AN EXPERIMENT IN REGULATED PHEASANT HUNTING, ALLATOONA RESERVOIR PROJECT, GEORGIA

By Roy Wood
Fish and Wildlife Service
Atlanta, Georgia

ABSTRACT

Controlled shooting of game birds, as evidenced by recently established preserves in the Southeast, is rapidly increasing in popularity. With a view toward appraising this type of hunting and its role in wildlife management, 100 ring-necked pheasants were released in seven lots on a 120-acre peninsula, Allatoona Lake, Georgia, November 24-27, 1955. Hunting began 30 minutes after the initial release of 24 birds and was sustained for four days, during which 25 hunters, divided into parties of from three to seven guns each, exerted a total gunning pressure of 33 man-days. Each of the seven hunts averaged about three hours in duration.

Eighty pheasants were bagged, approximately 2.4 birds per man-day, at a cost of $3.30 per bird, exclusive of ammunition, dogs, transportation and equipment. Techniques employed in developing grounds and conducting hunt, closely compared to practices employed on Nilo Farms, Illinois, and other established preserves, except that the Allatoona hunting grounds were flanked by broad, open-water areas. This factor unquestionably increased the percentage of recovery.

Contrary to the expectation of many, hunting conditions were natural, dog work excellent, shooting reasonably sporty, success satisfactory, and costs within reach of the average hunter. The feasibility of staging similar hunts by sportsmen's clubs or groups of hunters was demonstrated.

INTRODUCTION

Regulated hunting as defined by Dickey (1954) is "the release of pen-raised birds in the field and under natural conditions in advance of the hunter." It is by no means a recent innovation. For centuries it has been practiced in one form or another on preserves in England and other European countries from which many techniques have been borrowed and applied, or adapted, to private shooting grounds in America.

Regulated hunting for the public on a commercial basis, however, is of recent origin. For example, the first regulated shooting preserve in Pennsylvania was operated by Larry Stipe in 1945. Others followed and by 1954 there were 14 preserves operating in Pennsylvania, averaging approximately 400 acres in size and ranging from a minimum of 119 to a maximum of 900 acres.

That "regulated" or "controlled" shooting of game birds, including pheasants, chukars, quail and ducks is growing in popularity is evidenced by the rapidly increasing number of commercial preserves. According to estimates released by the Sporting Arms and Ammunition Manufacturers Institute, there were approximately 500 regulated shooting preserves in the United States in 1954. Reports received from Directors of State Game and Fish Departments evidence a total of 31 such areas in the Southeastern States in 1956, the first being Brown's Wells established in Hazelhurst County, Mississippi about 1945 (Plate 1 and Appendix 1).

Preserves operated by private interests are designed to provide hunting upon order at an established fee. Results are generally guaranteed. For $20.00, standard on many preserves, the hunter is entitled to four pheasants (two cocks and two hens), four ducks, or from eight to ten quail. A few preserves advertise rates as low as $10.00 for which the hunter is entitled to two pheasants. Dogs, guides and other services may or may not be furnished as a part of the cover charge.

The idea has appealed to many who have been confronted with closure of their traditional hunting grounds, diminished game populations, increased competition for remaining supplies, high costs of travel, exhaustive hunting, and empty bags. It has been disdained by others on the grounds that conditions in

the preserves were too artificial, fees excessive, and while regulated shooting may satisfy a select few, it cannot be expected to contribute substantially toward meeting the needs of the general hunting public.

The fact remains, however, that the movement is gaining momentum, and additional impetus is being rendered by educational and informational programs such as those sponsored by the Sporting Arms and Ammunition Manufacturers Institute, and by demonstrations such as those on Nilo Farms near Brighton, Illinois, a project initiated in April, 1952 by Olin Industries, Inc. (now Olin Mathieson Chemical Corp.).

Since the issues are fundamental, it is inevitable that professional men and organizations will be drawn further into the field as consultants, managers or both. The State of Illinois is establishing a network of public hunting grounds utilizing birds reared in game farms. The Oklahoma Game and Fish Commission is utilizing a part of its annual quail production for stocking a shooting ground. The Tennessee Game and Fish Commission is deliberating a future course of action. Other departments will be pressed for an expression of their views by interested sportsmen.

