

Common and Scientific Names of Plants Mentioned

Olney's threesquare	<i>Scirpus americanus</i> (Persoon)
Needlerush	<i>Juncus roemariionus</i> (Scheele)
Saltmeadow cordgrass	<i>Spartina patens</i> (Aiton)
Saltmarsh cordgrass	<i>Spartina alterniflora</i> (Loiseleur-Deslongchamps)
Loblolly pine	<i>Pinus taeda</i> (Linnaeus)
Saltgrass	<i>Distichlis spicata</i> (Linnaeus)
Tall cordgrass	<i>Spartina cynosuroides</i> (Linnaeus)
Saltmarsh bulrush	<i>Scirpus robustus</i> (Pursh)
Hightide bush	<i>Iva frutescens</i> (Linnaeus)
Groundsel bush	<i>Baccharis halmifolia</i> (Linnaeus)
Switchgrass	<i>Panicum virgatum</i> (Linnaeus)

LITERATURE CITED

- Nicholson, W. R. and Van Deusen, R. D. 1954. Marshes of Maryland. Resource Study Report No. 6. Maryland Game and Inland Fish Commission and Maryland Department of Research and Education.
- Steenis, John H. and John Warren. 1959. Management of Needlerush for Improving Waterfowl Habitat in Maryland. Proc. Southeastern Association of Game and Fish Commission, 13:296-298.

**1961 REPORT
FARM GAME COMMITTEE
SOUTHEASTERN SECTION—THE WILDLIFE SOCIETY**

By EDWARD G. SULLIVAN, ROBERT W. MURRAY, ROBERT E. MURRY,
LEE K. NELSON, *Chairman*

A Committee meeting was held in Atlanta, Georgia on August 16-18, 1961 with members Murray, Sullivan, and Nelson present.

ACKNOWLEDGEMENTS

Guests participating in some of the discussions at the Committee meeting included: Dr. C. W. Watson, Mr. Tom Steiner, Mr. Edward B. Chamberlain, Mr. Walter Rosene, Jr., Mr. Tad Lane of the U. S. Fish & Wildlife Service, and Mr. Leonard E. Foote of the Wildlife Management Institute. The Committee is indebted to these gentlemen for their ideas and very helpful comments.

Solicitation of ideas and comments from a number of outstanding men in the wildlife profession was conducted through correspondence by the Chairman. Those received provided the Committee with a wealth of material for consideration and they were much appreciated. Among those who graciously responded were:

- Mr. Harold E. Alexander—Arkansas Game & Fish Commission
- Mr. Jack Allen—Indiana Department of Conservation
- Mr. Clayton Bushong—Indiana Department of Conservation
- Mr. Jack Crockford—Georgia Game & Fish Commission
- Mr. William R. Edwards—Ohio Division of Wildlife
- Dr. Frank A. Hayes—University of Georgia
- Mr. James E. Keeler—Alabama Department of Conservation
- Dr. Edward L. Kozicky—Olin Mathieson Chemical Corporation
- Dr. Joseph P. Linduska—Remington Farms
- Mr. George C. Moore—Kansas Forestry, Game and Fish Commission
- Mr. Scott Overton—Institute of Statistics
- Dr. George A. Petrides—Michigan State University
- Dr. Frederic H. Wagner—Utah State University.

The views presented in this report, however, do not necessarily represent the views of those whose names are mentioned here.

INTRODUCTION

Attempting to predict the status of wildlife and hunting conditions in the future is a complicated and difficult job. A great many unknown factors are involved which can easily alter the most carefully pieced

together picture. The signs and trends of the present are the only guideposts to a look into the beyond. With a full realization of the toughness of the assignment the Committee attempted to foresee some of the problems that wildlife managers will face in the immediate and distant future. Certain conclusions crystalized from these deliberations. Unfortunately for those who get a thrill out of hunting upland game, the outlook is rather grave. Worse yet, no sure-fire solutions to the great problems lying ahead could be found. The Bobwhite will be hard hit. Prospects for rabbits are far from bright.

