

NEED FOR AND EFFECT OF PUBLIC HUNTING GROUNDS

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This survey of the public hunting grounds in the United States is not at all complete. Since the reply to our questions was not complete in some cases, some indirect sources were used to fill in the blanks, and there have been some changes since the compilations were made. I believe, however, it will give a fair over-all conception of the situation.

Public hunting grounds in the nation fall into so many different forms and combinations as to complicate comparisons. In some states, such as Maine, there are considerable acreages of unorganized townships which are not dedicated as public hunting grounds, but which nevertheless serve that purpose. In many western states the public ownership such as National Forests and Public Domain constitutes a large portion of the hunting lands. Portions of several National Forests are managed by state agencies through special cooperative projects. These agreements vary greatly, ranging from normal state-wide law enforcement to actual detailed management of cover and state supervision of specialized hunts, often under permit. In some states, forests are administered by a state agency other than the Fish and Game Department and managed primarily for the production of wood. Nevertheless, such publicly owned acreages do furnish land for public hunting. In others, the state forests are under the same commission or board as the fish and game activities and so are available for game management on much the same basis as for the management of timber, fish, or other recreational needs. In such states it may be practicable from a political and administrative point of view to give almost the same consideration to game and hunting on state forests as on specially designated areas purchased primarily for public hunting grounds.

Some lands originally acquired for federal refuges furnish public hunting. There are a good many holdings set aside for one purpose or another as public lands which incidentally are available for public hunting. The Adirondack Preserves in New York is an example. Another type is the dedication in Michigan, by the Legislature in 1899, of our Great Lakes Marshes to be held by the state in trust for the people (Act 171, P. A. 1899). The title reads as follows: "An Act to set aside the submerged and swamp lands belonging to the state of Michigan bordering upon the great lakes and the bayous thereof and those lying along the shores of the Kalamazoo, Grand and Muskegon Rivers, for a public shooting and hunting ground, defining the limits thereof and providing for its care and management." While the use of these lands is complicated by industrial, residential, and resort developments, they do furnish much excellent waterfowl hunting.

There are many other specially dedicated areas available as public hunting grounds. I have mentioned only a few. Each state agency could well canvass the many types to see which, if any, might offer promise under its peculiar conditions.

In order to get a general picture of the national situation, I would like to call your attention to the two maps entitled "Land Management Activities of Public Agencies" prepared by the United States Department of Agriculture. They show the boundaries of most of the federal and state projects. Smaller projects, of course, could be shown only by symbol and some were omitted because of limitation in carrying all of the detail. In general, the western states appear to have a generous number of national projects. In the southern states there is a considerable amount of National Forest area. In the more heavily populated northeastern and north central states there is, in general,

less of federal land. A higher percentage of brown in the northeastern and north central states indicates more interest in state forest and public hunting ground projects. Pennsylvania's public shooting ground program has been under way many years and is an outstanding example of fine accomplishment. The need for specially designated state public hunting grounds varies, at least in part, in inverse proportion to the amount of national holdings of forest, public domain, refuge and other lands open to shooting.

Map GA-83 shows the acreages of publicly owned lands open to hunting. While it may not show some small units or classes of land, it does give the general picture.

The need for public hunting grounds is also largely in proportion to hunting pressure. Charts have been prepared to illustrate this. Chart GA-81 shows the number of hunting licenses issued in 1944 based on the compilation of the United States Fish and Wildlife Service for allotting Pittman-Robertson funds.

Chart GA-82 is intended to show gun pressure in relation to total land area. An area has been shaded in each state which is in proportion to the average number of hunting licenses issued in 1944 per unit area of that state.

Obviously, the number of hunting licenses per unit area may not give a complete index of the need for public shooting areas because the distribution of public hunting grounds and public hunting demand within a state often vary greatly. In the northern Lake States, the bulk of the population is in the southern half of the states but the greater public ownership is in the northern half.

In some states with very little public hunting area and considerable gun pressure, the population of upland birds is high because of natural

conditions, so that hunters find adequate places for enjoyment on private lands. For example, South Dakota has relatively little public land, yet due to the very favorable conditions for pheasants, there is probably little demand for public hunting grounds and perhaps very little need for them at this time. While it is difficult to measure and show the harvestable populations of game on a graph, this factor is very important in determining the need for public shooting areas.

