

# UTILIZATION OF ILLINOIS LANDS FOR FORESTRY, WILD LIFE AND RECREATION

BY

T. H. FRISON

*Chief, Illinois State Natural History Survey, Urbana, Illinois*

It is indeed significant and indicative of changing conditions when a subject such as utilization of Illinois lands for forestry, wild life, and recreation creeps into a State Academy symposium. This gathering is assembled, too, in an area of Illinois where until the last few years there has been a relentless and uninterrupted trend towards the removal of the last vestiges of our native woodlands and wild life, and recreation has been essentially something apart and different from the joy of seeing, sensing, and getting into contact with those great living natural resources with which our state was endowed by nature.

There is now, however, much evidence that our awakening to the need of land in Illinois for forests, wild life and recreation is directly correlated with economic factors. So vital are these factors, even in an agricultural area which has been referred to as the bread basket of the world, that we are now being forced to revise the evaluation of our natural and renewable organic resources, pay heed to their preservation, and formulate sound and intelligent policies for their utilization.

Previous speakers in this symposium have called attention to some of the evidence which is causing people everywhere to start thinking of land utilization in its broadest sense. This evidence has been portrayed to you today in word pictures of the great differences which now exist in the soils of Illinois lands and which govern their degree of usefulness and values, the projects now under way to stop further serious losses of desirable soils through various types of erosion, and how the standard of living is reflected by natural resources. A great American, Benjamin Franklin, once said that it does not take long to see the bottom of the barrel if we are always taking out and never putting anything back in. His words fit the situation in Illinois today and I am glad to say we are beginning to take heed as shown by this symposium. From the standpoint of forests and the larger forms of wild life, however, we have waited until the bottom of the barrel has begun to show.

The utilization of Illinois lands for forests, wild life and recreation is not the simple problem it may seem at first glance. A stream or a wild life area is a complex biological unit of sundry and different or-

ganisms. Each is affected by the others and in turn affects the whole. Everyone acquainted with conservation activities throughout the country in past years knows that enormous sums of money have been practically wasted by both public and private agencies in behalf of increasing fishing or hunting. Meanwhile, these essential wild life resources have steadily declined. The launching of programs for utilization of lands in Illinois or anywhere for forestry, wild life and recreation can share this same fate unless each and every program or project rests upon sound and impartial data. Even then, over a long period of time, there will inevitably be some shifting and readjustments from time to time if there are again periods of skyrocketing of prices and then sharp declines.

It is apparent to all who have had anything to do with serious planning for utilization of land for forestry, wild life and recreation that these three phases of utilization are usually directly interwoven or at least can be made to interlace. When we bring back large forested areas, wild life properly encouraged is likely to return to an abundance within the limits of the carrying range, and recreation will and can easily be made to follow. I believe that planning for land utilization in Illinois should have a program broad enough to take in everyone and every type of interest.

There is no doubt that conservation activities in the past have often suffered severely from cliques of well-meaning individuals who could not get together; each pulling for a special type of conservation versus the type or types desired by others. It is significant that within the last three months, and for the first time in this country's history, we have witnessed all brands, sizes, and shapes of conservation organizations backing President Roosevelt's Committee on Wild Life Restoration in their attempt to formulate a national wild life restoration program.

Far-sighted land utilization programs, like conservation in general, should and can be broad enough to take in the lover of our birds and wild flowers, the hunter, the fisherman, the picnicker, and the scientist. I have no sympathy with a program which at great public expense would develop extensive areas of renewable natural resources and then forever lock them up and deny the public who paid the bill its share of their wise utilization or enjoyment. Neither have I sympathy for those short-sighted groups or individuals who would ruthlessly exploit and ruin that which they did not build and that which they would not replace or renew. Each interest in proper land utilization, as in conservation, will greatly profit by united and concerted efforts.