Some things appear to be inevitable. Farm game habitat for some species is shrinking at an ever-increasing rate. An exploding human population is spilling out of cities and towns gobbling up adjacent farm lands for abodes. Further encroachments by super highways, factory sites, shopping centers, etc. are occurring. "Clean" farming is a popular landowner concept. Economic trends are converting crops to timber production in many sections of the Southeast. A shift to livestock production is also noted.

Farm lands are becoming less accessible to hunters. Posting of private lands continues. More severe trespass laws are being passed. Chunks of prime hunting territory are being leased for the benefit of a few. This insidious practice has already invaded important quail areas in the Southeast and it is spreading.

Farm game productivity on private lands is generally far below potential and is likely to remain so. *Lack of incentive on the part of the landowner to practice game management is a major factor.* Economic considerations are also important.

Total numbers of hunters continue to rise but a slowing of the rate seems to be developing. Although population experts are predicting great surges in coming years a decline in the number of hunters per capita is anticipated. The foregoing developments seem to be responsible, in part, to an apparent shift to spectator sports and outdoor activities of a family nature, increased skeet shooting, participation in field trials, and greater use of shooting preserves.

Perhaps these prognostications are overly pessimistic. Present indications do not support such a contention, however. Can we stop this seemingly inevitable tide? Maybe not, but we can blunt its impact with practical long-range planning and prompt action programs.

A number of suggestions aimed at the preservation of farm game resources and future public hunting are presented for consideration. No claims to complete or infallible solutions are made, but a thoughtful evaluation of them by all administrators and field men is hoped. It is the earnest desire of the Committee that increased attention be directed to the aforementioned problems and unceasing efforts be made to solve them. The future hunting of farm game species hangs in the balance.

CREATION OF HUNTING OPPORTUNITY

Creation of farm game hunting opportunity is the major problem facing us. In simplified terms this means producing a supply of game and assuring an opportunity to harvest it. The latter is already a serious problem in some parts of the Region. It is becoming more acute.

Last year's Committee estimated that over \$6,000,000.00 was spent on statewide farm game habitat restoration projects in the Southeast during the past 20 years. They consisted mainly of plantings of shrub lespedeza food plots for quail and cover plantings of multiflora rose. Plant materials were furnished by state wildlife agencies. It was concluded that these types of blanket development programs on private lands were excessively costly and habitat benefits were insignificant. In addition, they failed to guarantee public hunting. In some areas these programs caused lands to be posted against public use.

The majority of farmers are unwilling to allot the necessary space or provide the required work and money involved in the practice of wildlife management. To some, hunting is an unnecessary bother. While heavy gunning pressure and alleged hunter damage have caused much land to be posted, access to a fair amount of private land can still be had for the asking. Since the vast majority of farm game lands are under private ownership they offer the greatest potential for perpetuating hunting opportunity. They also offer the greatest problems. To

somehow get a farmer to practice wildlife management and to allow reasonable public hunting is a challenge, indeed.

Game management on lands controlled by state wildlife agencies is simple by comparison. It is limited mainly by the capability of the land, the size of the tract, and the money and effort expended. Public access is guaranteed. Considerable acreages of forested lands are already in public ownership in many states. Few farm game lands are under public ownership.

It is recommended that concentrated efforts to manage game be confined to private lands open to public hunting. This represents a major shift in emphasis from past programs.

Multi-purpose acquisition and management programs are recommended. However, programs aimed at producing quail hunting may be impractical. Those designed for rabbit and dove hunting would appear to be more realistic.

I. Land Acquisition

It is the opinion of the Committee that a multiple action program is required to produce all possible hunting opportunity. This would include acquisition of reasonable amounts of land through lease and purchase by public agencies. Both represent tangible returns for monies expended. The goal should *not* be, however, to attempt to supply sufficient quantities of territory to fulfill all public hunting requirements. With present hunting pressures such a goal would be impractical, tremendously costly, if not impossible. Acquired lands should supplement the hunting opportunity provided by private lands only.