The attitude toward hunting trespass or the laws regulating such use of private property must also be considered. Massachusetts anticipates little need for public shooting grounds because the philosophy that everyone can hunt on private property has been widely accepted. In Michigan, the Legislature has made it a misdemeanor to hunt on farm land or in woodlots connected therewith, or on enclosed wild land, without the written permission of the owner or caretaker. The legal aspects and the attitude of landowners vary from state to state. They also vary greatly within Michigan, the most rigid enforcement of this restriction occurring in the southern farm lands which are most heavily hunted.

In most states, good waterfowl areas are much more limited than upland shooting sites, so there is more of a tendency for private parties to own or lease waterfowl areas. The need for waterfowl hunting grounds is likely to develop first, as is borne out by the statements from several states. Perhaps Michigan is an exception to this because the Great Lakes Marshes were dedicated as public hunting grounds many years ago and a considerable portion of the good marshes are along the Great Lakes. Previous to 1899, some of the best Great Lakes marsh lands were sold and there is considerable hunter support for buying back such marshes as public shooting areas.

In general, the specially designated public hunting grounds start originally with a single objective: to establish a refuge, for instance -- or perhaps a field trial grounds. As time passes, there is a tendency for the objectives to multiply and complicate the problem of management. Overlapping and partial-lapping of functions begin to appear.

From the very first we have found it unnecessary at our wildlife experiment stations to exclude the public or keep more than a very small percentage of the land closed to hunting. In fact, accommodating hunters in the fall has made available opportunities and information which could not have been obtained in any other way. Two of the census methods regularly used at our Rose Lake Station are based upon the kill of pheasants and rabbits. The entire hunting kill goes through the laboratory, and age ratios secured in this way are a valuable indication of the success of the previous breeding season. As much private and state land as possible is included in the hunting area each fall to swell the figures upon which these ratios are based and make them more significant.

The open-to-hunting method is about the only sure-fire system we know of to get the people who have a primary interest in game to visit research stations and expose themselves in the flesh to our investigational work. Probably we do not "sell" large numbers of people in this way, but it is one of the little springs that we hope some day will make a river.

An agency interested in producing game and fur must be concerned with its harvesting also. It is worth plenty of cash dollars every year to know that you can shoot three-fourths of the cock pheasants and half the rabbits and squirrels without cutting down next year's supply. It is difficult to conceive how we could have obtained this information had not the Rose Lake,

Prairie Farm, and other research areas been open to unlimited hunting. A number of people who are our good friends and appear to trust us within reasonable limits cannot yet bring themselves to believe that hunting is not a perennial threat to the game supply, but each year the controlled hunting areas are furnishing additional evidence that a game harvest is not necessarily a destructive phenomenon.

If experiment stations can serve as public hunting grounds, it is also true to some extent that public game areas can be useful in the research program. By establishing checking stations at strategic points in areas devoted largely to hunting, it is possible to sample the game population for general condition, sex and age groups, and other data and to interpret the data in terms of what has been found on more intensively studied tracts. To some extent we are also using the game areas for experimental work on cover and food plantings and for tests of the effectiveness, or lack of effectiveness, of the artificial restocking of game.

In Michigan, for a long time the concept was held that all the parks should be closed to hunting. It has been proved feasible to permit hunting during the season in a portion of the larger parks even though shooting and possession of firearms during the summer season is prohibited. Such dual uses cause some conflicts and require additional skill and preparation in carrying them out.

The federal refuges have been found in many cases to support other recreational opportunities. The fishing on the Seney Waterfowl Refuge in upper Michigan has become a local asset without interfering too much with the primary objective. The same thing is true of Pittman-Robertson project areas. While game restoration is the primary objective in many cases, fishing, boat-

ing, archery, and camping often can be developed upon these properties and offer a definite public service.

