

1979 Kirtland's Warbler Slide-tape Presentation

① What do the "endangered" sound like?

To some, the endangered voice is the howl of the timber wolf.

(Insert howl). To others, it is the scream^③ of our national symbol - the bald eagle. (Insert scream). And yet to others, it is the sound of what

④ may be our rarest songbird - the Kirtland's warbler.^⑤ (Insert warbler song).

20 wolf

25 eagle

30 KW

But like a man whistling in the dark, the cheerful melody of the warbler belies its precarious position - for the Kirtland's warbler perches on the brink of extinction.

⑥ The Kirtland's warbler was first described in 1851 from a migrant collected near Cleveland, Ohio and named^⑦ for the noted Ohio naturalist, Dr. Jared P. Kirtland. Collections in the 1880's^⑧ established the Bahamas as the wintering ground; in fact, no birds have been found wintering elsewhere. The nesting grounds^⑨ were not discovered until 1903 by a trout fisherman on the Au Sable River. All nests found^⑩ since then have been located in just 12 counties in northern lower Michigan within 60 miles of the first discovery.

⑪ An important reason for the bird's current endangered^{STATUS} is its narrow nesting habitat requirements. Nesting generally occurs only in large stands of Christmas-tree-sized jack pine^⑫. The jack pine stand must be dense enough so that the lower branches interlock and reach the ground,^⑬ yet must be interspersed with small openings.^⑭ Dense ground cover, mainly grasses and low shrubs, hides the nest. Nearly all nests have been^⑮ found on porous, infertile soils called "Grayling Sand". In

Michigan, dense jack pine growth is closely associated with this type of soil.

⁽¹⁶⁾ Jack pine seed cones usually remained closed & dormant until, like popcorn, they are opened by fire.⁽¹⁷⁾ The seeds are then released to quickly germinate in the bare soil. In this way, wildfires have historically regenerated the nesting habitat critical to the warbler. Like the legendary Phoenix that arose from the ashes, the Kirtland's warbler is so dependent on fire that it has been called the "Bird of Fire". Ironically, the success of modern forest fire control has been a detrimental factor to the warbler.

⁽²¹⁾ A few wildfires still occur, but they are usually kept to small size.

Modern forest management,⁽²²⁾ including controlled burning and planting are now used to provide the necessary habitat. (PAUSE)⁽²³⁾

⁽²⁴⁾ On arrival at the nesting grounds around May 12, the male warbler establishes a territory which he vigorously defends against other males. About ¹⁶ 32 acres are required for each pair.⁽²⁵⁾ These territories are usually clumped together and are often referred to as colonies.

⁽²⁶⁾ The nest, constructed by the female in late May or early June, is embedded in the ground and concealed by overhanging vegetation. An average clutch of 5 eggs is laid by mid-June.⁽²⁷⁾ Incubation, performed mostly by the female, takes 14 or 15 days.⁽²⁸⁾ During this time, the male carries food to his mate. Nestlings,⁽²⁹⁾ fed by both parents, fledge in about 9 days.⁽³⁰⁾ Renesting may occur in cases of nest destruction or failure, or when the nest is completed early. In this case,⁽³¹⁾ the male continues to feed fledglings of the 1st brood while the female incubates the second clutch.⁽³²⁾ Migration begins in late August and most birds have left the nesting area by September 15.

⁽³³⁾ The Kirtland's warbler has never been numerous in historic times. It probably flourished during the advance and early of the Wisconsin glacier,⁽³⁴⁾ when the jack pine belt extended much further south than it does now. At the end of the 19th century, a temporary increase did occur. Nesting habitat⁽³⁵⁾ was at a peak then due to the fires that raged across northern Michigan from the extensive logging operations.

⁽³⁶⁾ Getting an accurate count of songbird populations is generally impossible. However, a direct count of adult male warblers ^{is attempted} (can be made). These are reasonably accurate because of the specific habitat type, colonial nesting behavior,⁽³⁷⁾ the persistent distinctive singing of the territorial males. (Insert song). The first census was made in 1951 when ³ 452 (sic)* males were counted. ~~(One female is assumed for every male, so the count is doubled to obtain the total population.)~~ ^{A DECADE LATER, ANOTHER⁽³⁸⁾ CENSUS WAS MADE, AND THAT} A second census in 1961 resulted in a count of 502 singing males.

However,⁽³⁹⁾ ornithologists noticed that serious problems were developing. Modern forest fire control was reducing habitat⁽⁴⁰⁾ and the brown-headed cowbird, a nest parasite, was preying heavily on the Kirtland's. The worst fears were realized in 1971⁽⁴¹⁾ when the census revealed a 60% decline to only 201 males.

