

## SUMMARY OF THE 1981 KIRTLAND'S WARBLER TOUR SEASON

The number of visitors attending the Kirtland's Warbler tours in 1981 was 448, down by 136 from 1980's total of 584. This reduction in tour attendance is due in a small part to the fact that the tours ended one week earlier this year than last. However, the average number of visitors per day (total number of visitors divided by the total number of tour days) was 8.78 in 1981, as compared with 10.24 in 1980, showing a decline in visitorship over the entire season. This decline was caused mainly by a reduction in the number of scheduled groups of six people or more. In 1980, several birdwatching groups and school groups attended warbler tours. This year there were fewer birding groups and only four school groups on the tours (Redford High School, Yale School of Forestry, Bloomfield Hills School District, and Univ. of Mich. Biological Station). Even more important was the loss of the Youth Conservation Corps program this year to federal budget cuts. In 1980, six YCC groups attended tours, totaling approximately 100 young people and staff. This year, the absence of YCC groups on warbler tours may account for most of the decline in total number of visitors.

This year warbler watchers came from 26 states, 3 Canadian provinces and one non-North American country, England. Michigan and other midwest states were, predictably, the most heavily represented. The number of visitors from California was disproportionately high, considering the distance they traveled. This reflects, I believe, a high number of birdwatchers per capita in this state. There were three different groups from Great Britain.

My subjective impression is that there were more casual birdwatchers and vacationers on the tours this year and fewer hard-core bird listers than in 1980. This would mean that the warbler tours provided a source of recreation to more people who were visiting the Mio area for other reasons. It would also seem to indicate that more people were introduced to the skill and pleasure of birdwatching this year than were last.

On the following pages, I have included a summary of the 1981 warbler tour visitorship, showing attendance on the 7:00 and 11:00 tours, as well as the number of visitors on week days as opposed to weekends and holidays. I have also listed numbers of visitors (who signed the guest register) by state, province or country. Finally, there is a short script of my typical tour, drawn up for Phil Huber, wildlife technician, who led the tours on June 11, 12 and 13 at 7:00 while I was occupied on the breeding bird and Kirtland's Warbler censuses.

Rita Halbeisen  
1980, 1981 KW Naturalist

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MAY	WEEK DAYS		NUMBER OF VISITORS WEEKENDS & HOLIDAYS	
	total	$\bar{x}$ per day	total	$\bar{x}$ per day
7:00	17	2.13	37	5.29
9:00	50*			
11:00	40	5.00	17	2.43
Total	107	13.38	54	7.71
JUNE				
7:00	35	1.94	40	5.00
11:00	60	3.33	42	5.25
Total	95	5.28	82	10.25
JULY				
7:00	34	5.67	16	4.00
11:00	38	6.33	22	5.50
Total	72	12.00	38	9.50

TOTAL # VISITORS FOR SEASON: 448

AVERAGE NUMBER PER DAY (51 TOUR DAYS): 8.78

\* Redford High School group

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## STATES OF RESIDENCE (Visitors signing guest register)

Arizona	1
California	11
Colorado	3
Connecticut	1
Illinois	11
Indiana	9
Iowa	2
Kansas	2
Louisiana	2
Maryland	3
Massachusetts	7
Michigan	154
Missouri	2
New Hampshire	2
New Jersey	4
New York	7
North Carolina	2
North Dakota	2
Ohio	27
Pennsylvania	5
Texas	1
Utah	3
Virginia	3
Washington	1
West Virginia	1
Wisconsin	2

Ontario	10
Prince Edward Island	2
Quebec	2
England	6

26 STATES

3 PROVINCES

1 FOREIGN COUNTRY (OTHER THAN CANADA)

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## TOUR SCRIPT

Hello. My name is Rita Halbeisen. I'm the Kirtland's Warbler naturalist. I'll be taking you out to look for the warbler this morning, but first I'd like to show you a short film about the bird. Before showing the film, I'd like to point out one error in it. The film suggests that the reason why we do prescribed burning is to pop open the cones on the jack pines to release the seeds. Are all of you familiar with the tree jack pine? (If not, explain how jack pine depends on fire under natural conditions to open its cones... etc.) When the Forest Service does a prescribed burn, the mature trees are harvested first and used for pulpwood. A few trees may be left as seed trees, but the majority are taken out. The slash is left on the ground and the area is then burned. The purpose of the burning is mainly to prepare the site and to encourage the growth of plants like the blueberry, which tend to come in more readily following fire. The warbler nests on the ground, and seems to prefer the blueberry and associated plant species as nesting cover. The jack pines are artificially regenerated by aerial seeding or planting. We will be visiting an area today where warblers are nesting in planted Jack pine. (Said only when taking the tour to Mack Lake).