Although I have stated that programs for increasing forests, wild life and recreation are interwoven, each different area must be consider-

ed in the final analysis as a special problem with due regard to its former natural state and its present niche in our social and economic order. The Cook County Forest Preserves because of proximity to a large metropolitan area necessarily have heavier recreational demands than would an area of similar extent in the Ozarkian uplift of southern Illinois. In one locality the emphasis must be forestry, in another place upland game, still other areas must cater to migratory waterfowl, fish, recreation, etc. Nearly always, however, one or two major objects can be advanced at the same time. As an example of this I can cite an area near Danville, Illinois, where there is a large acreage of strip-mined land which is now virtually useless. This, if properly developed, could support an abundance of fish and game of a certain type, produce a good stand of a certain type of timber, provide a haven for wild flowers and our feathered friends, and serve as a recreational center for a large number of people. The Illinois River Valley presents another problem, particularly from the standpoint of barriers in the way of restoration. Southern Illinois is mainly a forestry problem with recreational and game interests thrown in.

Studies published by our Survey about eight years ago state that the original forest area in Illinois was over fifteen million acres with an average stand of 4,280 board feet per acre. This had shriveled by 1926 to an area of about three million acres with an average stand of about 1,000 board feet. As the land was cleared of its trees, it was devoted mostly to the raising of corn, wheat, oats, hay and other annual agricultural crops. We are now learning, because of crop yields, erosion, and other results, that the entire removal of the forests on part of this land was a mistake from the standpoint of a long-time land utilization program. Much of this land is truly submarginal and suited only to the production of a forest crop. This is particularly true of large areas in western, south-central and extreme southern Illinois.

A sound program of land utilization for this state should aim at the eventual reestablishment of forests on approximately six million acres of land now waste, cleared or semi-cleared. The present state forest of over 3,000 acres is only a drop in the bucket and the area should be rapidly and steadily increased. The establishment within the last twelve months of two National Forest units in Southern Illinois of potentially 600,000 acres was a big step in the right direction. This acquisition program must not be allowed to lag and in time this area will act as a stimulant to our state forest program. County forest programs and private forestry should not be forgotten and merit our attention. Even our tax laws are in need of revision to open the way for proper utilization of Illinois land through reforestation by private land-owners. Proper legislation must be a plank in our utilization program.

All early accounts of Illinois indicate that nature was exceedingly provident in bestowing our geographical area with bounteous wild life resources. An early English traveler once chronicled that "the wealth of Illinois lies in its land." He might well have added "and in its inland waters." The early struggles of the Indians for possession of the Illinois country, the existence of large Indian communities on the banks of the Illinois River and the largest mound builder community in the world near the Mississippi River were not accidents. They are a sure indication of an early abundance of fish and game—resources so essential to primitive peoples.

Reliable statistics concerning yields and values of game and fish are not plentiful. We do know, however, that in 1908 the Illinois River was worth about one dollar per linear foot on the basis of prices paid for fish to the commercial fisherman and about two dollars per linear foot on the basis of prices paid for fish by consumers. The estimates of commercial fishing at this time give us a production in this river from eighteen million to twenty-four million pounds. Together with the income resulting from trapping, duck hunting, sport fishing and general recreation, the Illinois River Valley represented a great source of income to our state and from products, too, for which at the present time there is no overproduction. Although the Illinois River territory accounted for a large amount of our wild life resources, it was not the whole story and the entire state with its forests, prairies, lakes and rivers had its contributions to offer.

A land utilization plan for Illinois must further the improvement of wild life resources. In 1932, with about 350,000 licensed hook-and-line fisherman in this state, we had about one acre of water—good, bad or indifferent—for each fisherman. When we include the number of persons not required to have licenses, such as minors and farm owners, there was probably less than one-half acre of water for each fisherman. It is surprising with this limited water area that our disciples of Izaak Walton were able to average about two pounds of fish for the year. When it comes to upland game, with the possible exception of rabbits, the situation is certainly no better. In 1930-31 there were nearly 350,000 hunting licenses issued in this state. This means that there was about 118 acres of cleared or uncleared land for each hunter. The migratory waterfowl situation is well known to most of you. Much data have been assembled by the U. S. Biological Survey which indicate this resource is in real danger.

