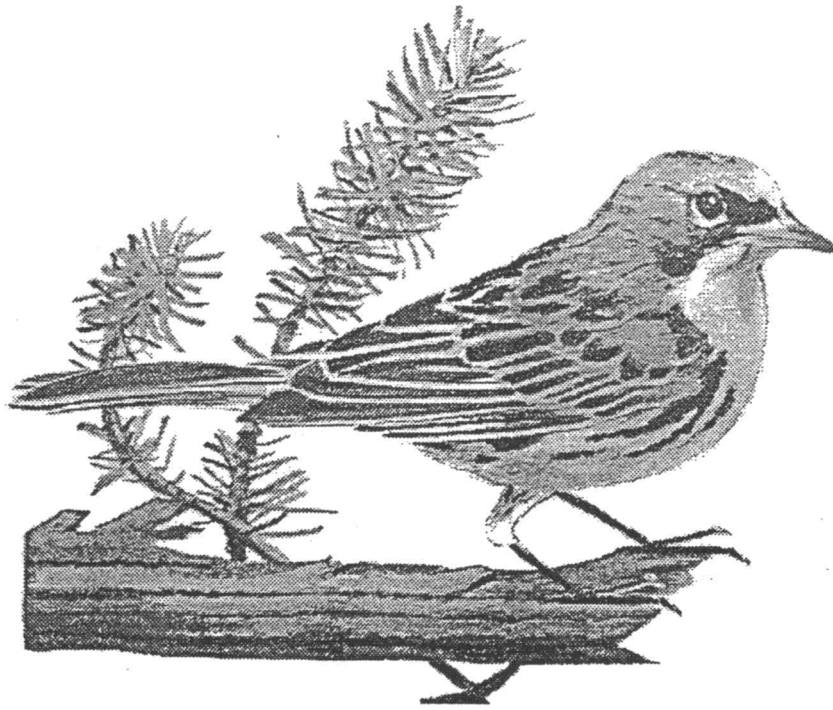


1994 KIRTLAND'S WARBLER SUMMARY



Prepared by:
Laura Mangold & Jean Richter

U.S. Fish and Wildlife Service
East Lansing Field Office
1405 South Harrison Road, Room 302
East Lansing, MI 48823

September 14, 1994

KIRTLAND'S WARBLER 1994 EFFORTS

Since at least 1971, a cooperative effort between the U.S. Fish and Wildlife Service, U.S. Forest Service, Michigan Department of Natural Resources and the Michigan Audubon Society has existed to ensure the future of the Kirtland's warbler. The primary objective of this relationship is to "Reestablish a self-sustaining wild Kirtland's warbler population throughout its known former range at a minimum level of 1,000 pairs." Recovery efforts have included extensive habitat management, cowbird control, research monitoring, and education. This report will briefly review past recovery efforts with an emphasis on 1994 efforts. The approximate cost of FY94 project efforts are given in parentheses when they could be obtained.

Habitat Management

Presently, there are approximately 134,000 acres of jack pine stands designated for Kirtland's warbler nesting habitat on 24 management areas within state and national lands. The management areas consist of 53,488 acres in the Huron-Manistee National Forest, and 74,143 acres within the AuSable, Mackinac, and Pere Marquette State Forests, with 6500 acres of U.S. Fish and Wildlife Service (Service) land interspersed throughout these areas. These areas have been designated as 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 - 40,000 acres of productive nesting habitat at all times.



In 1994, the Michigan Department of Natural Resources (MDNR) wildlife crews planted a total of 2,619,000 trees on 2,026 acres for which Section 6 funds were used. By the end of the year, the U.S. Forest Service (USFS) will have planted 2,937,500 trees on 2350 acres in the Huron-Manistee National Forest. Seney National Wildlife Refuge, which is responsible for the management of Service lands, received \$15,000 from the East Lansing Field Office in FY94. This money was used to purchase a direct seeder, a "V" plow for a bulldozer, anchor chains, and jack pine cones as a seed source (\$5000). In addition, 70 acres were planted on Service lands with a timber sale scheduled to occur this year. The Service also provided a cost share grant of \$9,417

to Trout Unlimited for the purchase and planting of jack pine seedlings on Trout Unlimited property.

