. 5

farm. Mortality was lowered in the use of brooders but it was thought that it would produce a poorly adjusted field bird upon release. This has never been substantiated.

A program of egg distribution by the game farm to farmers and sportsmen was started to supplement the release of mature birds. R. P. Nason (1920), in his article on pheasant figures states that the cost of birds raised by the sportsman and farmer was 35¢ per bird. The total cost to the State under this plan was \$6,414 and included depreciation on equipment and breeding stock, labor furnished gratis by the co-operator. The total expense to the State in raising 12,262 mature birds for release was \$33,755.55 including the noted depreciation. The cost per bird raised at the Michigan farm was approximately \$2.00 per bird. From these figures on the earliest releases it seems that the farmer and the sportsman could produce birds most economically, although their success in producing mature birds was much lower. Of the 27,500 eggs distributed, reports based upon about half that number indicates that only 8,525 were raised and liberated.

In 1928, the Mason County Chapter of the Izaak Walton League petitioned the Conservation Department to set up a

game farm in western Michigan to supply birds for this region. P. S. Lovejoy, as a result of stocking experiments in this region, discouraged further action in this matter.

At this stage of the pheasant's acclimatization into Michigan doubt was expressed as to its chosen habitat. Whether it would seek the environment of the grouse or choose the cover of the quail or even the more remote habitat of migratory fowl was problematical.

Pedigree of the Michigan Pheasant

The pheasant in Michigan is a complex hybrid and seldom if ever found in a genetically pure strain. The black-necked pheasant, Phasianus colchicus colchicus, brought from England to the east coast has been crossed for centuries with Phasianus versicolor the Japanese pheasant. Eastern breeders crossed this bird with the Eastern Chinese ring-necked pheasant, Phasianus colchicus torquatus, and the original Michigan stockings were of this character.

In 1923, the game farm stock was supplemented by 1000 Mongolian pheasant eggs, Phasianus mongolicus, purchased in Oregon.

Two hundred Japanese birds, Phasianus versicolor, were introduced in 1932 with an idea of increasing the hybrid vigor of the State stock.

The melanistic stock raised at the farm in the early thirties was thought to be melanistic mutants but this probably originated from crosses of P. versicolor with the P. colchicus stock from England. Black-phase birds of this nature could have a very important place in experimental work in the State as they could be easily identified in the field without the aid of bands. Wight 1940, recognized the value of these birds for field study but no effort has been made to continue such work in the State.

In Michigan except in rare instances, the pheasant is a hybrid produced by a mixture of the Eastern Chinese ring-necked, Phasianus colchicus torquatus, the Mongolian pheasant, Phasianus colchicus mongolicus, the English black-necked, Phasianus colchicus colchicus, and the Japanese pheasant, Phasianus versicolor. This mixture is evident in any series of wild birds but the Chinese ring-necked stock seems to dominate. Although recognized as a hybrid the bird is commonly referred to as the ring-necked pheasant. Through selection of the larger and more vigorous male birds at the game farm the State bred stock is slightly larger than wild strains.

