

## KIRTLAND'S WARBLER MANAGEMENT in MICHIGAN

Through the instigation and insistance of a group of men from the Audubon Society and the cooperation of the Forestry and Game Divisions of Michigan and the approval of the Michigan Conservation Commission, three Kirtland Warbler management units were set up and are now in operation. Messrs. Mayfield, Dockham, Berger, Holden and others felt that this bird's habitat was disappearing rapidly and the State and Federal Forest and Game Agencies should consider setting aside areas for its management and preservation.

Setting aside, developing and managing areas for this Warbler presented problems: Namely, how can the proper interspersion of openings and various densities of jackpine be arranged in an area of sufficient size for the production of Kirtland's Warbler and at the same time have entire unit managed on a forestry practice basis.

It was decided that several areas, in different counties, in different habitat, under different Foresters would provide better chances for success and provide more information for future use.

People who met with the Michigan Conservation Commission felt the Commission indicated they would be receptive toward the approval of several areas.

Members of Audubon Committee in cooperation with Game Division agreed that a minimum of 80 acres is necessary to maintain a suitable habitat for a colony of birds at any time.

In order to maintain these areas from a Forest management basis, several square miles of land were included in each unit. Larger areas of land in a unit would assure more than a minimum area of Warbler habitat and allow different parts of unit to be in varying stages, ranging from openings to merchantable trees and would least modify accepted forest management practices. Setting aside smaller areas would require constant management to maintain habitat and Foresters would never harvest a merchantable crop of trees.

Game Division feels that creating and maintaining Kirtland's Warbler units will also benefit deer and some small game.

Kirtland's Warbler management areas were picked from three counties, Crawford, Oscoda and Ogemaw. These would be under the jurisdiction of three different Foresters but in one Game management unit. These are well within the high population area of Warblers and on soil and in forest cover that has been the most productive of Kirtland's Warbler in the past.

The following areas were chosen as being the best possibilities for Warbler management.

1. Section 21, 22, 27, and 28, T24N, R1E, Ogemaw County.

This is part of the Horseshoe Lake burn of 1946 and

much of the area was coming into Warbler habitat.

It is seven miles by road from the old Ogemaw Refuge.

Two singing males were present at this time.

2. Section 12, 13, and 14, T27N, R1E, Oscoda County, about one mile north of the settlement of Red. Oak. In the past this was a highly productive area but today is largely a stand of dense jackpines of older age classes. Management requirements here are severe disturbance of the overstory through cutting and burning to produce suitable habitat.
3. Section 5, 6, 7, and 8, T28N, R1W, Crawford County, about one and one-half miles north of Lovells. This is now largely open and needs planting to be suitable. There was a singing male in the scattered clumps of jackpine. Area is largely open and needs planting.

#### Management: Unit One

In the spring of 1958, 112,000 jackpine seedling were planted in the North half of Section 27, T24N, R1E. The planting was at the rate of 1800 trees per acre. Planting was made in rows 6' apart and not over 4' between trees. To maintain openings plantings were made in groups of 10 rows and skipping 15 rows. In addition two small areas were planted with red pine and white spruce.

#### Management: Unit Two

In 1961 one 40 acre description was harvested of all merchantable forest products.

Management: Unit Three

In the spring of 1958, 122,400 jackpine seedlings were planted in the east half of Section 5, T28N, R1W. They were planted and spaced at the same rate as in Unit One, except that plantings were made in rows to conform to the edge of the present stand. These rows were irregular in shape and not in straight lines as in Unit One. As a result of a 40 acre burn in 1961 this was replanted.

John Eyelich  
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122,400  
112  
234,400