Cowbird Control

Fifty-three cowbird traps, including 9 new ones, were activated during the week beginning April 18 (\$1,736.19). Of these, one trap had to be completely, and another partially, rebuilt due to vandal attacks during the non-operational season. Another trap was completely destroyed during the trapping season and was not rebuilt. After the census, three more traps were activated in areas where warblers were not found in recent years, and one was deactivated due to the absence of warblers. A total of 432 start up decoys were collected and held during March and early April at Sandusky, Ohio by U.S. Department of Agriculture, APHIS and Animal Damage Control research biologists. The cowbirds were transported to Northern Michigan by Jean Richter of the Service. USDA-APHIS-ADC has provided this invaluable assistance annually since 1986. Traps were located in 24 Kirtland's warbler nesting areas in 7 counties: Oscoda - 29, Crawford - 9, Ogemaw - 7, Alcona - 3, Iosco - 2, Kalkaska - 1, and Roscommon - 1. Millet and sunflower seeds were placed in each trap to attract cowbirds and to feed the decoys throughout the trapping season (\$983).

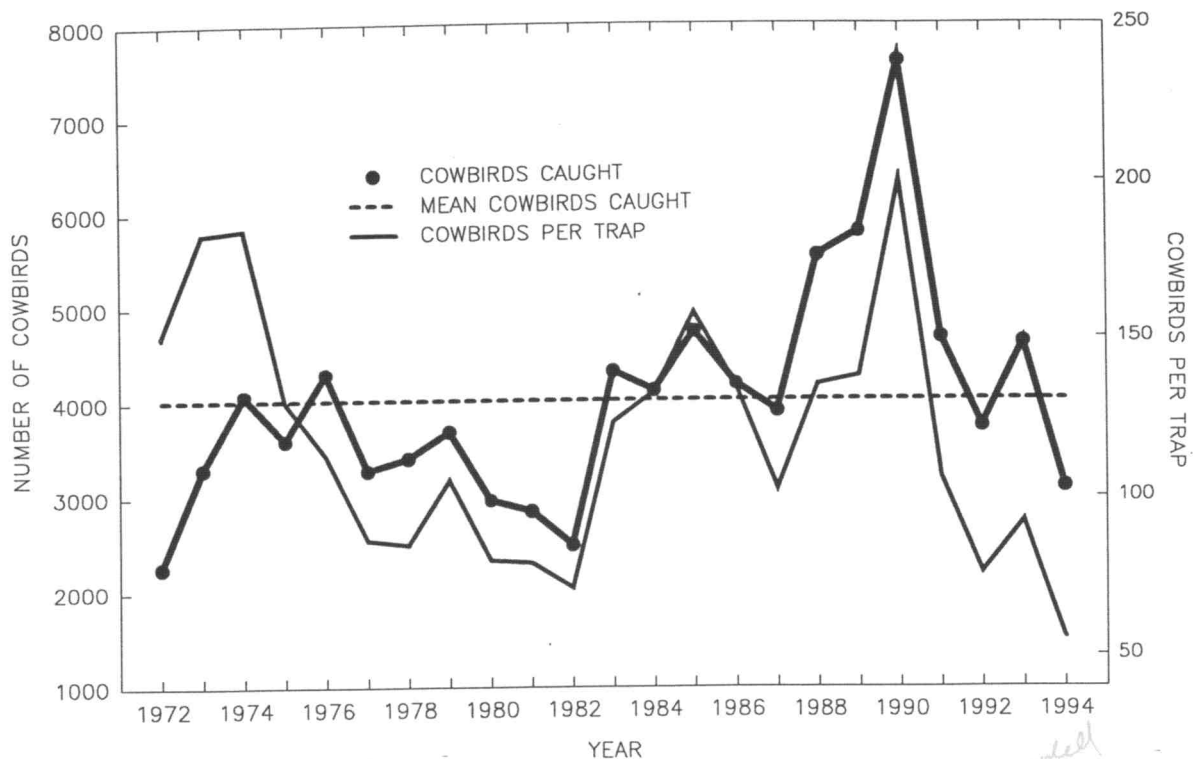
Trap locations were recorded using a Global Positioning System (GPS) for the first time. This information will be used to assist in Kirtland's warbler management and Geographical Information System (GIS) efforts of the USFS. Jean Richter of the Service assisted Phil Huber of the USFS in plotting trap locations.

Six temporary employees, three trappers, one tour guide, one trapper/tour guide, and one supervisor were hired during the trapping season. Total funds used for salaries for the entire season was \$40,722. In addition, \$635 was used for miscellaneous items such as buckets, work gloves, tape, software (\$115), health care (\$785), and postage (\$26).

In 1994, six vehicles were used for the Kirtland's warbler project. Funds were used for gas (\$2,140), travel (\$5,080), and vehicle maintenance (\$1,119). Six cellular phones were also in operation throughout the season (\$1,931).