PHEASANTS KILLED PER COUNTY - 1943 RING-NECKED PHEASANT RANGE MICHIGAN DEIN MICHIGAN

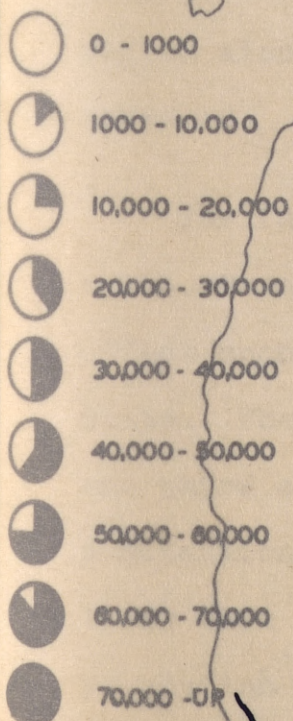
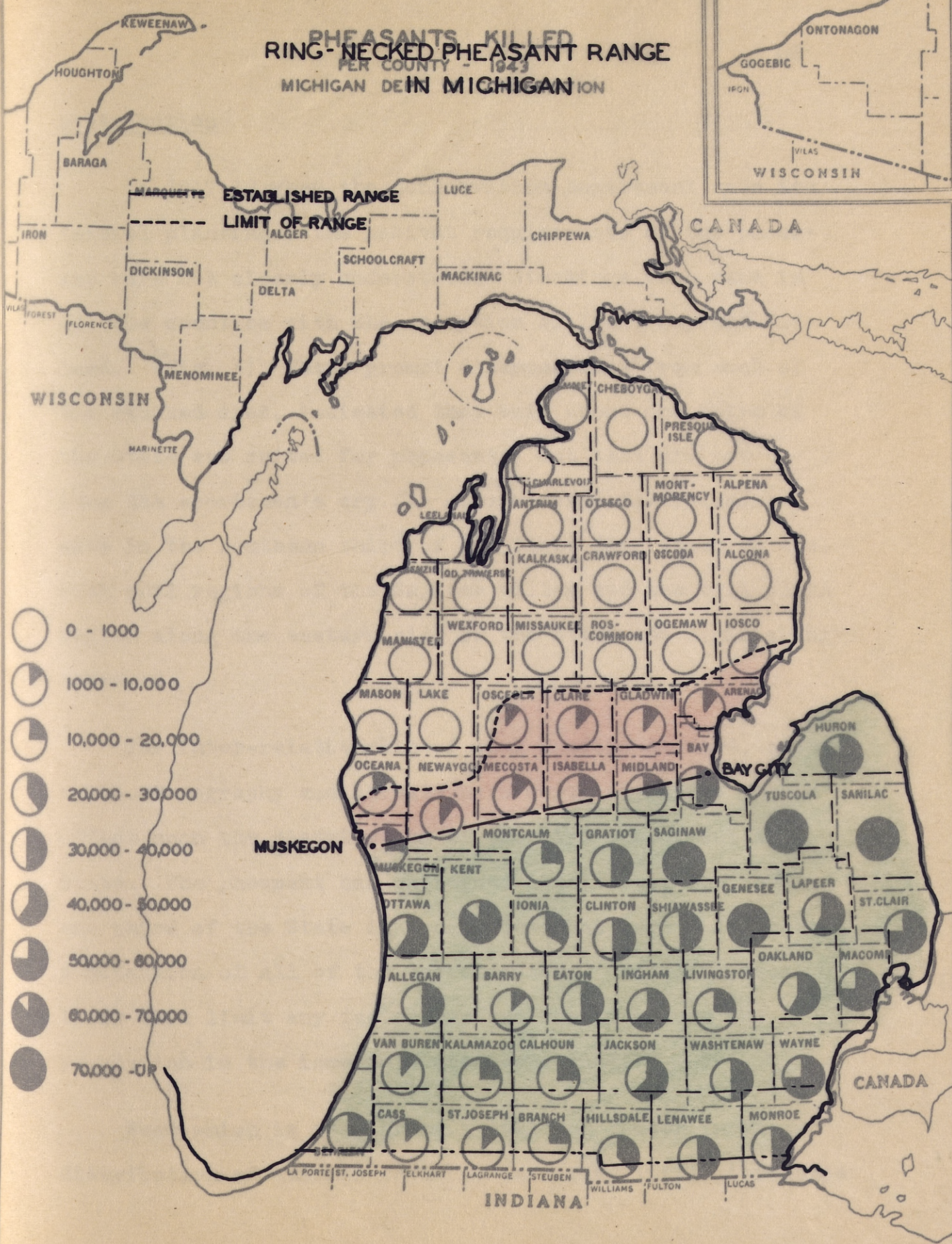
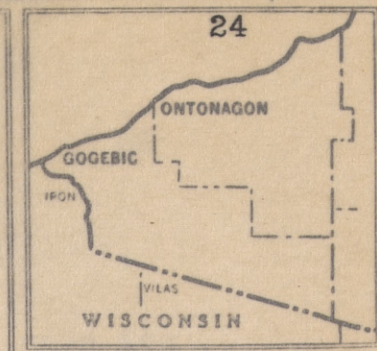


Fig. 6

Fig 7

0 10 20 30 40 50 60 MILES

Distribution

In 1917-18 when the Conservation Department made its initial plantings, the habitat requirements of the pheasant were not clearly understood. Stockings were made in all the counties with the exception of Iron, Bay and Midland. (Fig. 4) Their prompt disappearance from much of the stocked area, indicated that only about one third of the State was suited for pheasants, but this did not stem the sportsmen's cry for more birds. The releases made in the southern third of the State flourished in the rich soil regions of the Saginaw valley and the till plain region along the eastern side of the State and diminishing westward.

The inter-relationship of such factors as food, cover soils, topography and climate have certainly had a marked effect upon the distribution of the bird throughout the State. The pheasant has patterned itself over the southern third of the State in localities that have a delicate combination of all of the above factors. Local fluctuations that limit any factor may exclude or reduce the population in the immediate area concerned.

Food which is very often a limiting factor in the distribution of animals seems to have very little influence

on the pheasant in Michigan. It seems that any region that will provide rainfall sufficient for crop production seemingly provides adequate food. Dalke (1937) states that the pheasant is omnivorous and likes almost any small plant or animal food accessible and abundant. This characteristic has enabled the bird to become established and increase in regions where natural and cultivated foods are very different from those in its native habitat. The ring-necked pheasant seems well suited to get along with the minimum amount of cover the northern part of the State provides but it is a ground feeder and may not be well adapted to the deeper snow regions.

Climate, or local weather, seems to have a marked influence on distribution, but when the average of such meteorological influences as precipitation and temperature are compared with the pheasant's native range, little contrast is noted. The importance of precipitation and temperature has its greatest effect when there is a marked daily or seasonal fluctuation of either of these influences. This was noted in the spring of 1945 and 1946 when there was a combination of excessive rainfall and unseasonal cold. Generally this was disastrous to the overall population throughout the State, but many of the regions of well drained unproductive soils produced normal yields.

The heavy populations of the poorly drained productive soils proved more susceptible under these conditions, as these regions normally supply the greatest numbers of birds and annual yields decreased noticeably.

