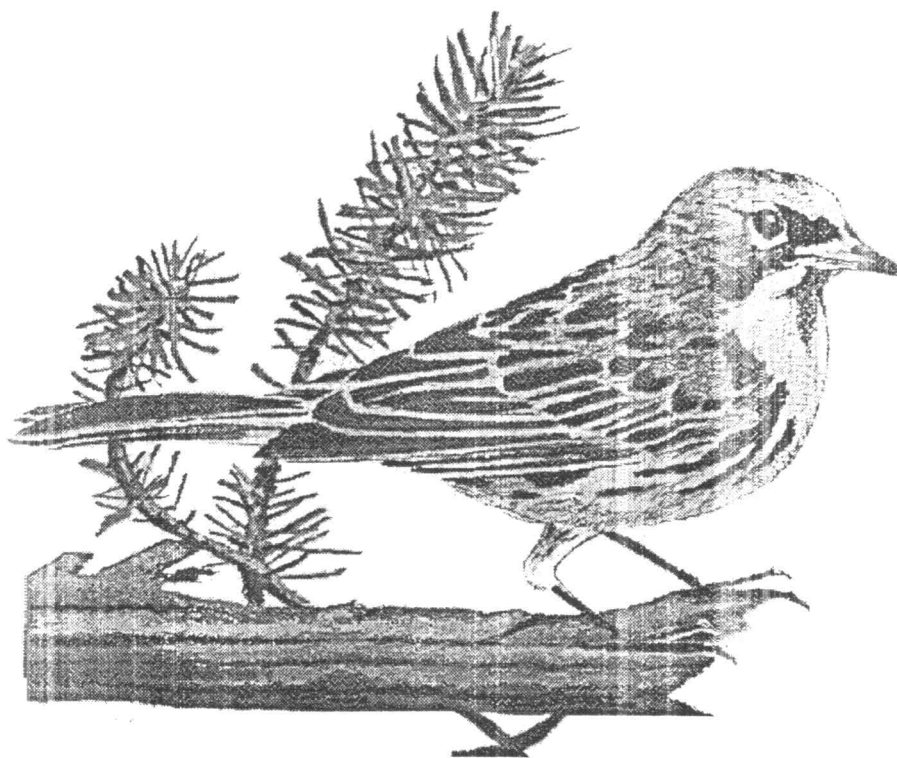


**KIRTLAND'S WARBLER  
SUMMARY of RECOVERY EFFORTS**

**FY1995**



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The Kirtland's warbler, one of our nation's rarest songbirds was one of the first species to be placed on the endangered species list in 1973. This highly specialized blue and yellow sparrow sized bird nests no where in the world but northern Michigan. The warbler prefers stands of jack pine trees 6 to 20 years old, which are the natural result of forest fires. Modern forest fire suppression, necessary to protect human life and property, prevents natural regeneration. Intensive management of the forest lands in Michigan is necessary to provide sufficient breeding habitat for this bird. Since 1971, a cooperative effort between the U.S. Fish and Wildlife Service (Service), U.S. Forest Service (USFS), Michigan Department of Natural Resources (MDNR) and the Michigan Audubon Society has existed to ensure the future of the Kirtland's warbler. Department of Interior recovery efforts include cowbird control, research monitoring, habitat management and an education and outreach program for the local communities that are situated in and around the Kirtland's warbler nesting area. This report will summarize the recovery efforts the four cooperative agencies carried out during fiscal year 1995 (FY95). The East Lansing Field Office received \$100,000 in FY95 to carry out activities relating to the recovery of the Kirtland's warbler. The approximate cost of project efforts are given when they could be obtained.

## HABITAT MANAGEMENT

There are approximately 134,000 acres of jack pine stands designated for Kirtland's warbler nesting habitat on 24 management areas within state and federal lands. The management areas consist of 53,488 acres in the Huron-Manistee National Forest, 74,143 acres within the AuSable, Mackinac, and Pere Marquette State Forests, and 6,500 acres of U.S. Fish and Wildlife Service land interspersed throughout the state forest areas. These areas are considered essential habitat and are being managed to provide a sustained, even flow of suitable nesting habitat. Management of warbler habitat consists of logging, burning, and planting designated tracts of land on a rotational basis to provide 36,000 to 40,000 acres of productive nesting habitat at all times.

The MDNR received \$117,000 in Section 6 funds in FY95 from the Service. This money was used to help cover the cost of creating habitat for the Kirtland's warbler such as purchasing jack pine seedlings, maintaining tree planting equipment, and hiring short-term workers to work on tree planting crews. The MDNR's Division of Wildlife planted 1,814,000 trees on 1,420 acres of state forestlands designated as Kirtland's warbler management areas (KWMA). Contractors hand planted an additional 31,000 fill-in trees in management areas as well. In FY95, the USFS will have planted 1,475,339 jack pine trees on 2,187 acres. On Service lands, managed by Seney National Wildlife Refuge, a total of 90 acres were planted in FY95. Seney



National Wildlife Refuge received \$4,000 in FY95 through Region 3's endangered species discretionary funds to be used for habitat management.