Three thousand one hundred and nine cowbirds (3,104 adults and 5 juveniles) were captured in traps in 1994, 1,505 (33%) less than in 1993. The average annual cowbird catch for 23 years is 4,025. Since 1972, 92,572 cowbirds have been removed (Fig. 1). This was the first year that the age of male cowbirds was recorded. The number of non target species caught in 1994 was 27, eight more than in 1993.

Figure 1. Total, mean and per trap brown headed cowbirds removed annually, 1972 - 1994, from Northern Michigan Kirtland's warbler nesting areas.

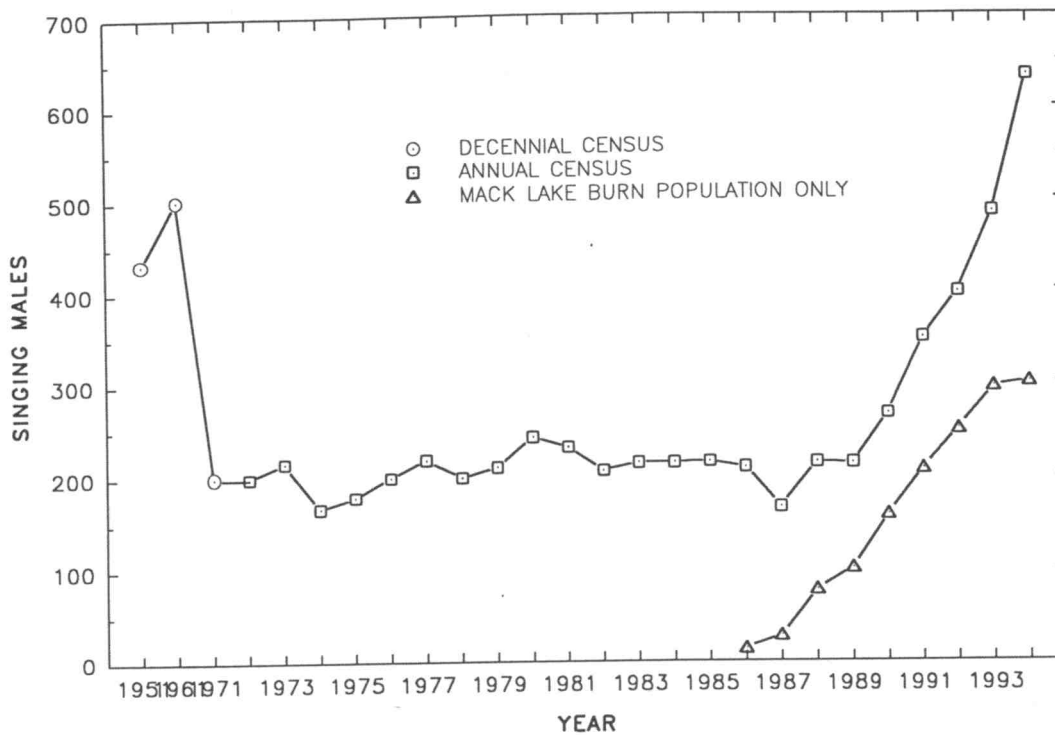


The Kirtland's warbler singing male census increased to a 33 year high indicating that annual cowbird control continues to be effective. Traps are capable of clearing cowbirds from a one mile radius within the Kirtland's nesting area. However, annual cowbird control conducted for 23 years apparently has no effect on the local cowbird population beyond each year. The survival of the Kirtland's warbler will depend on continued annual cowbird control.

Census

The annual Kirtland's warbler census began June 6 and ran through June 10. MDNR, the Service, USFS, Michigan Audubon Society, and a number of volunteers took part in the census. The participants counted 633 singing males in 1994 which was a 33 year high (Fig. 2). This was an increase of 148 singing males (30.5%) over 1993's 32 year high of 485 singing males. The Mack Lake Burn habitat provided the largest contribution to the overall Kirtland's warbler population. Three hundred singing males were counted in this area alone (Fig. 2). Biologists had hoped that the population would exceed the previous record of 485, but few imagined that it would reach 633 this year.

Figure 2. Census of singing male Kirtland's warbler, 1951 - 1994, with Mack Lake Burn census (Michigan Department of Natural Resources data).