Since a farm game purchase program would not change the total amount of land available for public hunting very much and since it might interfere with more critical acquisition needs, it is recommended that the greatest emphasis be given the securing of lease arrangements.

A. *Land Purchase*—In general, the cheaper lands are recommended for purchase as public hunting areas. The acquisition dollar is spread farther. Mismanaged lands can often be secured at relatively low cost. In some instances the purchase of high value tracts near metropolitan centers may be practical. These may be especially responsive to intensive management for dove and rabbit hunting.

In many instances the desired size of the area will not be realized immediately since some tracts will not be available. An overall expansion plan should be formulated. A combined purchase and lease program may be practical in some cases to provide adequate sized shooting areas.

Since acquired areas would serve multi-purposes, appropriations from state general funds might be secured to finance an acquisition program.

B. *Land Lease*—Leasing of hunting privileges on private lands by state game agencies is another method of creating hunting opportunity. Long-term leases may be most desirable but it might be easier to negotiate shorter contracts. Several methods of leasing have been tried. In North Carolina tracts are leased for a price and the farmer is paid extra for installing habitat improvements. In Pennsylvania payment is in the form of development and services rendered. Over one million acres of private land has been opened to free public hunting by this method in the past 20 years. Each farm is zoned, with some sections, i.e. areas near houses and barns, being posted for protection. The areas range from about 1,200 to 22,000 acres in size and are scattered throughout the farm sections of that state. Both hunters and farmers appear to be satisfied with this system. A similar system, or a variation of it, may be suitable for Southeastern states. This would appear to be one of the best proven methods of creating hunting opportunity on private lands and a thorough examination of it by interested states is recommended.

C. *Development of Acquired Lands*—Intensive development and management of acquired hunting lands can be an extremely costly item. They can also become a continued financial burden. To keep costs at a minimum, development should be confined to only the very necessary practices. Economical methods of retarding plant succession should be sought. The number of resident managers and assistants in a public hunting area program should be kept to a bare minimum. Wildlife biologists should plan and direct development work.

Game production and public hunting should be the *primary* objectives of policy pertaining to these areas. Any crop production or other farm-

ing activities which may be deemed necessary should be aimed *solely* at attaining these objectives. Necessary crop production can best be handled on a share-crop basis. Wildlife agencies should *stay out* of the farming business! The marketing of crops for cash, many of which are already in surplus or are price-supported by the Federal Government, is deplored.

II. Programs For Private Lands

A. *The Role of Agricultural Agencies And Federal Farm Assistance Programs*—A great *potential* exists for wildlife benefits resulting from programs of agricultural agencies such as the Soil Conservation Service, County Extension Services, and the Vocational Agriculture Service. These agencies deal directly with farmers and have a hand in manipulating land use. The same is true of Federal farm assistance programs such as the Agriculture Conservation Program, Small Watershed Projects, and the Feed-Grain Program. Considerable amounts of habitat utilized by wildlife are subjected to practices regulated by these Acts. Certain sections of these programs were specifically designed for wildlife management, i.e. the G practices of the now defunct Soil Bank. Relatively few farmers utilized them, however. Other practices are actually detrimental to wildlife interests, i.e. certain drainage projects, the alteration of some types of vegetative cover which were formerly good wildlife habitat. In fact, in a great many instances agricultural agencies and Federal farm programs have been at cross purposes with those of wildlife agencies.

Present day concepts regarding multiple uses of land and the recent surge in the development of recreation resources offer some encouragement. The attainment of both wildlife and agricultural objectives is not inconceivable provided that intelligent mutual understanding is an ingredient in the formulation and appliance of these programs. It is the responsibility of wildlife agencies to see that wildlife interests receive prominent consideration in farm programs.

The new Agriculture Conservation Program may offer a good opportunity for the adoption of beneficial wildlife practices. Future evaluation of this program will determine its worth from a wildlife standpoint.