## **COWBIRD CONTROL**

Brown-headed cowbirds, obligate nest parasites were reducing warbler annual production to less than one young per pair in 1971. Cowbirds return each year in diminished numbers to warbler nesting areas where they are trapped and removed by East Lansing Field Office biologists. Survival of the Kirtland's warbler is unlikely without cowbird control. Sixty-six cowbird traps, including 11 new ones, were activated during the week of April 17. Of these, one trap had to be completely rebuilt during the trapping season after a tornado destroyed it. The Service contracted with a private individual for the construction of trap panels (\$1,352) that can be assembled on-site by Service personnel. A total of 457 cowbirds (start-up decoys for the cowbird traps) were trapped during March and early April in Sandusky, Ohio at the U.S. Department of Agriculture's (USDA) Animal Damage Control research facility. The Service provided food for the birds during this time and throughout the trapping season white millet was placed in each trap to attract cowbirds and to feed decoys (\$1,034). Miscellaneous supplies purchased (\$315) included wood and screening to build 17 seed trays, buckets, tools, staples, and tape.

Four temporary employees, three cowbird trappers and one supervisor, were hired during the trapping season of April 17 - June 30. Two employees were brought on early to assist permanent staff with pre-season activities (\$42,661). Travel expenses during the trapping season were \$4,520. Another \$13,171 was used to cover partial salaries of other permanent staff.

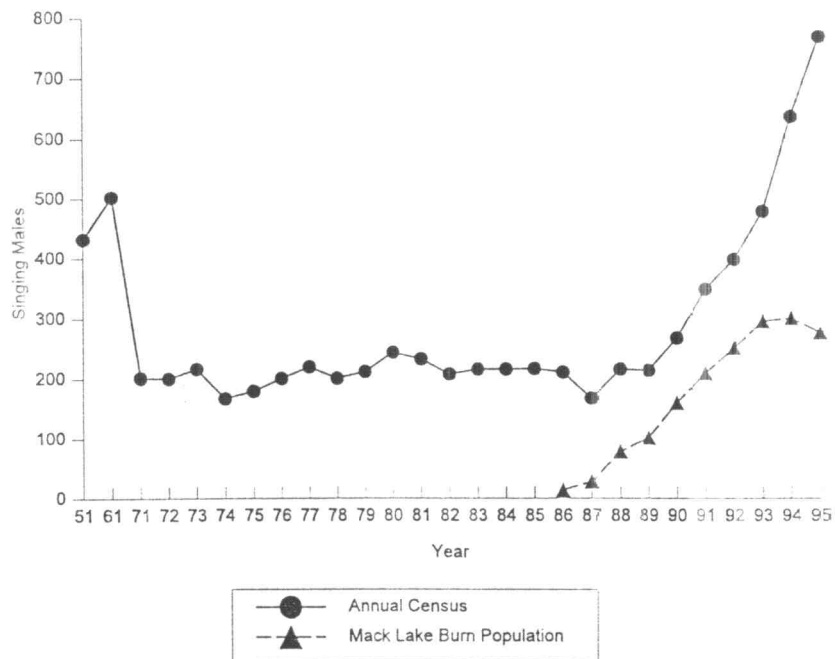
Six vehicles were used to carry out cowbird control activities in FY95. A total of 64,643 miles were accumulated on the six project vehicles throughout FY95. Of these, 56,643 miles were accumulated during the trapping season. To keep these vehicles in operating condition, funds were used for gas (\$2,985) and vehicle maintenance (\$1,747). A new mid-size Dodge Dakota pick-up 4X4 was purchased (\$19,000) to replace an older vehicle with 100,000+ miles. The Service also contracted with a private individual to have three wooden storage trunks constructed for the three trucks that run the cowbird trap lines (\$643). These trunks are used to hold millet, tools, nets and any other necessary equipment required to perform duties while on trap lines. Six cellular phones were in operation throughout the 11 week season (\$1,193) by each temporary employee for safety and security reasons.

A total of 5,855 cowbirds were captured in 1995 compared to 3011 in 1994. The average annual cowbird catch for 24 years is 4101. Since 1972, 98,427 cowbirds have been removed. Approximately 2,500 frozen cowbirds were shipped to a USDA research station in Denver, Colorado to assist researchers in a blackbird migration study.

## CENSUS

The annual Kirtland's warbler census was June 6 - 15. Service, MDNR, and USFS biologists participated in the census along with volunteers from the Michigan Audubon Society and local communities. The participants counted 757 singing males in the Lower Peninsula which was a 34 year high. This was an increase of 132 (21%) singing males. The Mack Lake Burn habitat continues to provided the largest contribution of singing males (276) to the overall Kirtland's warbler population. In addition, there were 8 males found in three counties in Michigan's Upper Peninsula giving an overall total of 765 males with the first ever recorded sightings of two females in the Upper Peninsula (Fig. 1).

Figure 1. Census of singing male Kirtland's warblers, 1951-1995, with Mack Lake Burn census.



