

1966 Preliminary Account of an Attempt to Reduce
Cowbird Parasitism at the Kirtland's Warbler Management
Area, Huron National Forest.

(A report to the U. S. Forest Service)

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INTRODUCTION

The basic aims and objectives of the study, the methods, and the area studied were essentially the same as in 1966 as stated in my 1965 report. However, trapping was used a great deal more than last year and the shotgun was used less. The Forest Service at Mio constructed a second 20 x 20 foot trap for me to use as shown in the revised map of the shooting and trapping stations in the Management Area (Figure 1).

As stated in his 1966 report, Bruce Radabaugh continued his study of the Kirtland's Warbler nesting success on the Management Area. He also extended his study to west of Mack Lake (out of the range of cowbird control). Likewise, I made an additional study of Kirtland's Warbler nesting success (and success of associated species) at a Kirtland's Warbler Area managed by the Michigan Department of Conservation where no cowbirds were removed. This area is in Ogemaw County thirty miles southwest of Mack Lake and covers approximately 640 acres. Also, in a barnyard approximately seven miles west of Mack Lake I trapped, banded, paint marked, and released 74 cowbirds to determine whether any would appear in the Mack Lake traps.

SHOOTING

Since trapping has proved more efficient than shooting, this year's shooting was restricted to late April and early May and was done to compare with the peak shooting period of 1965. Eighty birds (51 males and 29 females) were shot (see Table 1 as compared with Table 1 in the 1965 report).

TRAPPING

The two traps used this year were placed in Sections 1 and 3 on the north edge of the Kirtland's warbler nesting area (the 1946 burn) and were one and

one-half miles apart (Figure 1). From May 3 to July 23, I trapped 699 cowbirds (396 males, 183 females, and 120 juveniles). Of these, 564 were killed. Late in the season, the additional 135 were banded and released for potential recapture next year to attempt to determine whether the summer birds are local or migrant individuals (Table 2).

KIRTLAND'S WARBLER NESTING SUCCESS

Bruce Radabaugh has reported to the Forest Service on his excellent studies of the nesting success of the warbler on the Kirtland's Warbler Management Area. A brief summary of some high points of his work (Table 2) shows a great decrease in cowbird parasitism in 1965 and 1966 (the cowbird control years) as compared with the two previous years. Conversely, there has been a very striking increase in Kirtland's warbler nesting success (60 warblers fledged this year) and no cowbirds have survived to the fledging stage. Of 21 nests he found this year, only 1 (4.8%) was parasitized.

AREAS WHERE COWBIRDS NOT REMOVED (1966)

In the area west of Mack Lake, the Radabaughs found 14 nests of which 10 (71.4%) were parasitized. Likewise, at the Ogemaw County Area I found extremely heavy parasitism. Of 29 Kirtland's Warbler nests found there, in all stages of development, 25 (86.2%) were parasitized. Only two warblers and 14 cowbirds fledged from the 29 nests. The total nests and total nest contents throughout the season are illustrated in Figure 2.

Table 1
by shooting

Brown-headed Cowbird Kills at Kirtland's Warbler Management Area
April 24-May 7, 1986

Date	Apr. 24*		30		May 1		2		3		6		7		Totals by sex		Totals	Totals
Shooting Station	#1		#3		#3		#6		#2		#6 and walking		#7					
Time (AM)	5:45-9:00		5:20-10:20		5:30-9:30		5:30-9:30		5:30-9:30		5:30-9:30		5:30-8:30					
No. of Hours	3.25		5		4		4		4		4		3					
Sex	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀		
1st Hour	—	3	2	—	2	7	3	3	3	—	1	—	1	1	10	14	24	3.5
2nd Hour	—	1	5	2	4	2	5	1	4	—	1	1	1	1	20	8	28	4.0
3rd hour	1	—	5	1	—	2	1	—	—	—	—	—	—	—	7	3	10	1.5
4th Hour			6	2	1	—	2	—	—	—	—	—	—	—	9	2	11	2.2
5th hour			5	2											5	2	7	2.
Totals by sex	1	4	23	7	7	11	11	4	5		2	1	2	2	51	29	80	
Totals	5		30		18		15		5		3		4					
Totals per hour	1.5		6		4.5		3.8		1.3		.8		1.3					

*Considerable tape recorder technical difficulties. Possibly a poor comparison with 1965 on this date.

TABLE 2
1966. Brown-headed Cowbird Trapping
at the Kirtland's Warbler Management Area, Mio, Michigan

Dates (5-day intervals)	Trap # 2 (baited May 3)			Trap #3 (baited May 8)			Totals
	♂♂	♀♀	juveniles	♂♂	♀♀	juveniles	
May 3-7	20	13					33
May 8-12	29	31		27	19		106
May 13-17	29	22		24	26		101
May 18-22	6	1		18	9		34
May 23-27	8	2		12	0		22
May 28-June 1	6	1		3	1		11
June 2-6	26	2		15	5		48
June 7-11	8	0		6	1		15
June 12-16	14	1		2	2		19
June 17-21	12	1		3	0		15
June 22-26	14	1		10	1		26
June 27-July 1	16	1		23	0		40
July 2-6	17	1		13	6		37
July 7-11	19	3		5	6	2	35
July 12-16	88	9	17	3	14	13	64
July 17-21	0	2	37	1	2	20	62
July 22-23	0	0	24	0	0	7	31
Totals	232	91	78	164	92	42	699
Banded*	31	9	38	20	17	20	135
Killed	201	82	40	144	75	22	564**

* Banded and released late in the season to check recaptures in 1967.

** 80 additional birds were killed by shooting April 22 to May 7.

Table 3

Summary of Kirtland's Warbler Nests and Cowbird
Parasitism 1963-66 (Bruce Radabaugh data)

	Kw singing males	No. nests	No. Nests parasitized by cowbirds	Total cowbirds fledged	Minimum total Kirtland's fledged
1963	35	13	7 (54%)		15
1964	34	24*	17 (71%)	12	17**
1965	26	21	4 (19%)	0	30***
1966	20	21	1 (4.8%)	0	60****

* Five of these "nests" were fledged broods when found (6 cowbird young, 4 KW young). If these fledged broods are disregarded in the totals, then 12 (63%) of 19 nests were parasitized.

** Minimum 17, maximum 20 fledglings.

*** Minimum 30, maximum 42 fledglings.

**** Minimum 60, maximum 63 fledglings.