The stage of ruthless exploitation of our wild life resources is practically over except for isolated instances; due mainly to the present status and scarcity of wild life. Legislation as a means of saving wild life is not all that many suppose. In spite of laws we have witnessed a steady decline in certain essential wild life resources. Legislation

has been helpful and is still needed but we must look to other methods to achieve increase in abundance of the more desirable species of fish and game. The pushing of land utilization programs from the standpoint of forests, aided by the furthering of proper fire protection, cover and feed areas, will surpass incubation methods and be much less expensive. Probably if all the money received from the issuance of game licenses could be devoted to rearing quail under hatchery conditions there would not be one-fifth of a quail per licensed hunter. Cover, feed, and fire protection are the big factors and these have a chance in an intelligent land utilization program, even in the heart of the corn belt territory.

The recovery of bottomlands from the clutches of drainage districts—land that in most places cannot carry the present cost of its overhead—needs to be made an integral and major part of our Illinois land utilization program. Fish hatcheries serve useful purposes, particularly as educational exhibits and as a ready source of stock, but the idea that they alone will bring back good fishing in the type of waters peculiar to Illinois and over large areas is something of a fairy tale. Hatcheries rearing fish suitable for our waters are at best only about five times as productive as good natural areas of like acreage and character. With about 75 acres of water area in state hatcheries it is not difficult to understand that the total output can have but a negligible effect on our approximately 500 square miles of water area. The cost of stepping up fish production through hatcheries so that it would exert a real and tangible effect upon our total fish resources would be exorbitant. The solution of our fishery problem lies mainly in recapture through wise land utilization of those areas taken away from our rivers, particularly the Illinois River, by drainage districts and promotional schemes, and the increase in our state of impounded waters wherever possible. Clean streams and forested river margins are necessary parts of this program. Illinois has at best but a small water acreage as compared with other states and we need every acre of it. At the present time, at least, we apparently do not need so much corn and oats. This water area, also, could be the means of stopping the migration from our borders of many millions of dollars spent elsewhere.

I am not going to take your time recounting ways and means of human beings finding recreation on Illinois lands. Forests, fish, and game all can be translated into terms of recreation. It is for recreation that most people hunt, fish, or visit our woodlands. Although we have a large body of licensed hunters and fishermen, we have a much greater number of people who need land for an opportunity to commune with nature, to stretch their legs and to shake off the dust and mental cobwebs invariably collected by humanity under the pressure of social and economic conditions. This need is becoming of increasing importance

and the issue must be met. It is folly to use our best lands for this purpose and equally so not to use our submarginal lands.

I can briefly summarize my ideas of a land utilization program for forestry, wild life and recreation for Illinois as follows:

(1) Reforestation of nearly six million acres of submarginal land through federal, state, county, or private agencies. Much of this area should be in southern Illinois, but smaller units for such a program are available in most sections of the state and must be utilized to accomplish the greatest good from the standpoint of recreational uses. Sand lands, of which we have about 75 square miles, should be included in the forestry program.

(2) Restoration in the interest of fish, game, forestry, and recreation to as natural or improved state as possible of much of the former floodplains and bottomland lakes of our river systems, particularly of the middle and lower Illinois River valley, and the impounding of new water areas wherever useful and practical. Clean waters are prerequisites to the fullest success of this program.

(3) The establishment of game and migratory waterfowl sanctuaries.

(4) Expansion of our state park system whereby all types of areas are included and sufficient acreage is involved to absorb recreational demands without endangering those bits of wild life or flora of special or peculiar interest to scientists and wild life lovers.

(5) Recreational development will follow, or can easily be made to follow the types of land utilization just outlined.

(6) Promotional schemes and attempts to unload on public agencies submarginal lands at exorbitant prices must be avoided.

Submarginal land is in a sense waste land which, if carefully utilized, can be made productive of forests and wild life crops of which at present there is no overproduction. At the same time these areas can be used in a variety of ways to improve the mental and physical well-being of our citizens.

On top of this I would urge that all land utilization projects should be guided by scientifically acquired data of an impartial character. The data of this character which exists for Illinois today is largely the result of the activities over a period of many years of our State Scientific Surveys and the Illinois Agricultural Experiment Station. I know it has been a source of gratification to these organizations to observe the great increase in public interest and appreciation of the value of these data and to see years of patient labor—sometimes criticized by short-sighted individuals as of no practical value—blossom forth in a new radiance and utility. The Illinois Agricultural Experiment Station and the State Scientific Surveys are research and service organizations and are equipped to supply the leadership in the evaluation and scientific guidance of land utilization problems.