OBJECTIVES AND ACKNOWLEDGMENTS

With a view toward appraising controlled shooting and its probable role in wildlife management, I secured the cooperation of Mr. C. L. King of Acworth, Georgia in conducting an experimental hunt near his lodge on Lake Allatoona, a multi-purpose reservoir of approximately 12,000 acres located 45 miles northwest of Atlanta. Mr. King acted as host, extended the use of his dogs and facilities, and made arrangements for use of project lands involved. Valuable suggestions with respect to planning and organizing the hunt were received from Mr. Charles Dickey, Field Representative of SAMMI, Harrisonburg, Pennsylvania.

PROCEDURE

Description of Area

For the hunt, a peninsula of approximately 120 acres was selected. Measuring about 500 feet wide near its junction with the mainland, the peninsula flares to a center width of about 2,400 feet and, after making a dog leg to the north, tapers gradually to a blunt point. Total length of the peninsula is about 3,700 feet.

Bays which separate the peninsula from the mainland on either flank range from 300 to 1,000 feet across. Distance across the main arm of the reservoir is 2,000 feet.

Terrain and cover of the peninsula are very diverse. The undulating topography which characterizes the central portion is accentuated by a wooded hill on the point and by pine clad knolls near the base and southern flanks of the peninsula. Natural ravines and gullies are augmented by pits excavated by gold prospectors during Civil War days. An old military trail running from the mainland down the peninsula divides it into two distinct but unequally sized tracts.

At the time the lands were acquired for project purposes in 1950, approximately 75 percent of the peninsula was in cultivation. After five years abandonment, these lands are largely vegetated by broom sedge broken by small scattered patches of Korean lespedeza, partridge peas, bermuda grass, and extensive tracts of young loblolly pines ranging from 2 to 15 feet in height. Along old terraces and near draw heads are thickets of wild plum, sassafras, hawthorne, blackberry, sumach, and greenbriar. Sites of old farmsteads are marked by privet hedges, clumps of honeysuckles, tumbledown chimneys, and log piles. Occasional apple trees in staggered formation are relics of an old orchard.

Around the periphery of the peninsula is a fringe of sedges, cockleburrs, and wild millet, the width of which ranges from a few inches on the steeper slopes to as much as 100 feet in the coves. This fringe of vegetation, which occupies soils exposed in mid-summer by receding water levels, is separated from the lake by bare shores and mud flats ranging from 10 to 250 feet in width.

Acreage of principal cover types in relation to pool elevations are summarized in Table I:

TABLE I

SUMMARY OF COVER TYPES

Zone of water level fluctuation (El. 820-835).	
1. Denuded shores and mud flats (El. 820-832)	35 acres
2. Moist soil plants (El. 832-835)	15 acres
Upland area (Above El. 835):	
3. Old fields	45 acres
4. Woodland and pine reproduction	25 acres
PENINSULA TOTAL	120 acres

SOURCE OF STOCK

Game birds purchased for the experimental hunt consisted of 100 ring-necked pheasants produced as a hobby by Mr. H. S. Pringle of Cordele, Georgia. The pheasants varied from 16-24 weeks of age and from 1½ to 3¾ pounds in weight. Brood stock consisted of 15 hens and five cocks. Eggs collected were incubated and chicks brooded in home equipment. The young birds were later transferred in lots of from 20-25 with rearing pens measuring 10 x 30 x 6 feet. Those showing cannibalistic tendencies were equipped with "can't pick bits." According to contract provisions they were to be delivered in full plumage by 6:00 a. m., November 24.

TRIAL HUNT

Not knowing the condition or flight characteristics of Mr. Pringle's birds, or how they would react upon release, eight pheasants were procured and liberated on the peninsula at 11:00 a. m., October 15, for trial purposes. Having made no attempt to restrict their movement, seven of the eight birds ascended in almost perpendicular flight to heights of as much as 150 feet before leveling off and sailing fully 400 yards from point of release. Five pheasants sought cover in woodland, one perched high in a pine tree, and another, after flying halfway across Allatoona Lake, returned to the center of the peninsula and landed in a field of broom sedge. The eighth pheasant was eased into dense ground cover and when later flushed flew to the same pine woodland in which five others had escaped.