Problems of administration and increased costs are raised. While picnicking, camping, and fishing may be perfectly logical uses of the land and may be carried out without very much interference with game restoration, nevertheless they do require an increase in developmental and operational expense, such as additional sanitary facilities. In many cases there is no adequate legal machinery by which the users of such properties can be compelled to pay their share of the overhead. It seems to me impracticable to keep picnickers, naturalists and perhaps campers from using game areas when such use does not interfere too much with the primary objectives, but there should be practicable provisions for collecting fees to pay for the extra overhead and maintenance costs. When the funds were adequate, some extra costs could be absorbed, but with ever-mounting operational costs, joint financial participation seems imperative.

One new project is underway in Michigan to combine general funds and game license fees for acquisition so that the lands purchased can be made most useful and each activity can carry its proportionate share of the costs. Perhaps it may be of sufficient interest and promise to justify discussion in some detail. The Legislature appropriated three million dollars from the State's General Fund to be spent over a period of five years for the acquisition of recreational land in southeastern Michigan, adjacent to the Metropolitan Area of Detroit. The projects under consideration were on rough, mostly poorer agricultural soils, and contained as much water as possible, to provide extensive recreation of various kinds in addition to normal park functions. Realizing the need for public hunting grounds near the Metropolitan Area, the Department proposed the merging of funds for acquisition. To the General Fund

contribution of three million dollars was added \$600,000 from the Game Protection Fund. At the time the decision was made no one could be entirely sure this was the proper proportion (one dollar out of each six to come from game funds). Land market prices were rising and there was no good index to probable costs. Approximately 36,000 acres of these recreational lands have been optioned or purchased at an average cost of \$83.26 per acre. The cost was influenced greatly by the strategic location of the lands and the demand for them for private recreational purposes.

It is anticipated that perhaps ten, but not more than fifteen, per cent of these lands will need to be closed to hunting. Intensive developments for normal park uses will be provided on a small portion of the areas and less intensive programs for the remainder. It is believed that landscaping and development plans for the extensively used areas should be naturalistic and should, as far as practicable, hybridize the formal type of park plan with those that are beneficial to wildlife. The use of berry-bearing shrubs favorable to wildlife, which are also suitable for landscaping, we believe will create more interesting places for people to roam than too formal landscaping, because wildlife is also a considerable part of the hikers' interest.

On land set aside primarily for public hunting, the cover pattern will need to be kept in a condition featuring open sodded areas, intermediate brushy types, and a highly varied woodland. A landscape characterized by this intimate "interspersed" of different kinds of cover is not only the best for game, but also provides the sort of habitat esteemed by the human species for many kinds of year-'round activities. Hunting is only one type of outdoor recreation. Drives along semi-wild scenic trails, picnicking, and birding expeditions are enjoyed by the whole family, and there are indications that this sort

of thing is becoming more popular every year. To be so used, a tract does not need to be a state park. In general, the privacy provided by large unimproved areas makes up for a lack of pumps, fireplaces, and sanitary facilities, and a minimum of upkeep is necessary.

These lands will not produce as much wildlife as areas selected and developed permanently for game but we believe that to combine functions in this situation is better than to separate projects and administer them independently.

Much of the same public interest is developing on the Pittman-Robertson game restoration areas, as a good many requests are coming in for activities which are allied to hunting but actually not a part of it. Bow and arrow roving courses are becoming popular in many places and we are getting requests from local clubs for permission to set up archery ranges. These roving courses take relatively little land. The nature of the shooting is such that it needs very little supervision and it seems a fairly simple thing to work out a satisfactory cooperative arrangement with local groups to do most of the work and still leave the course open to everyone. But if we approve such plans we would be asked why we didn't put out picnic tables and toilets, and presently it drifts into a form of park recreational development. The next logical step is the request for development of a trap and skeet range and a rifle range. The trap and skeet grounds do not take much room but they require supervision and they require posting to keep people out of the back area. Twenty-two caliber long rifle shooting requires considerably more engineering and construction as well as closer supervision, and it all costs money. The capitol city rifle club also wants a heavy caliber range for the expert rifle enthusiasts and deer hunters to use. This is still more costly and more complicated, takes more land and more supervision.

The Boy Scouts start with hiking and end up by wanting a camp. The Junior Conservation Club and the local 4-H Groups are interested, too, and beat the church's request by a few weeks.

Of course, the clubhouse committee of the local sportsmen's organization can't see why the site they have in mind shouldn't be turned over to the club since their members actually contributed to the land purchases through license fees and federal excise tax on guns and ammunition.