SHOW THE FILM - Kirtland's Warbler, Bird of Fire (Either before or after the film, the visitors are asked to sign the guest register).

Are there any questions about the film or about the bird? If not, we will be leaving now for the warbler nesting area. It is about a ten mile drive south-east of Mio. (For Muskrat Lake, a thirteen mile drive northwest of town). I will be driving a red pickup truck which you will follow in your own cars. Please wait for me in the parking lot.

## MACK LAKE:

We're about to enter the Mack Lake Kirtland's Warbler Management area. Land was first set aside for the species in this area in 1957. This particular stand (section 3) was prescribed burned and planted in 1967. Warblers first occupied the area in the mid 1970's. It usually takes the warblers about eight years to occupy an area following a natural fire, and around ten years to come into a plantation such as this one. This is because the trees in a planting are usually spaced wider apart than in a naturally regenerated stand. It appears that in order to be attractive to the warbler, the pines must be large enough for the lower branches of adjacent trees to interlace. The warbler nests on the ground, and the presence of dense green pine branches close to the ground seems critical as cover for the nest and young. After the pines reach a height of 16 to 20 feet, the shaded lower branches drop off, and the stand is no longer attractive to the warbler. So the bird occupies a given stand of pines for a very short time, usually 10 or 12 years. Under natural conditions, it depends on fire to open up another stand and create the conditions favorable to its nesting.

(This narrative was usually given in parts, either while waiting for a warbler to appear or after sighting one, or both.)

It is important to leave openings in planted stands, such as those that occur in stands of natural fire origin. You notice that the trees on the edge of this opening have retained their lower branches, whereas the ones in the shaded interior of the stand are already beginning to lose their lower branches.

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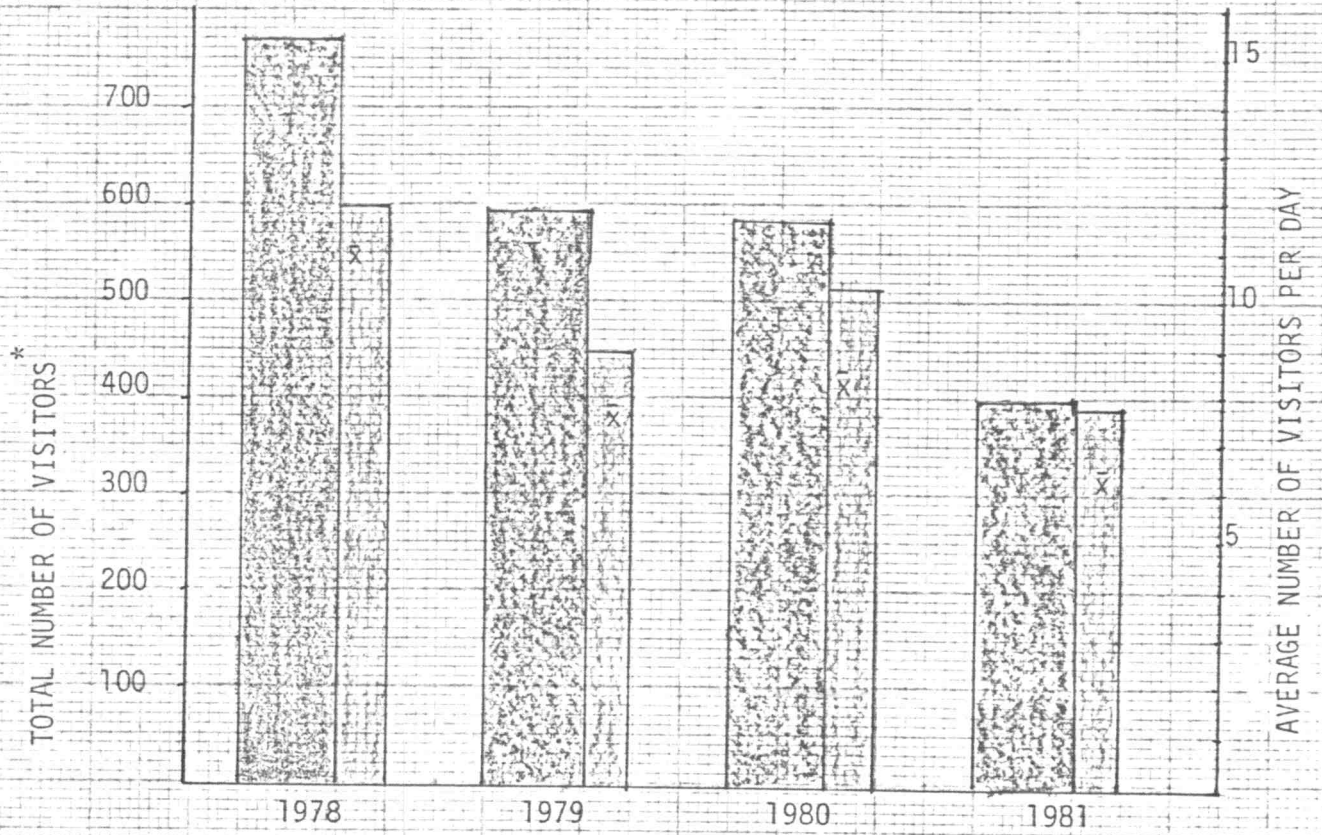
Openings scattered throughout the stand allow the sunlight to penetrate on the lower branches of the trees and these branches are retained longer. This is probably why we often find the warbler nesting under the trees which are closest to the openings. The rows of trees in this plantation follow what is called the opposing wave pattern, leaving a series of hour-glass shaped openings in the stand.

