

Oct. 31, 1972

Draft Recovery Plan
for the
Kirtland's Warbler

Prepared by Off. of Endangered Species and
Recreational Activities
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Prime objective: To restore the Kirtland's warbler to non-endangered status in its native habitat.

1. To provide adequate breeding habitat to support a non-endangered population of Kirtland's warblers.

11. Determine parameters of non-endangered population.

111. Estimate numbers of individuals in a non-endangered population.

112. Determine desirable distribution of a restored population.

1121. Determine historical range of the Kirtland's warbler.

1122. Identify that part of the historical range suitable for restoration of warbler habitat.

113. Determine number of separate breeding populations that would constitute a non-endangered population.

114. Determine where separate breeding populations should be located.

12. Determine number of acres of jack pine habitat needed at each site.

121. Determine amount of breeding habitat required to maintain each population prescribed in 11.

1211. Select three habitat sites with breeding populations of warblers--each site of different age jack pine.

1212. Determine amount of habitat--a factor of acreage and density of trees.

1213. Determine number of breeding pairs present at height of breeding season.

1214. Determine production per breeding pair with cowbird parasitism of x percent.

122. Determine likely growth rate of jack pines at each site.
123. Determine succession of jack pines required acreage of breeding habitat each year.
13. Dedicate identified sites and acreages to Kirtland's warbler management and indicate primary or secondary management level.
 131. Adopt management agreement for those sites already in public ownership and designate for primary management.
 132. Acquire sites not now in public ownership.
 1321. Complete land acquisition for primary management.
 1322. Acquire lands for secondary management.
14. Management primary habitat sites for annual production of y birds.
 141. For each site, determine number of separate plantings of jack pine required to have necessary acreage of optimum breeding habitat available each year.
 142. Identify suitable age jack pine stands already available on site.
 143. Clear required acreage for first jack pine habitat stand.
 1431. Remove marketable timber.
 1432. Clear adequate fire lane.
 1433. Burn remainder.
 14331. Station and man fire suppression equipment.
 - 14332.
144. Plant jack pine seedlings.
 1441. Produce jack pine seedlings in nursery.

1442. Harvest seedlings.
1443. Put seedlings in ground.
145. Thin jack pine stand to suitable density.
1451. Determine suitable density for optimum production of warblers.
1452. Determine optimum time and frequency of thinning.
2. Control cowbird parasitism so that no more than x percent of warbler nests are parasitized.
21. Construct one cowbird trap per 10 acres of breeding habitat on selected management sites.
22. Maintain traps in operation during period from June 1 to end of warbler hatching.
23. Monitor degree of parasitism in nests on each site.
231. Design parasitism survey to provide for minimum disturbance of nesting warblers.
232. Gather data to fit design.
24. If level of parasitism is above prescribed level, increase number of traps immediately.
25. If level of parasitism is below prescribed level, reduce trapping accordingly next season.
3. Protect nesting warblers from all unnecessary disturbance.
31. Prevent unrestricted access to breeding habitat.
311. Post informational signs around periphery of management sites.
312. Provide information to the interested and curious public.
3121. Build information stations.
3122. Distribute informational brochures.

32. Establish system of permits and clearance for scientists to do study in management areas.
33. Carefully assess disturbance resulting from all management under this plan.
4. Monitor population trends in the Michigan breeding area based on singing male survey.
 41. Design survey.
 42. Assemble resources.
 421. Recruit help.
 422. Train participants to identify singing male Kirtland's warblers.
 43. Conduct survey.
 44. Analyze resulting data.
5. Identify factors in wintering range that might threaten survival of the warbler.
 51. Determine wintering range of warbler.
 52. Determine cover requirements.
 53. Determine food requirements.