B. *Information Aids* — Publication and distribution of "How To" pamphlets (i.e. "More Rabbits—The Easy Way" and "More Quail—The Easy Way"—Bushong (Indiana) are recommended as a low cost means of providing genuine help to landowners seriously interested in aiding wildlife. Brouchures of this type cost as little as 3½¢ a piece.

C. *Information & Education Sections Responsibilities*—"Clean" farming practices, so detrimental to wildlife interests, have been promoted as ideal methods of agriculture by various farm groups. Widespread adoption has been alarming. It is essential that organized and concentrated efforts be made by Information & Education Sections to counteract these practices and point up the value of retaining wildlife habitat. Greater effectiveness may be attained by working through local farm community groups.

D. *Fee Hunting*—Failure on the part of farmers to voluntarily practice wildlife management is largely attributed to a lack of incentive. Most wildlife professionals are in agreement with this statement. There is much less agreement as to the type of compensation necessary to provide the proper incentive. Some advocate the charging of a fee by the landowner for the privilege of hunting. Many believe that some type of monetary compensation is inevitable. Others feel that any type of fee hunting constitutes infringement on a citizen's right to harvest game species which are generally recognized as belonging to all of the people. And so the arguments go.

The Committee feels that a discussion of this matter is in order especially since primary consideration is being given future farm game programs. Of relatively recent importance, fee hunting is bound to have a much greater impact in the years ahead.

On the pro-fee hunting side, game species are viewed as any other saleable crop. The hunting privilege fee is the farmer's compensation for providing the necessary habitat for game production. It is reasonable to expect some landowners to actively engage in wildlife management if they can expect a fair return for their investment of time,

money, and effort. Competition with their neighbors would be expected to keep the hunting fee down.

On the other hand, fee hunting in one of the southwestern states has brought some interesting aspects to light which may or may not result in the Southeast. Where this practice is actively promoted very little free hunting is now available, almost none in the better hunting areas. The charging of daily fees has largely given way to lease of the hunting rights of the entire property by a few individuals. The landowner is often attracted to this type of arrangement even though it may mean less profit to him. It is less bother to him and there are only a few individuals to contend with, rather than many. Leasing of this type is often mono-purpose. A few bird hunters may confine their sport to the pursuit of quail, leaving unharvested all other species of wildlife. Hunting is limited to those who can afford the cost. Some of the leasing is done by non-residents of the area and local conflicts arise. In the better hunting areas business enters the picture and soon realtors transact lease agreements. While starting on a small scale these practices spread since they force more hunting pressure to surrounding lands. The affected landowners are driven to negotiating similar agreements.

Private quail hunting leases are already prevalent in some of the better bird areas of north Mississippi. The practice is spreading to other areas and to other states. What can or should be done about it? Some recognize it as an inevitable trend. Others suggest steep license fees be imposed on the landowners engaged in selling hunting rights. Where this is done, however, the cost of same is usually added to the lease cost thereby raising the price of hunting. Some propose to convince the landowner that a daily fee hunting arrangement would mean more profit to him while assuring hunting to all willing to pay. Still others contend that any advocacy of this sort by a state game agency would jeopardize all free hunting still available.

The problem is great and solutions are not clear, but now is the time to explore the problems, project trends and program accordingly.

III. *Commercial Shooting Preserves*

Commercial shooting preserves have attained a marked measure of success in recent years. The quality of shooting has improved and their popularity is increasing. It is possible to harvest between 10,000 and 20,000 birds (pheasants, ducks, and quail) on an area of 300 to 400 acres during a 5- or 6-month season. Such enterprises are needed to satisfy the demand of the hunting public around metropolitan areas.