It seems to me that all of these things might be arranged on some of the larger tracts providing the appropriate money for each activity were available for the acquisition, development, maintenance, and administrative costs involved. Most states have found it difficult or costly to collect money from the general public except through appropriations by their legislatures. Legislative appropriations usually fail to meet the existing needs of park and recreational facilities already going, let alone provide enough additional for fluid hybrid projects.

One of the problems in connection with the development and administration of these hybrid or multiple-use projects is that they require much more experienced and broader-trained personnel for effective planning, management, and administration. The colleges for the most part train people to be foresters, biologists, or landscape men and the colleges' leadership is not very well equipped to integrate such activities or to train people for this type of work. It has been our practice to have biologists, foresters, soils men, landscape architects, pathologists, and other diversified personnel in our Game Division in order to bring their training and point of view into the program concepts. Having developed a fairly good nucleus of experienced men, we have found it practicable to develop on the job men already trained in a

specialty rather than to depend largely upon hiring men with the experience and training to go directly to such jobs. We have found it necessary to have a recruiting and in-service training program which is not too formal but effective in training people for diversified work of this kind. Whether the colleges will assume a greater role in training of this kind is a question, and I am inclined to think that administrative agencies will have to do much of it as a part of their in-service training program.

In connection with the management of intensive projects where special limits and permits are necessary because demand far exceeds the supply of hunting available, several states indicate that the overhead costs are rather high. Perhaps the mistake is made not in purchasing and starting a project, but in making restrictions which may not be necessary. It would seem to me that the restrictions should be at the minimum and that facilities should be primitive until the type and amount of use is known and the users are contributing in proportion to the costs of the facilities they desire.

Anyone who has done much reading of outdoor pages and sporting magazines in recent months must be impressed with the widespread fear and trembling that is felt for our wildlife in the immediate future. An uninformed reader might well conclude that our game animals and birds are teetering on the brink of disaster. Millions of returned servicemen, more and better sporting guns and ammunition, the developing public interest in the out-of-doors—these are cited as a threat against the very existence of the deer, the pheasant, and the grouse. Amid all of this popular viewing-with-alarm you may be surprised to hear me say that in Michigan we are not disconcerted by the prospect of greatly augmented hunting pressure. Rather we welcome the increased public use of this resource and propose to make good use of the funds accruing there-

from. We are assured that it will not mean the reduction of any of those species which bear the brunt of the hunter's enthusiasm.

There are two principal reasons for this confidence. In the first place, field investigations indicate that Michigan hunters under the present seasons and limitations have not been taking the entire available crop of game even in years when the kill was at the maximum for the state. Secondly, gun pressure is also being absorbed by the adoption of hunting methods which yield more sport per unit of game brought to bag. I will explain this briefly.

Surveys have shown that on private farms in good pheasant territory hunters spend an average of 40 to 60 hours on each hundred acres during the open season. We have repeatedly hunted large experimental areas more than four times this heavily without impairing the breeding capacity of the pheasant population. Our basic regulations restrict shooting to cock birds during a 22-day season, and within these regulations it appears well-nigh impossible to overshoot the pheasant. It is evident that hunting to a great extent is self-regulatory. When the birds are down, as in 1945, hunters have to work hard for every cock they shoot. With pheasants difficult to find, the effort to hunt this kind of game automatically slacks off. But of still greater significance is the fact that even in good years it has seldom been possible to shoot more than 75 per cent of the cocks in trial areas that have been really pounded with the gun. Since the pheasant has taken such good care of himself and actually thrives where we have deliberately subjected him to the most intensive hunting, and remembering that only a small portion, if any, of Michigan's private land is so heavily hunted, there is little reason to be apprehensive about what the gun will do to the ringneck. Our biologists estimate that in a year when the southern half of our lower peninsula produced

a bag of a million and a quarter cock birds, at least another quarter million could have been taken without removing any male pheasants actually needed for breeding.