At 1:00 p. m., four hunters with three bird dogs began hunting and within one hour had flushed four pheasants, two of which were killed, one was crippled, and one escaped to a covert far down the peninsula. Two others were observed running through dense cover but never took flight. One week later a hen pheasant was flushed near the shore line, midways of the island.

MANIPULATION OF COVER

On the basis of this trial release, it was evident that Mr. Pringle's birds had ample power of flight and that while the open water of the lake and bays were by no means a barrier to escape from the peninsula, it was a deterrent. Moreover, it was concluded that if a higher percentage of birds released were to be recovered, the dense cover of ground vegetation must be broken and birds individually planted in selected coverts.

Therefore, a tractor equipped with a rotary mower was employed on the area from 12:00 a. m. to 4:00 p. m., October 22. The general objective in mowing was to encircle or flank natural coverts of honeysuckle, blackberry briars, broom sedge, sumach, pine reproduction or other relative dense stands of vegetation with a mowed strip ranging from 12 to 24 feet in width. Where large expanses of broom sedge prevailed in old fields, an oval pattern was mowed, the long axis of which was a right angle to the long axis of the peninsula, and consequently the course of the hunt. Occasionally, figures 8, S and O were mowed to render greater edge effect.

ORGANIZATION OF HUNT

Invitations to friends, neighbors and professional associates were extended with a view toward securing the assistance of 25 hunters. Each contributed $10.00 in payment for four of the 100 pheasants to be released. Four regular hunts were scheduled on November 24 and 25, one each morning and afternoon.

Three additional hunts were held for cleanup purposes (November 26-27). Each hunter was entitled to a maximum of four birds with the understanding that should he fail to bag his birds during the scheduled hunt, he was entitled to return after November 25. Response was varied. A few were quick to avail themselves of the opportunity; the majority, however, were extremely skeptical and it was not until the day before the first hunt that all places were filled.

Release

The first release, consisting of 12 cocks and 12 hens, was accomplished between 7.00-8:00 a. m. on November 25. The second release of seven cocks and seven hens was accomplished between 12:00-1:00 p. m. that same day. On November 25, a total of 25 and 18 pheasants were released in the morning and afternoon, respectively. Four birds were released in the afternoon of the 26th and three the morning of the 27th. A summary of data pertinent to the release of 100 birds (60 cocks and 40 hens) is shown in Table II.

With few exceptions, all birds were "dazed" and planted in selected coverts along the hunting course. Some birds were observed to recover quickly and walk or run into dense cover. Others did not move until they were found by the dogs or hunters. Approximately six birds escaped from the shipping crates during release, only one of which flew across open water to land outside the hunting area. The others remained on the peninsula.

Harvest

The first party of six hunters and one dog, a retriever, began hunting at 8:30 a. m. on November 24 and left the field at approximately 11:30. A total of 12 birds were bagged. The second party of four hunters and three dogs, pointer, setter and retriever, began hunting at 1:30 p. m., leaving the field at approximately 4:30 p. m. A total of 15 birds were bagged. The third and fourth parties, hunting in the morning and afternoon of November 25, killed 25 and 18 birds respectively. Parties five, six, and seven were composed for the most part of hunters desiring to mop up after the regular scheduled hunts. Four hunters returned on the morning of November 26, and bagged six pheasants. Three pheasants were bagged that afternoon following release of four birds, and one on November 27 following release of the last three birds.

A summary of hunting pressure exerted by 25 hunters which culminated in the harvest of 80 out of 100 pheasants released is shown in Table II.

Discussion

An average kill of 2.4 birds per man-day of hunting and a total kill of 80 of the 100 pheasants released suggests that from the standpoint of hunter success and percent recovery, the hunt was unusually successful. Investigators for Olin Mathieson Chemical Corporation report that if a hunt is properly managed, a party of four should experience no difficulty in recovering 50% of all birds released for that particular party; moreover, that a recovery of more than 66% of all birds released during a hunting season cannot be expected.

Analysis of Table II shows that party one killed less than 50% of birds released for that party; party two killed 15 birds, one more than was released for the afternoon hunt. The average recovery rate of 80% for the entire hunt may be attributed at least in part to good marksmanship, particularly among the hunters of the first three parties who permitted less than four of all birds observed to escape. Good dog performance also aided in pointing the birds and in retrieving cripples.