Soil types and pheasant distribution in the State are certainly closely correlated but unfortunately little research has been conducted on these relationships. Observations made by various workers, Leedy 1939, Leopold 1931, closely correlate high densities with the more productive soil groups. The highest yields in the State are taken from the rich farm regions of the "thumb" and in the better soil groups in the eastern part of the State. Soil is also a very important factor in as much as it greatly modifies the food and cover character of the land, but in itself cannot be a limiting factor due to the complete lack of birds in the black soil groups of the south and southwestern regions of the United States.

Doubt of the pheasant's ability to survive north of the Saginaw valley region was expressed by the Conservation Department and experiments were conducted in Manistee County in 1928 and 1930 and in Menominee County in 1929. In Manistee County 1500 eggs were distributed and 500 mature birds released in the spring of 1928. Predators

were trapped and the county closed to hunting in 1928 and 1930. A food habit study found that food and cover limited the possibility of the pheasant's becoming an important game bird in the region. All the ^{same} birds indigenous to the region were "budders" rather than ground feeders. A few birds persisted in small numbers as far north as Charlevoix, but only on the better farm sections, where even in January and February the snow is seldom more than a foot deep.

Sportsman pressure brought about the Menominee experiment in 1929, that resulted in the planting of 100 birds in the vicinity of Escanaba under complete protection. Considerable shrinkage took place the following year and a colony type failure resulted. (Leopold 1931) These failures resulted in the State's refusal to make further northern plantings as thousands of dollars had been spent in experimental stockings in this region.

Range

The present range of the pheasant seems well expressed in areas where the population will sustain itself without continuous replenishment of stock.

Stocking in the State throughout all the suitable range has been carried on continuously since 1917, so this

makes it difficult to express geographically natural range limits. Leopold in his survey of the north central states in 1931, stated that the average of 6,568 birds were planted per state annually. While such a program sounds large it is relatively small when the total area is considered. This averages one pheasant per 43,000 acres of total area or about one half a bird per township per year. The kill by counties in 1943, when 1,368,000 birds were bagged probably can be interpreted to express the pheasant range in the State. Counties with kills over 5,000 birds per county probably have stable populations. (Buss 1937) Fig. 6

These figures indicate that the pheasant seems well established in southern Michigan yet almost totally absent from the northern two-thirds of the State. Wight 1940, suggests some factors that may limit northern distribution in the State:

1. Climatic conditions including snow and ice which makes food inaccessible over longer periods than the pheasants are able to endure.¹
2. Extended periods of low temperature which force pheasants to remain in the vicinity of their roosts until they are weakened by starvation.

¹/ Gerstell 1942, in controlled experiments found that birds survived over ten days at temp. of 0° F. without nourishment.

3. Lack of energy and strength to avoid attacks of predators and to withstand low temperatures, high wind, ice, sleet and snow.
4. Inadequate cover to meet their requirements under conditions in this northern country.

He cites an instance in Crawford County, Michigan in which pheasants successfully withstood the first winter by seeking cover within an open shelter where they were fed daily. During the following winter they selected a small clump of evergreens as cover. A careful survey indicated that the trees were the only available cover where the birds could conceal themselves. They failed to survive the winter even though food was supplied in abundance. Wight suggested that climatic conditions in the northern region might be suitable for Manchurian ring-necked pheasants, Phasianus colchicus pallasii, a bird never introduced in numbers into the United States.

A comparison of temperature and precipitation in east Manchuria and northern Michigan appears to make such a suggestion feasible.

Region	Latitude	Temp.		Annual mean	Prec. inches	Cover
		Jan. degrees	July Fahr.			
E. Manchuria	44-53	-12 -3	60 70	26 37	20-40	Forest
N. Michigan	44-47	-10 -25	70 80	41	20-40	Forest

It seems that any extension of the northern limit of the pheasant range in Michigan will only come about through the introduction of improved strains capable of overcoming the factors limiting our present species.

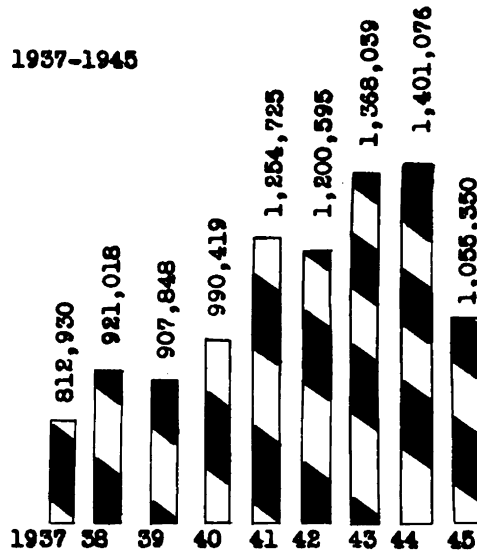
The Period of Beginning

In this period of beginning, extensive distribution of eggs were made to applicants throughout the State and instructions included with the eggs were detailed and very complicated to the average farmer. In 1917 applicants for eggs were provided with an instructive booklet "Pheasant Culture" which described in detail the procedure for handling and setting the eggs. By 1928 the ability to predict success in raising pheasants in different localities in the State brought about new regulations by the Conservation Department, governing their distribution. A priority system was set up as follows:

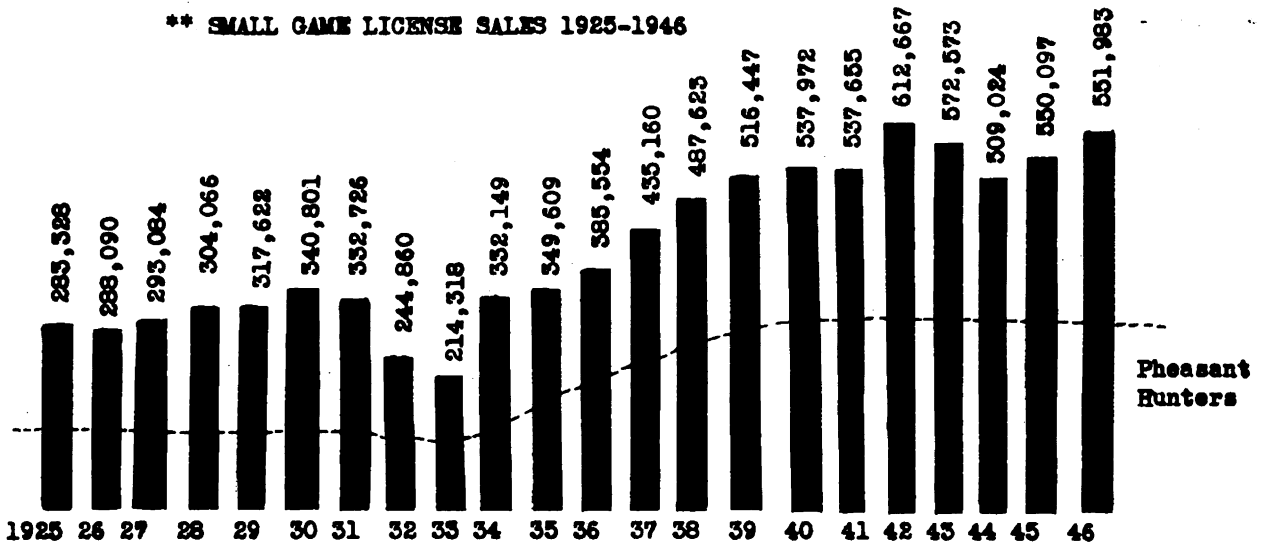
1. Preference to districts well suited to pheasants.
2. Preference to groups of neighbors against scattered individuals.
3. Each person to receive eggs must sign for them in person.

The commission at this time expressed the opinion that the average farmer could not succeed in small scale pheasant culture.

***PHEASANT KILL IN MICHIGAN 1937-1945**



**** SMALL GAME LICENSE SALES 1925-1946**



* Estimated Kill (Average of 10% of Total Licenses reported)

** Approximately 50%, report Hunting Pheasants

Fig. 6

With the passage of the Game Breeders License Law in 1916 numerous game farms became established throughout the State. There were approximately nine permits issued in the State this first year. The license entitled the game breeder to shoot his birds at any season or sell them as breeding stock. It was necessary under the law to affix a tag to birds disposed of and to report this in writing to the Department of Conservation.

Sportsmen's groups raised and purchased stock from these breeders and along with the expanding State program thousands of birds were stocked throughout the State. The 1920 Biennial Report of the Game, Fish and Forest Warden reported, "From every section of the southern area stocked comes reports from farmers that the pheasant is proving a prolific breeder and a remarkable increase is evident annually.

Although the birds were completely protected by law this did not make them less vulnerable to the undisciplined hunter. In a two year period from 1920 till 1922, fifty-five violators were apprehended, paying \$1,429 in fines and costs. With a protective force far more inadequate than it is today and a relative scarcity of birds, activities of this type probably delayed establishment in many areas of the State.

Ming General Game Bill

The degree of pleasure to be derived from the pheasant in Michigan was yet unknown, as no provisions for an open season had been established. Leopold (1931), states that a forty-five day open season was established in the State ¹⁹⁰⁵ but this was not authenticated.² The pheasant had become numerous enough under the closed season to present an argument for a limited open season in 1923. The following year the commissioner recommended to the Legislature and Federal Advisory Board that a four day open season on ring-necked pheasants throughout the State be November 1st to November 2nd and November 14th to November 15th, with a bag limit of two birds in one day, four in possession and eight in one season. The Ming General Game bill passed March 29, 1925 permitted the hunting of male birds, with a limit of four birds per gun, commencing October 25th to October 31st, 1925.

The popularity of pheasant shooting became statewide, and reports indicated that the pheasant was not nearly as

2/ Ltr. May 10, 1948 - A. Leopold This season in Michigan was probably inaccurate and the expression "Pheasants" may have been synonymous with grouse, partridge in game regulations.

poor a game bird as previously indicated. The four pheasants each license holder could take would be killed on different days with a maximum of two a day. Each bird bagged was marked with a small metal tag, similar to those used by the deer hunters in the State. These tags were furnished by the State upon purchase of a small game license.

Horton Trespass Act

The Conservation Department enjoyed the success of the pheasant in the southern counties as it apparently solved the small game problem in this region. The problem up to this time had been to produce and manage a game crop with little thought given to the obligations to the landowner. This confusion arose partially out of the fact that the State sold the sportsman the right to hunt but provided no place for him to carry on this activity. The pheasant and its relation to the land is a biological concept and does not lend itself readily to man's physical concepts of ownership. The pheasant is a product of the land and its degree of productivity conforms generally to the quality of the territory concerned. The farm regions of the "Thumb"³ and the eastern side of the State, easily

^{3/} "Thumb" refers to that portion of Michigan, east of Saginaw Bay.

accessible to the heavy human population centers of Detroit, Flint and Grand Rapids, were immediately plagued with trespassers.