Nor is there evidence that any of our other game has been seriously limited by the gun under recent regulations. One of the healthiest and most productive rabbit populations studied by our investigators is on a tract where a half or more of the cottontails are shot off each fall. More than five years of intensive work on the management of fox squirrels indicated that a drastic reduction of numbers in the fall leaves the population in better condition to reproduce than if hunting were eliminated. Our grouse populations come and go irrespective of hunting. Most of the state's deer problems have been cases of too many rather than of insufficient deer. It has been difficult to accomplish a relaxation of regulations to permit the taking of more animals even when we were convinced that deer were going to waste by the starvation route, and winter range was being seriously damaged.

The commendable caution of people in thinking and writing of the game harvest is a healthy sign of conservation-mindedness. But such an attitude must be accompanied by enlightenment or it may become a liability. I am sure that very few of our hunter-customers and few of those who write on outdoor affairs realize the extent to which game is an annual crop. They do not fully appreciate the abundance which nature will provide if given a chance and what a wastrel nature can be in killing off the things that grow each spring and summer. Of the cock pheasants shot by Michigan hunters, nine out of ten are young of the year. At the same time of year only about one hen pheasant in six is an old bird. Roughly two-thirds of the state's annual production of fox squirrels die each year. The hunter gets about half of these. The tremendous

annual turnover among wild animals is our guarantee that a large game harvest is not necessarily destructive.

If basic regulations are properly adjusted, the hunter's game crop will be a portion of the excess which is naturally produced and eliminated by one means or another each year. We believe that shooting which takes animals that would otherwise live to breed is unjustified. It is the job of the research division of the game management organization to furnish the information as to how far to go and when to make changes. It is important in this connection that the results of sound scientific game research be given a vote of confidence by both administrators and the public. That is the only way to make it pay off. After all, we do not hire a doctor and then tell him what medicine we wish to take. If he is worth hiring, then he should prescribe the dosage.

Aside from the fact that many game species can yield a larger annual toll than the sportsman has yet required, there is a growing appreciation that the value of game or fish can be enhanced by changing the method of harvest. A case in point is the developing interest in light tackle for taking game fish. There is nothing wrong in catching fish with a cane pole and a hook festooned with night-crawlers, but that combination is steadily losing ground before the five-ounce rod and dry fly. It may mean less fish, but it is more fun. Hunters are finding that a squirrel shot with a twenty-two is a more valuable squirrel than one killed with a shotgun. One of the best examples of efficient utilization of the wildlife resource is the rapid adoption of the bow and arrow as a means of killing both small and large game. There are 18 states which now have special regulations permitting the killing of deer with bow and arrow. Returns show that archers have about a three per cent success in hunting deer, whereas success is ten times as great among gun hunters.

Nevertheless, old-timers who have killed many a deer with the rifle are forsaking that mode of hunting for the "brush" bow and broadhead arrow. In a form of sport where success is so low, we can well afford more liberal regulations, such as a longer season and the lifting of sex restrictions. Certainly it will not hurt the deer herd and it will mean more recreation for more people.

It is my belief that an active public hunting ground program using all of the available facilities such as national and state forests, can change the philosophy of many hunters. Those now using private hunting grounds can actually be converted to dependence upon public hunting grounds. In 1929, in Michigan, there was a feeling that much northern forest land was being bought, fenced, and used for private hunting and this tendency was going to be a serious threat to the poor and middle-class income hunters. The Legislature set aside \$1.50 from every deer license for acquisition, maintenance, and development of game refuges and public hunting grounds. The public hunting grounds movement was also supplemented by the dedication of tax-reverted lands so that many of these became a part of a public hunting ground project. A comparison of old and recent State Highway maps showing project boundaries will attest the marked progress made under that program.

It is my belief that the normal philosophy of most hunters has changed, and that their mode of thinking is shifting from the idea of a large hunting club to the concept of a group owning a small tract on which they can erect a building, hang up their deer, cut their wood, and bury their garbage. Their hunting will be done chiefly on the surrounding public lands. In only a few cases are these small properties fenced; hence they are usually available for public hunting. By this provision of public hunting grounds it has become the mode or practice for many people who can afford their own hunting grounds to

compete with others in deer hunting. In other words, they do not need to have so much private hunting grounds because it is not the fashion for each group to have their own lands, and by providing fairly adequate northern public hunting grounds the state gets more hunting use out of the bulk of its forest area.

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