⁽⁴²⁾ An emergency meeting was held by concerned individuals and representatives of the Forest Service, Fish and Wildlife Service, Michigan Department of Natural Resources and Michigan Audubon Society. This committee, later to become the Kirtland's Warbler Recovery Team, concluded that habitat acquisition and management would be insufficient to meet the crisis.⁽⁴³⁾ The cowbird was the immediate problem.

*The '51 census was 432, not 452.

(49) Originally a bird of the short-grass prairies, the cowbird expanded its range northward in the late 1880's when logging and farming opened the forests. In Michigan, the cowbird came into contact with the Kirtland's warbler, a suitable host that never had evolved natural defenses against nest parasitism. (50) The female cowbird lays her eggs in the nests of other birds often removing some of the host eggs. She provides no care for her young. The cowbird nestlings hatch first and survive at the expense of the smaller host nestlings. (51) Researchers found that approximately 60% of the warbler nests contained cowbird eggs. This was reducing warbler production by at least 40% and in some years nearly wiped it out. (52) (Much of this valuable reproductive data was collected by Dr. Larry Walkinshaw. Over the past 40 years, (53) he has conducted nesting and banding studies, most of it as volunteer work.)

(54) In 1972, the Fish and Wildlife Service began an annual program of live-trapping cowbirds in warbler nesting areas. (55) The traps are placed near warbler colonies where they are checked daily from mid-May until mid-July. (56) Baited with sunflower seeds and water, (57) the traps use live cowbirds as decoys. Trapped cowbirds (58) are collected, placed in plastic bag and (59) asphyxiated with automobile exhaust, where death comes quickly.

(60) Frequently other birds are captured. All are banded (61) and released.

Since 1971, approximately 3500 cowbirds have been removed each year. The impact of this has been nothing short of remarkable. (62) Nest parasitism dropped to 6% the first year and has remained near that level, in sharp contrast to pre-trapping rates. Likewise, (63) fledging success has improved considerably.

⁽⁶¹⁾ Unfortunately, as you can see, this has not resulted in a dramatic increase. The population instead has remained roughly stable.

This lack of increase emphasizes the need for information on the Kirtland's ⁽⁶²⁾ during migration and wintering in the Bahamas. Despite considerable effort, only 1 specimen and a handful of sightings have been recorded in the 60 years. ⁽⁶³⁾ Obviously, very little is known about warbler activity away from the nesting area. But some problems must be occurring there, since about 1,200 leave the breeding grounds and only 400 return the following spring. This problem has been addressed in the recovery plan but direct work has not yet begun.

On the other hand, ⁽⁶⁴⁾ biologists have had some encouraging news lately. In 1978, 2 male warblers were found in Wisconsin and 2 others in Canada. Although no nests were found, this has caused biologists to expand their idea of the Kirtland's warbler range to other jack pine areas.

⁽⁶⁵⁾ Avid birders come from all over the world to see the Kirtland's warbler. Because of its endangered status and the ease with which the bird can be approached ⁽⁶⁶⁾, the nesting areas are closed to the public. Each summer both the Fish and Wildlife Service and the Forest Service ⁽⁶⁷⁾ hire naturalists to conduct tours into selected nesting areas.

⁽⁶⁸⁾ The Kirtland's warbler has received a great deal of attention and effort in order to ⁽⁶⁹⁾ prevent it from joining the ranks of the extinct. There are those who ask - why? There are several reasons but perhaps the most eloquent defense is this by William Beebe: ⁽⁷⁰⁾ (Insert KW song)

The beauty and genius of a work of art may be reconceived though its first material expression be destroyed; a vanished ⁽⁷¹⁾ harmony may yet again inspire the composer. But when the last individual of a race of living things breathes, no more, ⁽⁷²⁾ another heaven and another earth must pass before such a one can be again.

This script based on a paper given by Michael E. DeCapita at the Animal
Damage Control Programmatic Conference, Jan. 8-12, 1978 in New
Orleans, titled "The Kirtland's Warbler and Cowbird Cowbird
Control in Northern Michigan"

Script edited by Peter H. Butchko with considerable assistance from
Judy Alderson, Agassiz National Wildlife Refuge and Mike Boylan,
Ottawa National Wildlife Refuge, both Outdoor Recreation Planners.

Script narrated by Peter H. Butchko

Tape recorded in the conference room closet of the Engineering Building
at Plum Brook Station, William R. Bonwell assisting.