RESEARCH NEEDS

The following proposals regarding farm game research are presented:

1. Retardation of plant succession on public hunting areas is a major problem. Speedy, low cost, effective methods need to be developed.
2. Economical methods of managing wildlife species on public hunting areas are needed in order to insure maximum production.
3. The mechanics of hunting are not well understood, nor their effects on populations of game. Detailed studies of productivity over a period of years and with variable hunting pressure and harvest are in order. The point where maximum harvest will permit sustained yields must be found.
4. Continued studies of introduced exotic game birds, particularly the Iranian pheasant, the Kalij pheasant, the black francolin, and the red jungle fowl are needed.
5. Basic research into the disease carrying potentialities of released pen-reared birds is needed.
6. The effects of continued importation of nutria into the Southeast need to be looked into.
7. Studies of the hazards of unrestricted importation of wild animal species are required.
8. There is a need for the development of a license system utilizing an IBM type card. Such a method could eliminate the current need for a master license, or could alternatively be geared to a master license system. Estimation of duplication would be much easier, as would surveys utilizing the license files as a frame. Other advantages are that all licenses, both issued and unissued, are easily and quickly accounted for and the license revenues are easily totaled and audited.

9. It has been suggested that quail food shortages may exist in late summer and fall in some sections of the Southeast. Factors limiting the carrying of a maximum number of birds to the hunting season need to be determined.

10. There is a definite lack of communications between states in the Region, particularly between men engaged in research. The creation of a Research Newsletter to keep field workers up to date with progress and results of studies is needed.

11. There is need for surveys to provide information as to the relative availability of land to public shooting. Such surveys should be executed by technical personnel attired in hunting clothes operating in areas where they are unknown to landowners. Pertinent facts as to why access is denied or granted should be recorded and evaluated. Surveyors connection with game departments should not be disclosed. Statistical assistance should be engaged in planning survey routes in relation to hunter concentrations, metropolitan areas, and the distance the average hunter is willing to travel for sport.

AN EXOTIC OAK, *QUERCUS ACUTISSIMA*, FOR WILDLIFE FOOD PLANTING

EDWARD G. SULLIVAN¹ AND W. C. YOUNG²

For the past 25 years the forestry profession has done a commendable job in research, education, and management of our woodlands for higher yields of timber and pulpwood. The wildlife manager has been hard-pressed to keep abreast of the rapid advance in forest technology and keep these improved woodlands productive of wildlife.

Modern forestry has, no doubt, increased the carrying capacity for deer over much of our area. The increase in wild turkeys in several areas of the South can be tied back to better forest management and protection. Over much of our woodland, squirrels have not fared quite so well.

Many studies have been made to "save" or improve wildlife habitat in woodland. Most of these studies have dealt with the maintenance of adequate native hardwood species for wildlife food. Our native oaks, however, are often low and erratic producers. In addition to native hardwoods, there is a need for more dependable mast producers which could be planted and managed for game food. A superior mast producer should meet the following specifications: (1) Produce a "choice" food for the wildlife species desired; (2) Be a heavy and dependable producer; (3) Begin producing at an early age; (4) Not be subject to excessive damage by insects, weather or decay; and (5) Be relatively unimportant as a food for non-game species, particularly grackles and other flocking birds.

The introduced sawtooth oak, *Quercus acutissima*, has qualities that meet these specifications. This oak is native to Japan, Korea, China, and the Himalayan area. It is described as a round-headed tree reaching 80 feet at maturity. The leaves have the appearance of chestnut leaves. The white oak-sized acorns require two years to mature.

This oak has long been used as an ornamental in the Northeastern States. It is in supply by ornamental nurserymen (Mattoon). Records indicate its complete adaptation in Massachusetts and West New York. Recent plantings indicate its adaptation to southeastern conditions also. A specimen at the U. S. Plant Introduction Station at Savannah, Georgia planted in 1923 is 18 inches D.B.H., 50 feet high and has a spread of 75 feet.

Two accessions are being studied. One is on the campus of the University of Georgia at Athens. This planting has erroneously been called the chestnutleaf oak of North Africa, but recently has been identified as sawtooth oak, *Quercus acutissima* by F. H. Meyer of the New Crops Research Branch of the Agricultural Research Service in Washington. The other accession is Plant Introduction No. 168939. Plantings of this

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