*Added in 1992
data analysis*

Research

USFS Research Biologists continued their study on warbler movements, general behavior, and distribution throughout their nesting habitat. In addition, Carol Bocetti, a doctoral candidate at Ohio State University, recently completed her dissertation which focused on investigating the mating systems of the warbler in relation to habitat parameters. Professor Burt Barnes of the University of Michigan's School of Natural Resources is proposing to continue his work studying the dynamics of the jack pine ecosystem. There is currently no research being carried-out on the warbler within the research division of the Service, now the National Biological Survey. Field research by Patuxent Wildlife Research Center biologists was completed in 1992. Their data analysis is currently in progress. A cooperative education student at Ohio State University is currently working on a population model project for the Kirtland's warbler. The Service contributed \$5,000 to this effort.

Funding

The Michigan Audubon Society again gave the Service \$1,500 to assist in paying the salary of a guide to lead public tours to view the Kirtland's warbler. MDNR received

\$130,000 from Section 6 Endangered Species Act funds to assist in the management of the warbler, a noted decrease from the \$175,000 received in 1993.

Public Awareness

Tours

In 1994, guided Kirtland's warbler tours were conducted by the Service twice a day from May 15 to July 4. The Holiday Inn in Grayling provided a meeting place for the tours. This year, 595 participants from 39 states, 2 Canadian provinces and four other countries participated in the tours. Tour attendance decreased 23.2% from 1993. The USFS also conducted daily tours and had approximately 1,001 participants (20 states, 4 countries), which was an 80% increase from 1993 (Fig 3). The decrease in the attendance of the Service tours and the increase in the USFS tours is most likely due to the publicity that the USFS received during the First Annual Kirtland's Warbler Festival.

Figure 3. Approximately 1,596 people, representing 7 countries, attended the Kirtland's warbler tours provided by the U.S. Fish and Wildlife Service and the U.S. Forest Service in 1994.



For the first time this year, leaflets advertising the tours were placed at Michigan Highway Information Centers (\$519). Surveys were conducted during each tour to evaluate how people heard about the tours. This information was used to determine how well the leaflets were publicizing the tours. Out of 85 surveys, only 8 (9%) of the people stated that they learned of the tours through the highway leaflets. Thirty-nine (46%) of the people heard about it through birding magazines and 38 (45%) through "other" sources. An effort will be made to make the leaflets available earlier in the year for the 1995 tour season.

Booklets entitled, "Michigan's Bird of the Jack Pine" were made available at the guided tours conducted by the Service and USFS as well as at MDNR field offices. The MDNR also made a jack pine ecosystem poster available to the public.

Kirtland's Warbler Festival

The First Annual Kirtland's Warbler Festival was held in Mio the week of June 10 - 19. As part of the festivities, the USFS conducted daily Kirtland's warbler tours. Other festivities included: parade, fishing derby, street dance, bird watching contest, AuSable River clean-up, flower garden, wild flower and blue bird tour, and ice cream social.

The highlight of the Festival was a visit by Secretary of Interior, Bruce Babbitt. Mr. Babbitt was guided on a personal tour through the Kirtland's warbler habitat where he was able to view the bird from a few feet. In the afternoon, he gave a speech for the public at the Oscoda County Park followed by a question and answer forum.

Auto Tour

Also as part of the festival, a self-guided Jack Pine Wildlife Viewing Auto Tour was constructed. The auto tour is a 48 mile long habitat-forestry learning experience designed to generate support for, and an understanding of, jack pine management. Large green and white metal tour signs featuring a Kirtland's warbler and a pair of binoculars were erected to mark the auto tour route (\$5,000). The basic tour can be done comfortably in two hours. If the side trips are included however, it takes at least three hours. The tour has eight stops along the route, several of which have scenic overlooks of the AuSable River. This auto tour not only takes one through areas inhabited by Kirtland's warblers, but through a variety of habitats providing opportunities to see many kinds of wildlife including bald eagles, white-tailed deer, bluebirds, and beavers. Expansion of



the tour is schedule to include a 58-mile loop from Wakeley Lake east to Mio. The Auto Tour has received national prominence and will be receiving special recognition this October at the 3rd Annual National Watchable Wildlife Conference in Burlington, Vermont.

Plans for 1995

In 1995, habitat management efforts will continue as they have in the past. Cowbirds will continue to be removed from Kirtland's warbler nesting habitat in the same manner as used in previous years. The age of the male cowbirds will be recorded again in 1995 so that the data can be compared between years. New cowbird trap signs are in the process of being designed for the 1995 season. Also, installing a surveillance camera on a trap that has been vandalized several times in the past is being considered. Guided public tours will also continue as they have in previous years. A recovery team meeting focusing on Kirtland's warbler management is scheduled to be held this February.