

## A FEW REMARKS ON CONSERVATION IN THE ILLINOIS RIVER VALLEY

BY

RALPH F. BRADFORD

*Division of Forestry of the Illinois State Department of Conservation*

NOTE: In planning the symposium on the economics of the Illinois River Valley, this subject was assigned to Director Ralph F. Bradford, of the State Department of Conservation, but due to his unavoidable absence it was handled extemporaneously by R. B. Miller, Chief Forester of the Department of Conservation, Division of Forestry.—EDITOR.

### INTRODUCTION

Briefly, the property owned and operated by the State Department of Conservation may be classified under the head of fish hatcheries, game farms, fish and game refuges, and state forests. The total acreage devoted to these various purposes, according to the latest figures, amounts to 10,457 acres and possibly as much more is under lease as game refuges. Each class of property will be discussed briefly in order, with its purposes and outstanding features.

### FISH HATCHERIES

The main state fish hatcheries are at Spring Grove, Mattoon, Rockford, and Carlyle, the first being the oldest and best developed, serving as a standard to work for. There seems to be a disposition on the part of the state not only to make these places function for the production of fish for restocking Illinois lakes and rivers, but also to develop them as places of interest to the community. With this end in view modern cottages for the care-takers are being erected at Mattoon, Rockford, and on the state forest and the grounds are being landscaped and made attractive, taking the fullest advantage of whatever natural beauty the site may already have. A neat brick pumping station has been built at Mattoon and the difficulty of keeping the hatchery ponds full, which has been giving some trouble, will be surmounted in time by the city of Mattoon by the construction of a new dam in the Little Wabash lower down than the present spillway. This will greatly increase the storage capacity of Paradise Lake, the public water supply, from which water has been pumped into the state ponds.

## GAME FARMS

At the Yorkville Game Farm various species of pheasants are being raised [1], also quail on a tract of more than 700 acres near Mount Vernon and at the State Fair Grounds, Springfield, where forty acres are given over to the purpose and where another custodian's cottage will be erected. A trained game breeder who has worked under Coleman, of Virginia, with great success is now in charge of raising quail at the Fair Grounds and there is ample space for laying and rearing pens. The eggs are hatched in an electric incubator and the chicks are transferred to brooders which are entirely off the ground and each of which can be kept at a controlled temperature. The other method of quail encouragement applicable to farms in the corn belt is called the Stoddard method because he developed it in Georgia. It has been proved that the number of quail coveys on the average farm can be greatly increased by creating the proper environment for them in the way of food, shelter, and reduction of the number of their enemies. In this connection it may be said that the destruction of coverts along streams, roads, and ravines by fire and grazing as well as the disappearance of the Osage Orange hedge from the majority of the farms in the corn belt is largely responsible for the gradual decrease in the number of quail or bobwhite as a farm bird.

## FISH AND GAME REFUGES

The Horse Shoe Lake property of 3,160 acres situated 18 miles north of Cairo, in Alexander County, is a fish and game refuge and although the lake dried up the past summer (1930), it was a most opportune time to put in a dam which will hold the water to the proper level for ducks, geese, and fish as well as to perpetuate the cypress (*Taxodium distichum*) which is found there in its virgin condition along with plenty of tupelo gum swamps.

Dr. C. L. Stewart, of Urbana, in his paper on land utilization in the Illinois River Valley will no doubt mention the fact that many drainage districts are not able to pay land and drainage taxes and I would suggest that such land might be more profitably used for the production of timber, fish and game, and for another purpose which will pay good dividends, namely, recreation. According to some reports land for duck shooting purposes varies in price from \$50 per acre in the lower Illinois River valley to \$400 in the Beardstown area. The usual charge for looking after hunters is now \$15 per day per man or \$25 for two men. Sometimes ten guns are placed at a single hole or blind, which would mean \$150 per day. This amounts to about \$1 per duck and when we

add to this the amount the hunter spends at hotels, for gasoline and oil, care hire, ammunition, and other incidentals it may amount to as much as \$2 per duck, which means quite a revenue for the farmer, for hotels and restaurants, filling stations, and a certain number of men employed during the season as pushers.