The opposition to this type of hunter conduct was instantaneous. The farmers from this beginning were made to feel that it was less trouble to discourage game than to deal with hordes of trespassers. This problem with all its perplexities is one that has remained foremost in pheasant management throughout the State since the passing of the Horton Act in 1925.

In 1925, Senator Horton, himself a farmer, fostered the Horton Trespass Act, making it a misdemeanor to hunt on farm land without consent of the owner. Counties supported Sunday hunting laws that discouraged and discriminated against the "city" hunter. This general condition grew throughout the country until in 1930 it was stated by P. S. Lovejoy that twenty-one states reported that one third of all privately owned land was posted against hunters and increasing at an alarming rate. Under the Horton Act all the private lands of Michigan were theoretically posted against hunting.

Shooting Preserve Act

Michigan was the leader in enactment of a law which

permitted the private individual to harvest a game crop which he produced through his own initiative and expense. This law, known as the Shooting Preserve Law, was adopted by the State legislature in 1929. The provisions of the Act were as follows:

1. The Department of Conservation was given authority to issue shooting preserve licenses.
2. Applicants must own or lease the land.
3. Applicants must rear or buy stock from licensed commercial breeders and then must actually release on the premises at least 100 upland game birds. Having done this, the licensee, or any one authorized by him, could hunt on the licensed premises during such open season as the Conservation Department designated and they could kill up to whatever percentage of released birds the law allowed. (For the first two years the State allowed a two month open season, October and November, and a kill of up to 50 per cent of the birds released.)
4. The law authorized the Commission to make such rules and regulations as needed to accomplish the defined purposes and at the same time protect the public interest.
5. All birds shot and removed from such licensed areas were provided with special seals to identify them as birds lawfully taken.

The Shooting Preserve Plan was undoubtedly the State's cheapest method of stocking game range. In the seven year period of its existence 47,862 birds were released on these preserves and an average of 15.9 per cent of these

KILL OF SMALL GAME IN THE PHEASANT RANGE MICHIGAN - 1942 - '46

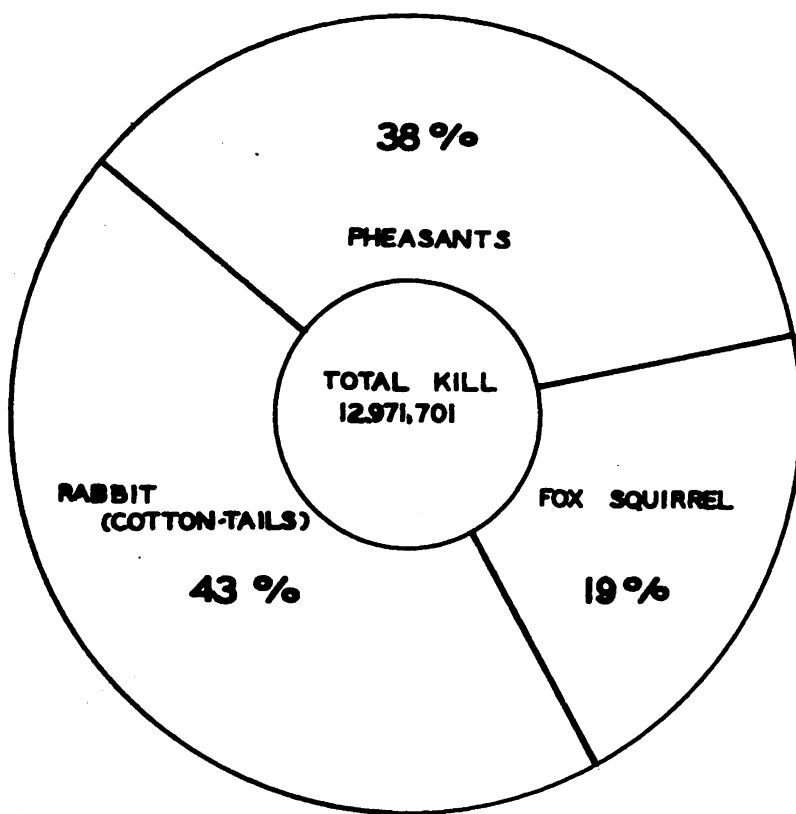


Fig. 9

birds were bagged. In no one year did the preserves take more than 21 per cent of the birds released, although they were authorized to take up to 50 per cent of the total stocking. If 50 per cent of the remaining birds survived, the sportsmen of the State received 24,000 birds, gratis. Dispersal studies made by the Conservation Department indicated that the birds scattered widely over an area when released and did not confine themselves to the preserve boundaries. Records of releases of the Shooting Preserves were submitted to the Conservation Department, as required by law and provided a great deal of valuable information on pheasant stocking.