Manipulation of cover by mowing of stopping strips appears to have been very effective. Olin Mathieson Chemical Corporation (1955) points out that hunting pheasants on a controlled shooting area set up on an abandoned farm or plantation will amount to searching for the proverbial needle in a haystack, and recommends repeated mowing of stopping strips as a management measure. A recovery of only 25% of birds before mowing as compared to 80% after mowing tends to substantiate this observation. In several instances, pheasants moved from the point of release to the edge of a mowed strip or to the road where they firmly held to the point. Some birds flew into large unmowed areas near the tip of the peninsula and were never found.

TABLE II

SUMMARY OF RELEASES, HUNTING PRESSURE, AND KILL

		Release			*Hunting Pressure*			*Kill*		
Party	*November*	*Cocks*	*Hens*	*Total*	*Men*	*Hrs.*	*Dogs*	*Cocks*	*Hens*	*Total*
1	24 A. M.	12	12	24	6	18	1	5	7	12
2	24 P. M.	7	7	14	4	12	3	7	8	15
3	25 A. M.	16	15	31	7	21	4	12	13	25
4	25 P. M.	18	6	24	7	21	3	13	5	18
5	26 A. M.	0	0	0	5	15	3	5	1	6
6	26 P. M.	4	0	4	3	9	3	3	0	3
7	27 A. M.	3	0	3	1	3	2	1	0	1
TOTAL		60	40	100	33	99	19	46	34	80

There is no doubt that the open water of Allatoona Lake effectively deterred flight from the peninsula and aided recovery of pheasants released. There were several instances when pheasants flew over the open water and then back to cover further down the peninsula. On one occasion, a cock flushed some distance ahead of the dogs, flew fully one-half the distance across the main body of the lake, and then circled back to receive a barrage of open fire as he sailed across the line of hunters. On another occasion, a crippled hen failed to make the crossing and was picked up by a nearby fisherman. The only bird known to have crossed the water escaped from its transporting crate during release operations.

The dazing and individual planting of pheasants into selected coverts along the hunting course proved much more satisfactory than the mass-release as practiced in the trial. Pheasants dazed and released with head under wing remained quiet until I had left the scene. If the bird walked or ran away, the trail could be easily followed by the dogs. If the pheasant flew from the point of release, however, it was much more difficult to find.

The sport furnished by birds flushed in the morning of the third day led some of the hunters to believe that it would be better to release birds 12 hours rather than 30 minutes before a scheduled hunt. During this experiment some of the birds were easily found to the disdain of those hunters who prefer difficult prey; but for every bird easily found, there were 2-4 others which had worked away from the center of the course and without good dogs would have never been flushed.

Most of the pheasants released were capable of vigorous flight provided they were given time to rest. I had considered constructing a flight pen on the shooting grounds and having the birds delivered several weeks prior to the scheduled hunt in order that they could be conditioned. The trial release, however, revealed that Mr. Pringle's birds were aggressive and while I am not qualified to make a comparison with pheasants reared in flight pens, I do know that the hunters on Allatoona exhibited emotions ranging from surprise to astonishment at the vigor of the pheasants flushed. Although no record was kept on the ammunition used, it may be conservatively estimated that an average of between 2-4 shots were fired per bird. One hunter was privileged to fire 20 rounds at 10 pheasants, bringing only five down.

Conducted on the basis of a "group operation" where the use of the grounds and all labor of handling the birds was contributed, cost of the hunt was $264.00. This included $250.00 for 100 pheasants, and $14.00 for the mowing. Dogs for

the hunt were loaned by Mr. C. L. King or brought along by respective owners. Thus the cost of thirty-three man-days of hunting was only $8.00 per man-day; cost per pheasant bagged $3.30, as compared to an average of $4.00 to $5.00 for birds bagged on commercial preserves. This cost, of course, was exclusive of shells, gas, transportation, depreciation of equipment and other associated expenditures.