## COWBIRD TRAP

This is one of the 36 cowbird traps that are located throughout the active warbler nesting habitat. There are four of these traps in the roughly two square miles which comprise the Mack Lake management area. (3 at Muskrat Lk). The traps are operated by the U.S. Fish and Wildlife Service, and checked on a daily basis. Each trap attracts cowbirds from about a mile radius. In order to catch the birds which have come into the trap, the trapper first hangs a smaller holding cage on these nails here, and lifts this piece of sheet metal so that the small cage and the big trap are connected. I'll step inside for a moment to show you how the birds get in. They drop down through this larger mesh, but they cannot fly back up through the narrow opening. They are attracted to the trap by the sunflower seed kept here and also by decoy cowbirds, which stay in the trap all of the time to lure others. Cowbirds, like other blackbirds, tend to flock with members of their own kind. The cowbirds you see in here now are mostly decoys. If you look closely, you may be able to see that each one is wearing either a metal leg band or a wing tag, to indicate to the trapper that it is a bird which remains in the trap all the time. If there were birds in here that I wanted to catch, I would walk around the trap waving my arms and shoo them into this corral made of chicken wire. The corral acts to funnel the birds down to the small holding cage. Then they would be in a small enclosure where I could handle them more easily. At this point, Blue Jays and other non-cowbird species are banded and released. The cowbirds are destroyed. In the beginning, they were removed about fifty miles away and released, but they returned, sometimes to the same traps.

The trapping program has been immensely successful. It was started in 1972, after biologists noted a 60% decline in the number of breeding pairs of warblers in ten years. The warbler used to be counted only every ten years. In 1961, there were about 500 singing males counted, but in 1971 only 200 were found. At this same time, it was found that about two thirds of the warbler nests had one or more cowbird eggs in them. So the warblers were spending a lot of time and energy raising young cowbirds, and were bringing off less than one young warbler, on the average, per nest. After the cowbird trapping program began, the proportion of parasitized nests dropped to 6%, and the warbler fledging success increased to more than three young per nest, on the average. In recent years, no cowbird eggs have been found in any of the warbler nests checked. Because of cowbird trapping, many more young warblers are leaving Michigan for the Bahamas each fall. Yet the number of nesting warblers has increased only slightly in the past ten years. Since the warbler breeds when it is one year of age, it was expected that many of the birds produced as a result of cowbird trapping would return the following year to join and augment the nesting population. This has not happened. Some people believe that some factor on the wintering grounds in the Bahamas must be decreasing the population, thus offsetting the increase in numbers resulting from cowbird trapping. It is my opinion, however, that the warblers are probably surviving at the same rate as before, and some may be returning to Michigan. But there is simply not enough acreage of suitable jack pine stands here for all of them to establish territories and breed. Each pair of Kirtland's Warblers defends, on the average, 8 acres.

This is more than twice as large as the territory of any other warbler species that has been studied. So they do not pack very tightly into the available space. Many warblers may be spreading out to places where people are not looking so carefully for them. Singing male Kirtland's have been found outside of the central nesting area in Michigan in recent years. In 1977 and 1978 they were found in Ontario, in 1978 in Quebec, and in 1978, 1979 and 1981 in Wisconsin. Thus it seems that cowbird trapping is not the single answer to the problem of saving this species. There must also be more jack pine stands in the right age class to provide ample nesting habitat. In about 1988, some of the area which was burned last spring should have grown up to be suitable as warbler nesting habitat. At this time, we will probably see an increase in the number of breeding warblers censused.



\*Does not include 50 students from Redford High School