Game Farm Reared Pheasants Released
and Shot on Private Shooting Preserves

Year	No. licenses	Acreage	No. birds released	No. birds entitled	No. shot	% shot
1929	8	21,021	3,569	1,784	635	17.8
1930	11	22,716	7,770	3,885	921	11.9
1931	12	23,658	8,554	4,277	1646	19.2
1932	16	31,390	11,046	5,523	1253	11.3
1933	15	23,832	7,712	3,856	1479	19.2
1934	16	23,473	7,251	3,625	1223	16.9
1935	7	9,286	1,960	980	430	21.9
			<u>47,862</u>	<u>23,831</u>	<u>7587</u>	<u>15.9</u>

The law met with opposition and interested groups felt it was discriminatory and patterned after the European system. They maintained that only those people that owned farms or had money to join private clubs could participate.

The Grange, a powerful agricultural organization in the State, declared that the pheasant was a State bird and therefore all citizens must be treated equally in plans to utilize it. They regarded the Preserve system as a special privilege law and the most vicious unsportsmanlike law on the statute books. With this sort of opposition, the Preserve Act was destined for defeat and was repealed, February 10, 1935. The law, although generally unsatisfactory to the majority of sportsmen, was sound in as much as it encouraged the land owner and the sportsman to raise and tend a game crop co-operatively.

The repeal of this act jeopardized the business of the private game breeder as these preserves had grown to be their primary source of income. Pheasant culture was an art of husbandry and many organizations depended on these individuals to supply mature birds and incubate chicks for their use. Beyer (1936), stated the law as amended made it a felony for the game breeder to shoot his stock except in the open season designated by the Department of Conservation. In the light of such economic injunctions, the professional breeder passed from the Michigan scene.

The Michigan sportsmen, with little regard for the environmental requirements of the pheasant or other

relations that might exist, rallied forces for more birds. C. A. Justan, President of the Michigan Conservation Congress in 1936, proposed a program by which the farmer would be paid fifty cents for each chick raised to the age of eight weeks. It was proposed that the license fee be increased to one dollar and twenty-five cents, earmarking \$50,000 for pheasant culture. This group felt confident that this program would produce 100,000 pheasants in the State annually.

This program was never adopted by the State but the need for more birds and a place in the field for the increasing number of hunters grew continually, (Fig. 8). The Conservation Department was aware that hunters were experiencing difficulty obtaining access to private lands and farmers were suffering losses and inconvenience. Conflicts of this nature continued in spite of the Horton Trespass Act which was not vigorously enforced. In 1929, plans that might alleviate some of these difficulties in the State, were drawn up and presented to interested groups.

The Williamston Plan

The Williamston Plan originated in Williamston Township, Ingham County in 1929, when a farmers' group

organized to control trespass and to encourage the production of wildlife. Two basic features characterized the plan:

1. Control of trespass nuisance and partial limitation of the number of gun days per unit of area by the Farmers Progressive Hunting Club.

2. Cover improvement and management for wildlife.

Such a program was stimulating to many groups and similar organizations with slight modification were developed throughout the country.

The entire area owned by a co-operative group was posted as a unit using signs bearing the name of the organization. The hunter under the plan could only use the land after obtaining a permit from one of the farm or landowner members of the organization. The farmer was under no obligation to give out a permit to any one who did not meet with his approval. The number of tickets to be issued by each member was decided upon by the organization and normally did not exceed four. After all the tickets had been issued no other hunters are allowed use of the area until a permit was returned by a hunter leaving the area.

When the hunter obtained his permit he was required to leave his car parked in the landowner's yard and he returned the permit upon returning to his car. Under this system the farmer had access to identification of the hunter should difficulty arise, and a degree of control over the hunter's activities upon his property.

The organization was centered around a community group, township, or grange unit, and the size of the unit varied under different plans. Small units with direct control by the landowner, that were acquainted with each other and had common interests, seemed to be the most stable. The Conservation Department researchers and law enforcement units co-operated with the group, giving them advice and protection, and were permitted access to the organization unit. By 1945, there were 40 clubs of this type in eighteen counties in Michigan, occupying 168,592 acres.

The Williamston Plan was established on a long term basis with no effort made to terminate its findings and to stimulate interest in a modified plan. Hunting pressure grew at a more rapid rate than was anticipated and the land managed under such conditions could not support all those that wished to hunt. Violations resulted and the

farmer yielded to the hunting pressure by frequently disregarding the permit system. Farmers discriminated against the "city" hunter in favor of local people and racial groups were commonly barred from using these areas. A general lack of interest in this type of planning has done little to effect an understanding between the farmer and the sportsman. The war brought the project to a standstill and little effort has been made to revive it in the last few years. Although this project has waned, the need for such a co-operative program is still apparent.

The Stocking Program

In 1928, the State Conservation Department expressed doubt as to the value of continuing the stocking program. Of the 35,000 eggs distributed in that year, doubt was expressed that more than 500 birds reached maturity. At the cost of twenty-five cents per egg this seemed prohibitive. In terms of the sportsman's dollar this program may have been a total failure, but its value as a public stimulus in the pheasant program was recognized and eggs of "good will" continued to be distributed in increasing numbers.

The State stocks, on the average, 5,000 mature birds per year; considering 20,000 square miles of pheasant range in 30 counties in southern Michigan, this averages about one bird per four square miles. A stocking program of this type does little to augment any increase in the wild population, so we might conceive that its value lies in the field of good public relations.