The peninsula, with 85 acres of cover, proved adequate for one party ranging from four to seven individuals. Leaving King's Lodge and walking abreast down one side of the hunting area, circling back down the other and then carefully searching remote coverts, three hours were required to complete the course. Thorough coverage required longer hunting.

Based on a comparison of individual success, it apparently made little difference whether there were four or six men per party. On the basis of safety and hunting enjoyment, however, it is reasonable to believe that a maximum of four hunters per party is to be desired. It may also be assumed that with less than four hunters the recovery rate may diminish.

CONCLUSIONS

From conversations overheard and comments received from those participating, it may be assumed that the hunt was successful. Contrary to the expectation of many, hunting conditions were natural, dog work excellent, shooting reasonably sporty, success satisfactory, and costs within reach of the average hunter. Further evidence of a successful hunting experience lies in the fact that without exception, all hunters wanted the operation repeated.

On the basis of this evidence it is my conclusion that similar hunts could be successfully staged by sportsmen's clubs or groups of hunters where favorable grounds and a source of birds are available.

LITERATURE CITED

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APPENDIX I

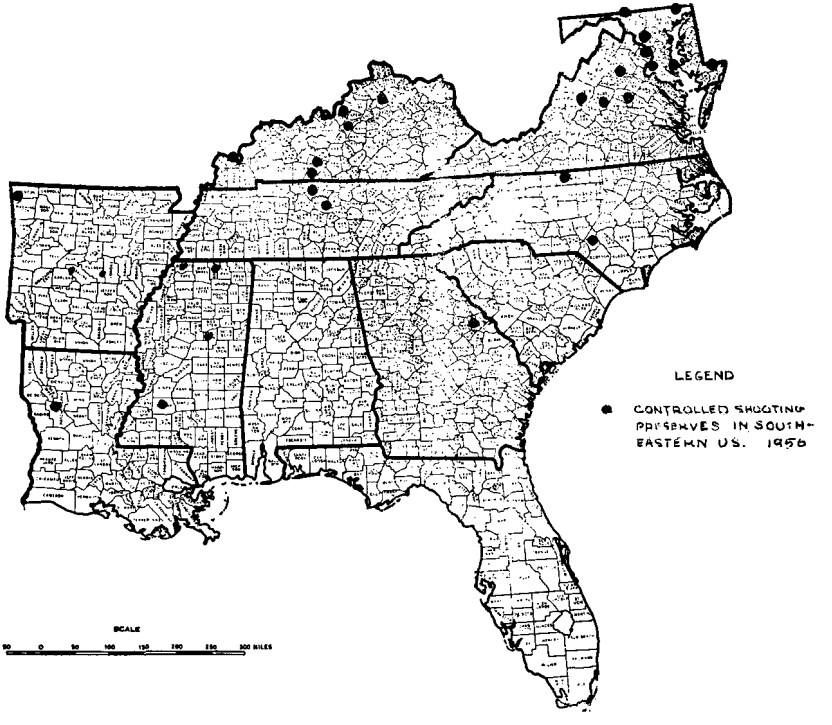
CONTROLLED SHOOTING PRESERVES IN THE SOUTHEASTERN U. S., 1956

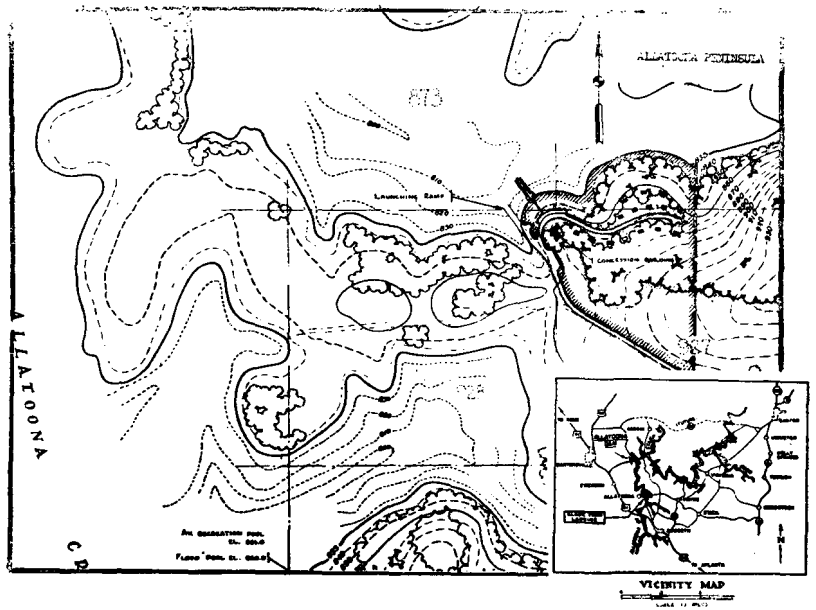
State	*Name of Area*	*Acreage*	*Location (County)*
Alabama	None	...	.....
Arkansas	Oak Ridge Game Farm	600	Benton
Florida	None	...	.....
Georgia	Richard E. Hawes	320	McDuffie
Kentucky	Kentucky Training Kennels	1,000	Scott
	Windy Hills Pheasant Farm	1,000	Meade
	Royal Acres Pheasant Farm	637	Nelson
	Preston St. Pheasant Shooting Preserve	1,000	Jefferson–Bullitt
	Pheasant Paradise Farms	311	Simpson
	Shanty Hollow Game Preserve	1,000	Warren
	Rainbow Acres Hunting Preserve	868	McCracken
Louisiana	Black Lake Lodge	?	Natchitoches
Maryland	Hammond's Long Acres	269	Hancock
	Triggaland Kennels and Game Farm	312	Brookerville
	Harford County Pheasant Shooting Club	480	Darlington
	Port Tobacco Valley Pheasant Farm	1,374	La Plata
	Hunting Creek Pheasant Shooting Grounds	215	Prince Frederick
	Tri-State Sportsmen's Club	212½	Salisbury
	Pierce Bates	...	Harford
Mississippi	R. D. Sanders	2,000	Copiah