#### STATE FORESTS

The Union County State Forest located northwest of Anna and Jonesboro, now totals 3,319 acres and is suited for the production of timber, for watershed protection, for the preservation of wild life, and for recreation, since the law provides that state forests may also be declared game preserves. State forests can also be used for recreation the same as state parks, the National Forests of the United States having attracted more than 31,000,000 visitors in 1930. A full description of this property will be found in the "Illinois Farmer" of November 10, 1930, and in the April 1931 issue of the "Illinois Teacher."

#### HUNTING CLUBS

Contrary to the statement in the May issue of the National Geographic magazine by Wood [2] that "a law in Illinois forbids luring wild ducks with food," such legislation has never been passed, as a study of the state game law will reveal. The putting out of shelled corn in fields or in the Illinois River bottoms is commonly practiced, the method being to fill a boat full of shelled corn and anchor it to a tree in the evening. During the night the ducks sometimes come in in sufficient numbers to eat all of the corn in the boat, so that in the morning the boat floats in the water.

According to records in the office of the State Department of Conservation there were 440 hunting clubs licensed in the state in 1930, each club paying a ten dollar license fee. Our estimate is that 303 of these are located along the Illinois River or in contiguous territory, in about 19 counties extending from LaSalle to Madison County. Mason County leads with 89, Havana being a center for sportsmen; Cass is next with 38, Beardstown being a hunters' rendezvous; Marshall has 38 clubs, Putnam 29, Woodford 20 and Calhoun 18. Each gun club is required by law to keep an account of the number and species in the daily kill made by members and others at the club and to send this report in to the office of the Conservation Department, but such records are far from complete so that the total kill of ducks on the Illinois River can be only an estimate.

## EFFECT OF LOW WATER IN 1930

Although for several summers prior to 1930 the high water in Illinois River had killed many trees, even the pecan, cottonwood, and willow, the summer of 1930 was characterized by very low water levels. According to one of your speakers there was only 20 inches of rainfall at Peoria, which is the lowest in 80 years. This has affected unfavorably the growth of trees over the state, actually killing a great many and slowing up the growth of those that remained alive. What was true of trees has also been true of the growth of fishes, if authorities can predict correctly. Adams [2] says, "It has long been known that by making a study of the scales of fish, it is possible not only to determine the exact age of the individual but also to learn something of the conditions under which it developed. If the rings, or annuli, are close together, with small spaces between them in a certain part of the scale we can infer that the conditions were not favorable to growth during the period when the part was added."

Several hunting clubs did not do any shooting at all in 1930 on account of the low water in Illinois, one man saying that it would have taken an increase of four and one-half feet of water to make the proper conditions at their club.

## COMMERCIAL FISHING

The value of the commercial fishing in the Illinois River can be calculated better by others here present but if I am not mistaken, it was once estimated at well over \$2,000,000 yearly. In addition to this there are pearl and mussel fisheries and the value of the pearl button blanks made from shells at several points on the Illinois River. Certain stretches of the river are closed to mussel fishing in order that the stock may have a chance to recover, which is in the interest of both the state and the mussel fishermen.

## CONSERVATION MEASURES

All the values I have mentioned could be greatly augmented by proper conservation measures, such as the prevention of stream pollution and closer observance of the fishing and hunting laws. Under the advice and help of the Sanitary Water Board, many of the cities along the Illinois, including the city of Chicago, are making efforts to treat their sewage so that in time only purified water will be returned to the stream. When that time comes, as we confidently believe it will, the Illinois will return to its own in the way of transportation, hunting,

fishing, and recreation, all matters of land utilization will have been worked out for the highest interest of land owners and the state, and there will be no need of a half day of discussion showing what is needed to be done but a full day to show what has been accomplished by the various agencies represented here today.

#### REFERENCES

- [1] WOOD, JUNIUS B., Illinois Crossroads of the Continent, with illustrations from photographs by Clifton Adams, staff photographer, and a special map supplement of Illinois, The National Geographic Magazine, Vol. LIX, No. 5. May, 1931, pp. 523-594, Washington, D. C.
- [2] ADAMS, L. A., Transactions of the Illinois State Academy of Science, Vol. 23, No. 3, March, 1931.