Sportsmen's groups in the late thirties continued to stock mature birds in increasing numbers in all parts of southern Michigan.

In 1936, the Muskegon Conservation Club projects released about 1,000 birds in the vicinity of Muskegon.

From 1938 to 1940 the Monroe Rod and Gun Club and the Macomb County Conservation Club released 4,000 and 1,188 birds respectively.

In 1931, the Jackson Prison Boys Vocational Farm, and the Wolf Lake Hatchery were used by the Jackson County Conservation Club for rearing birds for release in the county. The Kent County Conservation League employed local poultry breeders to propagate birds for their use.

The significance of these and similar releases on the State pheasant population was not clearly understood. In

1928, the game farm marked with aluminum bands all birds sent out for release. The low percentage of bands recovered prompted further investigation concerning the fate of the released birds. Of the total birds banded and released by the game farm, over a five year period, the percentage of banded birds reported bagged averaged 5.5 per cent of the total released. Sportsmen that carried on similar projects had comparable results. Experiments were carried out by the State to determine at what period of release, the hunter took the greatest percentage of the birds. The results indicated that birds released about two weeks prior to the opening of the hunting season, yielded the highest return, but the experimental average never exceeded 10 per cent at any period. (Tubbs 1941)

This would seem to indicate that artificial propagation after establishment has done little to provide birds for the gun. Considering 10,000 mature birds released in Michigan in any one year a liberal estimate, this would provide approximately 1,000 birds as past band returns indicate. In Michigan where almost 1,500,000 birds may be taken in a peak season, released birds play a small part in the present program. In parts of the State which are environmentally unsuited for pheasants yet have sufficient hunting pressure, "put and take" stocking may have a

definite place, but the cost of such a program is always high.

By 1930, the place of stocking in the Michigan pheasant program had served its original purpose, that of establishing the pheasant as a game species in the State. The value of continued stocking to sustain hunting seems only justified in exceptionally heavy use areas of low productivity.

Hunting in Michigan

The open day of the pheasant season in Michigan finds people from every walk of life in the field, accompanied by every breed of dog imaginable. In 1946, the pheasant provided sport for approximately 300,000 hunters and comprised about 38 per cent of the small game bag in southern Michigan. (Fig. 9) With the total bag exceeding a million male birds for a three year period prior to 1944, it appeared that hunting little affected their numbers in successive years. Experiments conducted by the State at the Prairie farm and Rose Lake experimental stations supports such a conclusion.

Allen (1947) found that a sufficient number of cocks survived, up to 25 per cent, even under the heaviest

shooting pressure at the present 22 day season. A survey in 1946, indicated that farms surrounding the experimental areas were subject to from 40 to 60 hours of gun pressure per hundred acres. Hunting pressure at the experiment stations varied from 99 to 256 gun hours. Kill records kept at these stations show that 70 per cent of the birds are taken the first week, 20 per cent the second and 10 per cent the last week of the season. To shorten the season by a week would therefore only save approximately 10 per cent of the birds. This assumes no loss of hens in the hunting period, a factor that was well controlled on these experimental areas. Allen concluded that there are not significantly large areas of pheasant range in the State where this experimental data does not apply. As no state-wide survey of this nature has been conducted we must accept this data as the best available.

Records indicate that 10 birds per hundred acres seems an average kill on farm lands in southern Michigan and 125 gun hours per 100 acres harvests this available crop. When the hunting pressure exceeds this figure it seemingly goes unrewarded. The average bag in different counties varies only slightly. Where there is good hunting, there are more hunters and in the pheasant range chances of success are about equal, due to differential hunting pressure.

The closed season does not seem to be a satisfactory tool for increasing pheasant numbers in Michigan. In 1946, sportsmen demanded a closed season in Huron County and although the birds were scarce the Conservation Department did not feel justified in closing the county to hunting. A closed season may have reduced the illegal hen loss in the area and in this way increased the number of available cocks the following year. Wight (1940), in a very complete check on the Northville, Michigan hunting area found a total of four illegally killed hens for every ten legally shot male birds. Increased gun pressure may be an important factor in increasing the number of illegally killed hens.

Black (1941), in a study of the Waterloo Recreational area near Jackson, Michigan, found that game failed to increase although the area was closed to hunting for six years. This area was largely submarginal farm land retired from cultivation and planted to provide food and cover for wildlife. If the birds are able to reproduce their numbers on this type of land a compensating relationship must exist and the surplus formerly removed by hunters is removed by other factors.

Twenty per cent of the hunters interviewed at the State game areas in 1942 had encountered difficulty in

securing permission to hunt on private land. "Within approximately one hundred miles of all the larger cities in southern Michigan lies more than 42,000 acres of public land open to pheasant hunting." (Black 1942) These areas generally support few birds as they are situated on the poorer, submarginal or non-agricultural lands. Lands for public hunting have been acquired in part by the State through Pittman-Robertson funds.⁴ The Federal government pays 75 per cent of the cost of any approved purchases and the State provides the remaining 25 per cent. Land values in the better pheasant range in the State are high due to their primary value as crop lands. The possibility of the State furnishing a place for 610,000⁵ hunters on public lands of this type seems doubtful. The relative value of these public hunting areas now owned by the State have not been properly evaluated, as the areas are largely unmanaged and newly acquired. Future research and management

4/ Pittman Robertson Act - Congress made funds available to States from a 10 per cent excise tax on sporting arms and ammunition to be used for wildlife restoration. The money is allotted on the basis of area and number of hunting licenses sold.