1979 Kirtland's Warbler Slide-Tape Program
Slide Scheme

1. FWS seal (FWS 1)
2. 2 wolves, close-up (FWS 69, Ottawa NWR)
3. Perched Bald Eagle, screaming (FWS 70, Ottawa NWR)
4. "The Kirtland's Warbler" titled on cork (FWS 2, FS 1)
5. ♂ KW singing with caterpillar in beak (FWS 34)
6. ♂ KW amidst slash (Audubon 1312-2)
7. Portrait of elderly Dr. J.P. Kirtland (FWS 71, Cleve. Mus. Nat. Hist.)
8. Bahama Island map incl Florida and Cuba (FWS 5)
9. Fly fisherman on river (FWS 6)
10. KW nesting areas in Michigan, by county (FWS 7)
11. KW habitat (Muskrat Lake)- showing good-sized openings. (FWS 10)
12. Habitat - dense growth of lower branches (FWS 9)
13. Habitat - Muskrat Lake 1973, opening in foreground (FWS 8)
14. Ground cover around tree (FWS 65, Cleve. Mus. Nat. Hist.)
15. Grayling Sand bank with trees on top (FWS 66)
16. Jack Pine cone in tree (FWS 13)
17. Jack Pine cone, seeds and seedlings (FWS 14, FS 32)
18. Controlled burn, billowing flames (FWS 67)
19. Forest fire at night-close, hazy (FWS 15, FS 54)
20. Smokey Bear fire prevention poster (FWS 16, FS 40)
21. Fire - day, mostly smokey and blackened (FWS 17)
22. Controlled burn with foresters and helicopter (FWS 19, FS 5)
23. Jack Pine seedlings in planted row (FWS 21, FS 57)
24. ♂ KW singing in dead branch (FWS 32)
25. Jack pine area -, overlooking small valley (FWS 23)
26. KW nest at base of tree with nestlings (FWS 24)
27. Close-up of ♀ KW incubating (FWS 25, FS 22)
28. Close-up of ♂ KW with worm (FWS 26)
29. ♀ KW at nest with nestlings (FWS 27)
30. KW fledgling on dead log (FWS 29)
31. ♂ KW at same nest as #29 (FWS 28)
32. Migration route - Michigan to Bahamas (FWS 55)
33. ♀ KW perched at base of tree (FS 19)
34. Map - Jack pine belt in North America (FWS 68, Cleve. Mus. Nat. Hist.)
35. Horizon forest fire at night (FWS 32, FS 47)
36. Man tallying census with map, compass (FS 67)
37. ♂ KW singing at Jack Pine treetops (FWS 33)
38. Bar graph - KW population census: 1951, 1961 (FWS 72)
39. ♂ KW amidst Jack Pine with worm (FWS 3)
40. ♂ Cowbird on ground (FWS 35)
41. Bar graph - KW population census: 1951, 1961, 1971 (FWS 73)
42. Patches of FWS, FS, MDNR, MAS (FWS 74)
43. ♀ Cowbird - close-up of head (FWS 38)
44. ♀ Cowbird on ground (FWS 39)
45. Old logging scene with loggers and oxen (FWS 75)
46. ♂ KW feeding fledgling CB (FWS 76, Cleve. Mus. Nat. Hist.)
47. 2 CB eggs, 1 KW eggs in hand (FS 73)

- 48. Dr. Walkinshaw handling ♂ KW (FWS 42)
- 49. ♂ KW in hand, banded (FWS 77)
- 50. CB in trap #29 (FWS 78)
- 51. Biologist entering decoy trap, from distance (FWS 44)
- 52. Drop chute, sunflower seeds and water of trap (FWS 45)
- 53. 2 ♂, 1 ♀ CB on branch in trap (FWS 79)
- 54. CB in catch cage at trap (FWS 46)
- 55. Biologist asphyxiating cowbirds (FWS 47)
- 56. Evening grosbeak in trap (FWS 48)
- 57. Brown thrasher in trap (FWS 49)
- 58. Blue jay being banded (FWS 80)
- 59. Data - reduction in KW nest parasitism through 1978 (FWS 81)
- 60. Data - increase in KW fledging success through 1978 (FWS 82)
- 61. Bar graph - KW population census through 1978 (FWS 83)
- 62. Bahamas - rocky with distant tall trees (FWS 56, FS 77)
- 63. Bahamas habitat - forest understory (FWS 57, FS 88)
- 64. Two biologists censusing in habitat (FS 66)
- 65. Two bird-watchers in forest (FWS 58)
- 66. "Unlawful to Enter" sign - habitat background (FWS 84)
- 67. Tour group on road in habitat (FWS 60)
- 68. KW Recovery Plan - cover (FWS 61)
- 69. Sign- "KW Nesting Area" (FWS 85)
- 70. ♂ KW perched in understory, with worm (FS 89)
- 71. ♂ KW in hardwood understory (FWS 86, Cleve. Mus. Nat. Hist.)
- 72. ♂ KW, close-up, facing front (FWS 87, Cleve. Mus. Nat. Hist.)

Numbers following slide description refer to number on slide.
 "FS" refers to slides taken from Forest Service slide-tape program.
 "Audubon" refers to slides available from Michigan Audubon Society.
 "Ottawa NWR" and "Cleve. Mus. Nat. Hist." refers to origin of slide
 original from which copies were made.