## RESEARCH

Year one of a three year Kirtland's warbler banding project, funded by the Michigan National Guard, began in spring 1995. Lead by National Biological Service biologists and the Service coop unit at Ohio State University, the project is a continuation of the banding program that was cut short in 1992 due to lack of funds. The objective of this banding project is to gather demographic and habitat data of individual warblers in an effort to complete a population model that will simulate the births, deaths, and movements of the entire population with an output of the projected future population trend. In addition, the banding will allow biologists to continue to monitor the movements and distribution of individual birds and how they select habitat. Service biologists invested approximately 860 work hours assisting NBS researchers band 281 birds this year (\$4,787).

Professor Barnes from the University of Michigan's School of Natural Resources and the Environment, supported two graduate students investigating landforms in warbler habitat and how the Kirtland's warbler relate to different landforms. Information on the history of occupancy patterns, soil, climate, and vegetation are being analyzed to allow managers evaluate current habitat productivity and whether or not it is feasible to expand habitat based on landform features. In addition, a graduate student from Ohio State University began a study on the foraging behavior of the warbler.

## PUBLIC AWARENESS

### Tours

In 1995, guided tours to Kirtland's warbler habitat were conducted by the Service twice daily from May 15 - July 4. The Service hired one temporary Biological Technician to give these public tours (\$3,736). Through a cooperative agreement between the Michigan Audubon Society and the Service, a grant of \$1,500 was received from the Audubon Society to help cover the salary of the tour guide. In addition, the Service contracted with D.J. Case and Associates to update the 1989 version of the slide show tour participants view (\$4,784). An ecosystem management approach toward warbler management as well as recent research findings and the increasing population of the warblers is emphasized in the up-dated version of the slide show. The Holiday Inn in Grayling again provided a meeting place for the tours. This Year, 724 participants from 39 states and 8 countries participated in the tours compared to 595 participants last year. The USFS tour was taken by 593 people in 1995 compared to 1,001 in 1994 (Fig. 2).

Figure 2. Approximately 1,317 people, representing 8 countries and 39 states, attended the Kirtland's warbler tours provided by the U.S. Fish and Wildlife Service and the U.S. Forest Service in 1995.



For the second year, the Service and MDNR collaborated on producing a tour information flyer (\$319) that was distributed in tourist highway information centers and to local chamber of commerces and businesses. The Holiday Inn contributed \$200 towards the production of these flyers. A publicity survey given to tour participants indicated that 16% of the 106 people who filled out the survey had learned about the tour from these flyers, 51% from various birding magazines and publications, and 23% by word of mouth.

### **Kirtland's warbler festival**

The Second Annual Kirtland's Warbler Festival was held in Mio June 15 - 18. This years festival was shorter than last years. As a result, the events were focused within just one weekend. Festival events included: a bird watching contest, fishing derby, river clean-up, and an ice cream social. New festival events included: a 5K and 10K run; wildlife presentations on the Kirtland's warbler, bears, and birds of prey. On the weekend, the public was invited to take the auto tour on county buses with interpreters on hand to explain the diversity found in the jack pine ecosystem. Festival organizers do not have an estimate of how many people participated in festival activities but the attendance was not high due to the extreme hot temperatures northern Michigan was experiencing during the festival.

### **Auto Tour**

The 48 mile loop of the jack pine wildlife viewing tour is nearing final completion. Interpretive signs have been completed on seven of the 11 stops. A ribbon cutting ceremony for the ruffed grouse walk site, a stop on the auto tour, took place during the Kirtland's warbler festival. This 3/4 mile loop has five interpretive stops focusing on aspen management, hardwood forests, and the wildlife found there. The Ruffed Grouse Society and matching funds from the National Fish and Wildlife Foundation Fund made this portion of the auto tour possible. Fund raising activities and plans are underway for the start of the 58 mile west loop, the second phase of the jack pine wildlife viewing tour.



Mike DeCapita, Wildlife Biologist, East Lansing Field Office, gave a presentation on Kirtland's warbler tourism projects to the White House Environmental concerns Task Force on Travel and Tourism, July 25, in Washington, D.C. (\$402). The Task Force is a government and industry group convened by the President to develop a comprehensive national tourism strategy. Environmental concerns was one of nine broad categories considered by various task forces prior to the national meeting to be held October 30 - 31, 1995. Mike described the Jack Pine Auto Tour, Kirtland's Warbler festival in Mio, and the regular Kirtland's warbler viewing tours, with particular mention of the Holiday Inn of Grayling involvement.

## PLANS FOR 1996

In 1996, habitat management efforts will continue as they have in the past. Plans include cutting 67 acres, planting 158 acres and selling timber on 735 acres of Service land; planting 1,400 acres (1.5 million trees), 100 acres to timber sales on USFS lands; planting 1,050 acres (1.5 million trees) on MENR lands. Cowbird control efforts are being planned for as well as public tours to warbler habitat by both the Service and USFS. Spring and summer banding activities will continue next year along with the habitat and foraging studies mentioned in the research section of this report. Two recovery team meetings are planned for February, 1996 and July, 1996.