5/ Of the 610,000 small game hunters in Michigan in 1941, 392,019 reported they had hunted pheasants.

of these lands may increase their value to the Michigan sportsmen. Black (1942), in an extensive survey of the State hunting areas found them not used to capacity, due largely to the fact that hunters were not informed about their existence.

Current Situation

The recent peak in pheasant abundance was reached in 1944 when 1,500,000 male birds were taken in the State. In 1945, this peak crashed and the population followed a downward trend until the present year. A quarter of a century of basic research and investigation in Michigan failed to stem the sportsman's demand for an action program. The reduction in the pheasant population was not confined to southern Michigan but extended throughout the normal pheasant range in the United States.

Various methods were devised to determine the degree of scarcity of the birds in various parts of the State. Life equations indicated that the incubation and brood months are periods of high juvenile mortality.

A census system, utilizing brood counts made by rural mail carriers as an index to nesting success, was put into operation. The significance of the figures ascertained by

this census method were not as encouraging as the job of co-operative research accomplished. Trends such as these gathered in 1946, were compared with the brood counts in 1945. The 1946 population level, even with a decided increase in brood size over the 1945 figure, remained approximately the same as the 1945 population. This was partially explained through the reduced number of broods although the individual brood sizes were average.

In the peak year of 1941 a ratio of one adult to twelve juveniles was bagged. In 1946, one adult to five juveniles was taken, although the spring brood sizes were similar, indicative of the failure of a great number of hens to rear successful broods.

Some sportsmen, with the fox reaching peak numbers, attributed the pheasant decline to its abundance. Although the fox has increased its numbers were high during the peak pheasant years in the State with little noticeable effect.

Unfavorable weather in the period of egg laying may determine the success of the hatch. (Graham-Hesterberg 1948) This in turn normally determines the number of birds available in the hunting season. As little can be done to affect the course of the weather, the State out

of necessity, plans to increase its game farm capacity to meet this situation.

The game farm at Mason in the present biennium expects to greatly increase its present capacity. Due to the shortage of labor, Jackson Prison farm was utilized by the State in 1944 for the propagation of birds. The State expects to extend its program there by doubling the breeding stock, making two 6,000 bird projects. A similar project is planned for the Dansville Game Area, making four propagation units in the State, including the State game farm at Mason. The egg production aim for the present year is 48,000 to 50,000 eggs, which past records indicate may produce 5,000 to 10,000 mature birds if raised by co-operators. The need of a program of such magnitude seems far overshadowed by the sportsman's demand for such a project.

The Conservation Department, in addition, plans to spend up to \$300,000 on an extensive habitat improvement program. This program calls for a co-operative effort between the State and interested landowners for the improvement of pheasant habitat. Expenses up to \$100.00 per farm for the planting of food patches, fencing of woodlots and shrub plantings valuable for wildlife, will be borne by the State.

The farms are planned by game technicians under approval of the landowner who supplies the necessary labor to carry the plan to completion. Preliminary surveys indicated that of the 1500 landowners interviewed only 40 per cent seemed willing to co-operate in such a program. The remaining 60 per cent are not interested in increasing pheasants and do not want sportsmen on their lands.

At present the State has 200 farm plans completed and another 100 to be submitted by interested sportsmen groups. The value of such a program cannot be correctly evaluated in the next few years. Planting programs of this nature carried out by the Soil Conservation Service proved to be highly valuable to general land improvement, as well as being of value to wildlife. Whereas such a program may have its shortcomings as far as direct benefits to wildlife are concerned, its value to the land may be far reaching. Research has recognized that good farming practices and farm game go together so this may be an approach to the small game problem in southern Michigan.

SUMMARY

- 1893 Pheasants introduced into Michigan by Arthur Baumgartel of Holland, Michigan
- 1895 First pheasants released in the State, 6 miles north of Holland, Michigan by Arthur Baumgartel
- 1913 First Michigan Hunting License Law, Public Act 108
- 1917 Hunting License Act, dollar charge made for a license to hunt small game in the State
- 1917 Establishment and purchase of the Mason State Game Farm 4 miles southeast of Mason, Michigan
- 1917 Horton Trespass Act, law made it a misdemeanor to trespass on private land
- 1917 Initial pheasant stockings made by the State Conservation Department
- 1925 Ming General Game Bill, first open season on Michigan pheasants
- 1929 Horton Shooting Preserve Act, right granted to raise birds on private lands for shooting in an extended season
- 1928
- 1929 Manistee and Menominee Experiments, proved conclusively the inadvisability of stocking of pheasants in the northern counties in Michigan
- 1929 Introduction of the Williamston Plan, co-operative hunting units open to public use under direction of the landowner
- 1935 Repeal of the Shooting Preserve Act
- 1944 Peak kill of pheasants reached in the State, 1,401,076 male birds estimated taken by Michigan hunters
- 1945 Crash decline in the State pheasant population
- 1948 Pheasant Restoration Program, State and landowners cooperate in a habitat improvement program

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