	French Camp Academy	2,500	Choctaw–DeSoto
	Brown's Wells	1,200	Copiah
	(Unknown)	...	Benton

APPENDIX I—*Continued*

CONTROLLED SHOOTING PRESERVES IN THE SOUTHEASTERN U. S., 1956

State	*Name of Area*	*Acreage*	*Location (County)*
N. Carolina	Jones Bros. Game Bird Farm	200	Rockingham
	E. L. Hedrick, River Bend Ranch	500	Hoke
S. Carolina	None	...	.....
Tennessee	James Massey	350	Sumner
	Dr. R. D. Wilkerson	?	Wilson
Virginia	Hidden Acres Game Preserve	425	Trevilians–Louisa
	Hof Game Bird Farm	72	Oakton–Fairfax
	West Hill Kennel Shooting Preserve	500	Staunton–Augusta
	King Kennels	200	Rixeyville–Culpepper
	Frauron	131	Keswick–Albemarle
	Willard P. McBain	?	Princess Anne





RESULTS OF KENTUCKY'S WILDLIFE PLANT AND SEED DISTRIBUTION PROGRAM FROM 1949 TO 1956

By JAMES S. DURELL
District Biologist, Kentucky Department of Fish and Wildlife Resources

I. INTRODUCTION

Twelve or fifteen years ago, habitat improvement was considered the most important tool in the management of practically all wildlife. During the past five years or so, a more skeptical view has been taken of habitat improvement on private farmland. Game produced that way costs more than forest game and waterfowl produced on public lands, and in the management of farm game, emphasis has been shifted to hunting regulations as a management tool. Population and hunter success surveys are made to gather data on which these hunting regulations can be based.

It might be worthwhile to remember that about 85 per cent of the game harvested comes from private lands. And hunters probably would appreciate biologists more if we would actually increase the production potential, rather than just telling them how much they can kill without depleting the brood stock.

Farm game does have one advantage over forest game and waterfowl. It is more generally distributed, and more convenient to a much larger number of hunters.

Small game management techniques have been so thoroughly proven that there is no need to wait for better ones. Any biologist will admit that, given control of a farm, he can increase all kinds of small game present. There is a great opportunity to get agricultural workers to include wildlife management practices in their farm management plans.

Farm game management has been included in the Kentucky Pittman-Robertson program since 1948. Like other states in the Southeast, Kentucky had primarily a plant distribution program. In addition to the plantings and other habitat